



# SERVICE AVAILABILITY AND READINESS ASSESSMENT

of the public health facilities in Libya



# Service Availability and Readiness Assessment

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of the public health facilities in Libya, 2017



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## Foreword

Libya has made real progress towards achieving the Millennium Development Goals, achieving significant reductions in both maternal and infant mortality by 2015. Now, with the introduction of the Sustainable Development Goals, we intend to build on this progress, committing ourselves to the achievement of Universal Health Coverage (UHC). In addition to this, our health system needs to be robust enough to address the acute humanitarian health needs. The MoH is committed to serving the needs of all people in our country, no matter their status.

To help us assess the capacity of Libya's health services and identify the gaps that need to be addressed to achieve UHC and address humanitarian needs, a national survey was conducted following the Service Availability and Readiness Assessment (SARA) methodology. The SARA survey measured the availability of general and service-specific services through the public health facilities in Libya, as well as the readiness to provide general and specific services, measured through the availability of basic equipment, trained staff, guidelines, diagnostic services, and essential medicines.

The initial results of this assessment, presented in the SARA Summary Report earlier in 2017, indicated that notwithstanding the closure of nearly one-fifth of health facilities across the country, both general and specific health services remained available across Libya, and that international targets for health facility density, maternity bed density and core health workers density were fully met at a national level.

The more comprehensive analysis of the Libyan health system contained in this SARA Full Report identifies clear challenges that we as a nation need to address in order to provide equitable and effective health services. This report makes it evident that both human resources and health facilities need to be used more efficiently, and provides a more comprehensive insight into the shortage of essential medicines across Libya, the training needs of health staff and the need for essential guidelines.

I hope that this report will provide MoH staff, stakeholders and partners in the health sector with an invaluable tool to assist us with joint planning and support for strengthening Libya's health system. We realize that significant work needs to be done, and we are committed towards working together to ultimately ensure healthy lives and the promotion of well-being of the Libyan population.

We wish to thank Dr. Syed Jaffar Hussain and the team of the World Health Organization, Libya office, for their continuous support, and also wish to acknowledge the effort and dedication of the Health Information Centre, Hospital Directorate, PHC Directorate, and all other entities of the MOH that contributed to the completion of this survey. Special thanks are afforded to ECHO, the EU, and the WHO for their financial support for the implementation and analysis of this survey.



Dr. Omer Basher Altaher  
Minister of Health  
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The second Service Availability and Readiness Assessment (SARA) survey was conducted in 2016 by the Health Information Centre (MoH) in collaboration with the WHO country and regional offices. This participative process involved considerable contributions and support from both individuals and institutions. I therefore wish to extend my sincere gratitude to His Excellency Dr. Omer Basher Altaher, the Minister of Health in Libya, and all those that contributed to the process of survey implementation and writing this long-awaited full report of the 2017 SARA Survey. I also wish to sincerely acknowledge the timely and generous financial support of ECHO, the EU and WHO, without which the survey could not be conducted and this valuable report would have not been produced.

Furthermore, we would like to acknowledge the World Health Organization country office and WHO regional office for their technical support. Particular recognition goes to Dr. Syed Jaffar Hussain, the WHO Representative for Libya who spearheaded the whole survey, and to Dr. Haroon Ur Rashid Public Health Officer WHO Libya and Dr. Eman Aly Technical Officer, IER, EMRO for their technical support. Eman AbuDahab, consultant for WHO, designed the survey software in CSPro and analyzed the data and Ahmad Bayomi engineer IER, EMRO provided further technical support. Final data analysis and writing of this comprehensive report were done by Dr. Annemarie ter Veen, WHO consultant.

We sincerely acknowledge contribution of the following nationals:

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- All surveyors for Hospitals and Primary Health Care Facilities (annexed).
- All Directors of Health at District and Municipality level.
- All Hospital Directors and Health Facilities Directors.

Finally, I wish to thank the staff of the Health Information Center for their contribution throughout the survey.

I hope this report will assist all decision makers in the MoH, as well as our stakeholders and partners, with effective planning for strengthening our health system. I wish and pray that this report will benefit all of humankind seeking health care in our Libyan health facilities, and bring happiness to our country.



Mr. Mohammad Ibrahim Daganee  
Director, Health Information Center  
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## Acknowledgements

It is with great pleasure that I see the collaborative efforts of WHO and the Libyan Ministry of Health on the Service Availability and Readiness Assessment (SARA) survey culminated in the form of this long-awaited Final SARA report. The MoH Libya was able to implement this survey and collect the necessary data in very difficult circumstances, and their resolve and resiliency deserve to be applauded, along with the work of consultants Eman AbuDahab and Annemarie ter Veen, who spent long hours analyzing and writing up these final results. We hope that with this report, you have in hand a comprehensive and useful tool that will assist you with evidence-based planning and effective implementation of policies, programmes and projects to work towards Universal Health Coverage for the Libyan population, and to address the humanitarian health needs of IDP, migrant and refugee populations in the country.

Even now in times of adversity due to the conflict and instability in Libya, the Ministry of Health persists in its efforts to ensure that health services are available. The availability of health care infrastructure and staff remains a very strong asset in ensuring access, but the comprehensive analysis shows that although many health facilities are reportedly functional, they are unable to provide any, or adequate services due to a shortage of essential medicines, medical supplies (including equipment), and staff with up-to-date training.

Essential services that require strengthening include reproductive, maternal, neonatal and child health services across the country, while significant coverage gaps exist in the provision of HIV/AIDS, STI, family planning and NCDs including mental health services. Readiness indicators are far too low across all services, but especially in the PHC facilities. The vulnerability to major outbreaks is also very high.

In order to meet the urgent population health and humanitarian needs, the capacity of primary health care facilities and the hospitals need to be improved on a fast track basis. The disease specific programs (both preventive and curative) also require major changes. I am particularly concerned about the limited availability of guidelines, standard operating procedures (SOPs) and trained staff in every specific service area. As a senior representative of the lead technical agency, I assure the people of Libya that together with the MoH and partners, we will work on improving the supply of essential medicines, updating technical guidelines, strengthening health governance, improving quality of services and providing capacity building for both individual staff and institutions. The main aim of WHO is to make the health system in Libya so robust to achieve Universal Health Coverage (UHC), which is the cornerstone for implementation of SDG3.

I would hereby like to acknowledge the financial support of ECHO for the field work, and the EU for funding the detailed analysis, reporting and dissemination of results. Without this support the production of this final report would not have been possible. I would also like to express appreciation for my colleagues at the country office and regional office for their support and effort, especially Dr Haroon ur Rashid, WHO HIS officer.

Finally, I wish to thank HE the Minister of Health and the MoH officials, especially Mr. Mohammad Daganee and his team from the Health Information Center, Libya, for their efforts in completing this survey.



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## Table of Contents

Foreword.....	iii
Acknowledgements.....	iv
Table of Contents.....	vi
List of Tables.....	xi
List of Figures.....	xv
List of Summary Boxes.....	xix
Abbreviations and Acronyms.....	xx
Executive Summary.....	xxii
Structure of the report.....	xxix
1 Introduction.....	1
1.1 General context.....	1
1.2 Conflict and humanitarian context.....	1
1.3 Health system.....	1
1.3.1 Public Sector.....	2
1.3.2 Private Sector.....	6
1.4 Health indicators.....	7
2 Methodology.....	9
2.1 Selection of health facilities.....	9
2.2 Survey tools.....	10
2.3 Training of surveyors.....	11
2.3.1 Geographic regions.....	11
2.4 Data collection.....	12
2.5 Data entry and quality checks.....	12
2.6 Data analysis.....	13
2.6.1 Indicators.....	14
2.6.2 Mapping.....	16
2.7 Limitations.....	16
2.8 Ethical clearance.....	16
2.9 Overview of chapters.....	16
3 General services availability and readiness.....	17
3.1 Health facilities overview and functionality.....	17
3.2 General Service Availability.....	24
3.2.1 Health infrastructure density.....	24
3.2.2 Health workforce density.....	28
3.2.3 Service utilization.....	30
3.2.4 Service Availability Index.....	35
3.3 General Service Readiness.....	36
3.3.1 Hospital level general service readiness.....	37
3.3.2 PHC level general service readiness.....	38
3.3.3 Comparison of general service readiness scores between facility types.....	40
3.3.4 Disaggregated readiness data for hospitals.....	41
3.3.5 Disaggregated readiness data for PHC facilities.....	51

3.3.6	Breakdown of readiness indices by tracer item and municipality .....	58
4	Reproductive, maternal, newborn and child health .....	63
4.1	Overview of available RMNCH services .....	63
4.2	Antenatal care services .....	63
4.2.1	Availability and readiness for ANC.....	64
4.2.2	Breakdown of readiness indicators .....	66
4.3	Obstetric and Newborn Care services .....	67
4.3.1	Availability and readiness of delivery and EMoNC services.....	67
4.3.2	Breakdown of readiness indicators .....	71
4.3.3	Newborn care.....	75
4.3.4	Postpartum care.....	76
4.4	Family Planning services .....	77
4.4.1	Availability and readiness .....	77
4.4.2	Breakdown of readiness indicators.....	80
4.5	Infertility treatment.....	81
4.6	Immunization.....	81
4.6.1	Availability and readiness .....	82
4.6.2	Breakdown of readiness indicators.....	84
4.7	Child health services .....	86
4.7.1	Availability and readiness .....	87
4.7.2	Breakdown of readiness indicators.....	89
4.7.3	Availability of hospitalization facilities for young children .....	91
4.8	Overview of RMNCH services in PHC facilities, by municipality.....	92
4.8.1	Availability and readiness of RMNCH services.....	93
4.8.2	Breakdown of readiness indicators.....	94
4.9	Overview of RMNCH services by hospital facility.....	98
4.9.1	Breakdown of readiness indicators.....	98
5	Communicable diseases.....	102
5.1	Tuberculosis.....	102
5.1.1	Availability and readiness .....	103
5.1.2	Breakdown of readiness indicators for TB services .....	105
5.2	HIV/AIDS .....	107
5.2.1	HIV counselling and testing.....	108
5.2.2	PMTCT services .....	111
5.3	Sexually Transmitted Diseases .....	114
5.3.1	Availability and readiness .....	114
5.3.2	Breakdown of readiness indicators.....	116
5.4	Leishmaniasis.....	116
5.4.1	Availability of services.....	116

5.5	Brucellosis.....	119
5.5.1	Availability of services.....	119
5.6	Overview of communicable diseases services through PHC facilities, by municipality .....	121
5.6.1	Availability and readiness of communicable diseases services .....	121
5.6.2	Breakdown of readiness indicators.....	123
5.7	Overview of communicable diseases services by hospital facility .....	125
6	Non-communicable diseases .....	128
6.1	Diabetes.....	129
6.1.1	Availability and readiness .....	129
6.1.2	Breakdown of readiness indicators.....	131
6.2	Cardiovascular diseases.....	132
6.2.1	Availability and readiness .....	132
6.2.2	Breakdown of readiness indicators.....	133
6.3	Chronic respiratory diseases .....	135
6.3.1	Availability and readiness .....	135
6.3.2	Breakdown of readiness indicators.....	137
6.4	Cervical cancer.....	138
6.4.1	Availability and readiness .....	139
6.4.2	Breakdown of readiness indicators.....	141
6.5	Breast cancer .....	141
6.5.1	Availability of services.....	142
6.5.2	Breakdown of readiness indicators.....	144
6.6	Mental Health.....	144
6.6.1	Availability of services.....	144
6.6.2	Breakdown of readiness indicators.....	147
6.7	Overview of NCD services through PHC facilities, by municipality .....	148
6.7.1	Availability and readiness of NCD services .....	148
6.7.2	Breakdown of readiness indicators.....	152
6.8	Overview of NCD services by hospital facility.....	155
6.8.1	Availability and readiness of NCD services .....	155
6.8.2	Breakdown of readiness indicators.....	155
7	Emergency, Surgical Services and Blood Transfusion.....	157
7.1	Emergency services .....	157
7.1.1	Availability and readiness .....	157
7.1.2	Breakdown of availability and readiness indicators .....	161
7.1.3	Ambulance services .....	165
7.2	Minor surgery .....	165
7.2.1	Availability and readiness .....	166
7.2.2	Breakdown of readiness indicators.....	169

7.3	Major Surgery .....	172
7.3.1	Availability and readiness .....	172
7.3.2	Breakdown of readiness indicators.....	175
7.4	Blood transfusion.....	177
7.4.1	Availability and readiness .....	177
7.4.2	Breakdown of readiness indicators.....	179
7.4.3	Volume of blood used and discarded .....	181
7.5	Surgical and ICU wards .....	181
7.6	Minor surgery and blood transfusion services in PHCs by municipality .....	182
7.6.1	Breakdown of readiness indicators.....	184
7.7	Emergency, Surgical and Blood transfusion services by hospital.....	184
8	Dental services .....	190
8.1.1	Availability of services.....	190
8.1.2	Breakdown of readiness indicators.....	192
9	Diagnostic imaging and laboratory testing services .....	193
9.1	Diagnostic imaging services.....	193
9.1.1	Availability and readiness .....	193
9.1.2	Basic readiness data for imaging services in hospitals .....	195
9.2	Laboratory testing services.....	197
9.2.1	Availability and readiness .....	197
9.2.2	Breakdown of readiness indicators.....	199
9.3	Diagnostic imaging and laboratory testing availability, by municipality .....	204
9.4	Diagnostic imaging and laboratory testing availability through hospital facilities, by hospital.....	208
10	Essential medicines .....	218
10.1	General availability and readiness scores.....	218
10.2	Medicines and medical materials in PHC facilities, by municipality.....	224
10.2.1	Availability of essential medicines and medical materials .....	224
10.2.2	Administrative processes .....	225
10.3	Medicines and medical materials in hospitals.....	226
10.3.1	Availability of essential medicines and commodities .....	226
10.3.2	Quality of storage facilities .....	230
10.3.3	Organization of pharmacy and availability of guidelines.....	231
10.4	Medicines and medical materials in medical supply stores/warehouses .....	234
10.4.1	General availability of essential medicines.....	234
10.4.2	Administrative processes .....	235
11	Health workforce .....	236
11.1	Health workforce density .....	236
11.2	Hospital workforce availability and training.....	238
11.2.1	Human resources training in hospitals .....	242
11.2.2	Human resources support and concerns in hospitals.....	243

11.3	PHC facilities workforce availability and training .....	244
11.4	Other facilities workforce availability .....	249
12	Hospital record keeping systems .....	250
12.1	Record keeping facilities .....	250
12.2	Staff and training .....	251
12.3	Data quality .....	252
13	Hospital organizational structure and management .....	254
13.1	Governance and management .....	254
13.2	Facility support services .....	254
13.3	Quality Assurance/Improvement .....	254
13.4	Disaster Planning, facility Safety and Security .....	255
13.5	Standard Precautions for Infection Prevention .....	255
13.6	Building and utilities .....	255
13.7	Waste management .....	256
13.8	Sterilization of equipment .....	256
13.9	Transport .....	257
13.10	Maintenance and repair of grounds, buildings and equipment .....	257
14	Bibliography .....	263
Annexes .....		266
Annex I: Master Facility List, with staffing and services reported for each facility .....		266
Annex II: 2017 Population estimates per district, Libya .....		297
Annex III: Standard humanitarian place codes (P-codes) and alternative district names .....		298
Annex IV: Surveyors for Hospitals and Primary Health Care Facilities .....		299

## List of Tables

Table 1: Number and proportion of hospitals by region .....	4
Table 2: Number and type of primary health care facilities .....	4
Table 3: Number and type of private sector health facilities by district .....	6
Table 4: Libya health indicators .....	8
Table 5: Types of public health facilities included in the 2017 SARA surveys .....	10
Table 6: Districts included in the six health regions defined for SARA .....	12
Table 7: Procedure for field level data quality checks for each questionnaire .....	13
Table 8: Service availability indicators and associated targets (14) .....	14
Table 9: Service availability indices.....	15
Table 10: Functional status of health facilities at time of survey .....	20
Table 11: Number of PHC and other facilities, by municipality and facility type .....	22
Table 12: Facility numbers and density per 10,000 population by district, according to facility type .....	24
Table 13: Inpatient bed density per 10,000 population by district and facility type.....	25
Table 14: Maternity bed density per 1000 pregnant women by facility type and district .....	27
Table 15: Health workforce density per 10,000 population by facility type and district .....	29
Table 16: Outpatient visits per capita per year by facility type and district.....	31
Table 17: Hospital inpatient service utilization per 100 population per year by district .....	33
Table 18: General Service Availability summary index by district .....	35
Table 19: General Service readiness for hospitals by district .....	37
Table 20: General Service Readiness for PHC facilities by district .....	39
Table 21: Overview of general readiness score components, by hospital .....	49
Table 22: Breakdown of overall readiness indices for PHCs by tracer item and municipality (part 1) .....	59
Table 23: Breakdown of overall readiness indices for PHCs by tracer item and municipality (part 2) .....	61
Table 24: Availability and readiness of facilities providing individual RMNCH services.....	63
Table 25: Availability scores for individual antenatal care services by facility type and district.....	64
Table 26: ANC readiness scores by domain and facility type .....	66
Table 27: Percentage and types of health facilities offering delivery services by district.....	68
Table 28: Readiness indices for delivery services by district .....	70
Table 29: Availability of maternity beds by ward type .....	71
Table 30: Summary of newborn and NICU bed capacity in hospitals.....	75
Table 31: Number of PHC facilities offering FP and types of contraceptives available by district .....	78
Table 32: Readiness index for family planning services by district.....	80
Table 33: Availability of vaccines in PHC facilities offering immunization, by type and district.....	82
Table 34: PHC facilities readiness indices for immunization services by district.....	84
Table 35: Availability of child health services by facility type and district .....	87
Table 36: PHC readiness scores for child health services by domain and district .....	88
Table 37: Summary of pediatric and pediatric ICU bed capacity in hospitals .....	91
Table 38: Availability and readiness of essential RMNCH services in PHC facilities by municipality.....	93
Table 39: Overview of PHC facilities with staff trained in RMNCH topics in the past 2 years.....	95
Table 40: Availability of RMNCH trained staff, guidelines, medicines, equipment and specific child health services by municipality .....	96
Table 41: Proportion of Hospitals with staff having received service-specific training in the past 2 years .....	98
Table 42: RMNCH services available and readiness scores, by hospital.....	100



Table 43: Availability and readiness of communicable diseases services provided by type of facility ...	102
Table 44: NCDC facilities availability and readiness index for management of TB services by district ...	103
Table 45: Overview of TB diagnostics available by municipality .....	106
Table 46: Availability and readiness index for HIV counselling and testing services by district.....	108
Table 47: PHCs and hospitals with staff trained in HIV-related subjects during the past two years .....	110
Table 48: Availability and readiness of PMTCT services at hospitals, by activity and district .....	112
Table 49: Availability and readiness indices for management of STI services by type and district.....	114
Table 50: Availability of leishmaniasis services, by district.....	117
Table 51: Availability of brucellosis services, by district .....	119
Table 52: Availability and readiness of communicable disease services by municipality .....	122
Table 53: Proportion of PHC facilities with staff trained in communicable disease topics in the past two years.....	124
Table 54: Availability of individual anti-infective medicines in PHC facilities, by district.....	124
Table 55: Proportion of hospitals with staff receiving training in communicable disease topics in the last two years.....	125
Table 56: Communicable disease availability and readiness scores, by hospital .....	127
Table 57: Availability and readiness of NCD services provided by type of facility .....	128
Table 58: Availability and readiness of diabetes services, by facility type and district .....	129
Table 59: Availability of guidelines, trained staff and diagnostics for diabetes .....	131
Table 60: Availability and readiness for cardiovascular disease services, by facility type and region ....	132
Table 61: Availability of guidelines, trained staff and diagnostics for cardiovascular diseases .....	133
Table 62: Availability and readiness for chronic respiratory diseases services, by facility type and district .....	136
Table 63: Availability of guidelines, trained staff and diagnostics for chronic respiratory diseases .....	138
Table 64: Availability and readiness for cervical cancer diagnosis services, by facility type and district	139
Table 65: Availability of guidelines, trained staff and diagnostics for cervical cancer .....	141
Table 66: Availability of basic breast cancer diagnostic services in PHC facilities, by district .....	142
Table 67: Availability of guidelines, trained staff, diagnostics and treatment for breast cancer .....	144
Table 68: Availability of mental health services, by facility type and district.....	145
Table 69: Availability of guidelines, trained staff and diagnostics for mental health.....	147
Table 70: Breakdown of available readiness indicators for individual NCD services in PHC facilities, by municipality.....	149
Table 71: Proportion of PHC facilities with staff trained in NCD subjects in the past 2 years.....	152
Table 72: Availability and readiness scores for NCD services, by hospital .....	153
Table 73: Proportion of hospitals with staff trained in NCD topics, by training .....	155
Table 74: Availability and readiness of emergency, surgical and blood transfusion services provided by type of facility .....	157
Table 75: Emergency services and procedures availability through hospitals, by type and district .....	158
Table 76: Public hospitals readiness index for emergency services by district .....	159
Table 77: Overview of infrastructure and support services for 67 hospital emergency services .....	161
Table 78: Number of ambulance centers per 100,000 population, by district.....	165
Table 79: Availability of minor surgical procedures by facility type and district .....	166
Table 80: Readiness of minor surgical services by facility type and district .....	167
Table 81: Availability and guidelines of trained staff and guidelines on surgery in hospitals and PHC facilities .....	169
Table 82: Availability and readiness of major surgical services through hospitals, by district.....	172
Table 83: Readiness for major surgery services, by district.....	174

Table 84: Availability and readiness of blood transfusion services by facility type and district.....	177
Table 85: Overview of blood availability, source of blood, and screening practices, by facility type .....	180
Table 86: Overview of functional equipment available for blood transfusion, by facility type .....	180
Table 87: Overview of the availability of blood transfusion guidelines and trained staff, by facility type .....	180
Table 88: Utilization volume of blood transfusion services in hospitals .....	181
Table 89: Summary of Surgical and ICU bed capacity in hospitals .....	181
Table 90: Availability and readiness for minor surgical services and blood transfusion in PHC facilities, by municipality.....	182
Table 91: Overview of staff trained for surgical and blood transfusion interventions in PHC facilities..	184
Table 92: Overview of hospitals with staff trained in emergency, surgery and blood transfusion in the last 2 years .....	185
Table 93: Availability of surgical services, by specialist type and hospital .....	185
Table 94: Availability and readiness for emergency services and minor surgery, by hospital .....	186
Table 95: Availability and readiness for major surgery and blood transfusion services, by hospital.....	188
Table 96: Availability of dental services by facility type and district .....	190
Table 97: Availability of overall readiness of dental services .....	192
Table 98: Availability and readiness of diagnostic imaging and laboratory services provided, by type of facility.....	193
Table 99: Number of health facilities offering diagnostic imaging services, by facility type and district	194
Table 100: Availability and readiness of laboratory testing services by type of facility and district .....	197
Table 101: Availability and management of laboratory services in hospitals .....	201
Table 102: Availability and readiness of diagnostic imaging and laboratory testing services at PHC and other facilities, by imaging type and municipality.....	204
Table 103: Types of laboratory testing, materials and equipment available in PHC facilities, by municipality.....	206
Table 104: Types of laboratory testing, materials and equipment available in other facilities, by municipality.....	208
Table 105: Diagnostic imaging and testing available and readiness score for laboratory testing, by imaging type and hospital.....	209
Table 106: Diagnostic imaging procedures, equipment and trained staff available, by hospital.....	211
Table 107: Availability of laboratory rapid laboratory testing, rapid tests, cancer testing, and laboratory equipment, by hospital .....	213
Table 108: Laboratory tests and (functional) equipment for conducting diagnostic laboratory tests available, by hospital .....	215
Table 109: Mean availability of essential medicines in PHCs and hospitals by treatment category and district .....	219
Table 110: Number of medicines per treatment category for calculation of the availability indices, by facility type.....	219
Table 111: Medicines included in each of the treatment categories for PHC and “other” facilities.....	222
Table 112: Medicines included in each of the treatment categories for hospitals .....	223
Table 113: Availability of essential drugs, by treatment category and municipality.....	224
Table 114: Summary of ordering and supply data for pharmaceuticals in PHCs.....	226
Table 115: Availability of medicines, by disease category and hospital.....	228
Table 116: Overview of warehousing quality in primary dispensing pharmacies and bulk pharmaceutical storage areas in hospitals, by hospital.....	232

Table 117: Overall availability of a sample of 80 medicines in the medical stores, by facility and treatment category .....	234
Table 118: Summary of ordering and supply data for pharmaceuticals in other facilities.....	235
Table 119: Health workforce density per 10,000 population by facility type and district .....	236
Table 120: Official and employed hospital staff numbers, by type .....	238
Table 121: Human resources employed by hospital and type .....	240
Table 122: Proportion of Hospitals with staff having received service-specific training in the past two years.....	242
Table 123: Human resources training systems available in hospitals .....	243
Table 124: Average PHC staff numbers, by facility type .....	244
Table 125: Ratio of staff to individual services provided per PHC facility .....	244
Table 126: Numbers of human resources for health by type and municipality .....	246
Table 127: Proportion of PHCs with staff having received service-specific training in the past two years .....	248
Table 128: Staffing of "other" facilities, by staff type and facility type .....	249
Table 129: Availability of staff trained in reporting and coding in hospitals .....	252
Table 130: Overview of hospital governance and management systems, by hospital .....	258

## List of Figures

Figure 1: The structure of the Libyan Ministry of Health.....	3
Figure 2: Libyan health care delivery system.....	5
Figure 3: The Health SDG and its targets .....	7
Figure 4: Photographs of surveyors training workshops .....	11
Figure 5: Map of functional status of public hospital facilities and public & private hospital facility density per 10,000 population.....	18
Figure 6: Map of functional status of public PHC facilities and public & private PHC facility density per 1,000 population.....	19
Figure 7: Map of "other" health facilities, by facility type.....	21
Figure 8: Map of inpatient bed density index scores by district (combined public & private).....	26
Figure 9: Map maternity bed density index by district (public hospitals & PHC facilities).....	28
Figure 10: Map of core health workforce density as a multiple of the target of 23 health workers per 100,000 population.....	30
Figure 11: Map of service utilization scores by district, combined for hospitals & PHC facilities.....	32
Figure 12: Map of hospital utilization scores, by district.....	34
Figure 13: Level of achievement of individual components of the service availability index .....	35
Figure 14: Map of general service availability indices, by district .....	36
Figure 15: Map of general services readiness index scores for public hospitals, by district .....	38
Figure 16: Map of general readiness scores for PHC facilities, by district.....	40
Figure 17: Summary of domain-specific general readiness scores, by facility type .....	41
Figure 18: Overall availability of basic amenities in hospitals, by type .....	41
Figure 19: Map of basic amenities mean scores for hospitals, by district.....	42
Figure 20: Overall availability of basic equipment in hospitals, by type .....	43
Figure 21: Map of basic equipment availability scores for hospitals, by district.....	43
Figure 22: Overall availability of basic medicines in hospitals, by type.....	44
Figure 23: Map of basic medicines mean scores for hospitals, by district .....	45
Figure 24: Overall availability of basic diagnostics in hospitals, by type .....	46
Figure 25: Map of basic diagnostics mean scores for hospitals, by district.....	46
Figure 26: Overall availability of standard precautions in hospitals, by type.....	47
Figure 27: Map of standard precautions mean scores for hospitals, by district .....	48
Figure 28: Overall availability of basic amenities in PHC facilities, by type .....	51
Figure 29: Map of basic amenities mean scores for PHC facilities, by district .....	52
Figure 30: Overall availability of basic equipment in PHC facilities, by type .....	53
Figure 31: Map of basic equipment mean scores for PHC facilities, by district .....	53
Figure 32: Overall availability of basic medicines in PHC facilities, by type .....	54
Figure 33: Map of basic medicines mean scores for PHC facilities, by district.....	55
Figure 34: Overall availability of basic diagnostics in PHC facilities, by type.....	56
Figure 35: Map of basic diagnostics mean scores for PHC facilities, by district .....	56
Figure 36: Overall availability of standard precautions in PHC facilities, by type .....	57
Figure 37: Map of standard precautions mean scores for PHC facilities, by district.....	58
Figure 38: Map of availability and readiness scores for ANC services by district, and ANC referral hospitals.....	65
Figure 39: Map of availability and readiness scores for delivery services by district, with CEmONC referral hospitals.....	69

Figure 40: Lowest level of provider conducting deliveries during the day .....	71
Figure 41: Delivery practices and available signal functions at the 52 hospitals offering delivery services.....	72
Figure 42: Percentage of standard precautions available in delivery wards of hospitals .....	73
Figure 43: Availability of 19 pieces of functional delivery equipment in 52 hospitals .....	73
Figure 44: Availability of individual maternal and neonatal medicines in 79 hospitals .....	74
Figure 45: Availability of individual maternal medicines in 318 PHC facilities .....	74
Figure 46: Availability of neonatal care functions and equipment and drugs in hospitals .....	76
Figure 47: Availability of functional equipment and supplies for postpartum care in 39 hospitals.....	77
Figure 48: Map of availability and readiness scores for family planning services by district .....	79
Figure 49: Availability of basic family planning medicines in 318 PHC facilities.....	81
Figure 50: Map of availability and readiness by district, and hospitals offering immunizations .....	83
Figure 51: Immunization - overview of administration, training, supplies and cold chain availability	85
Figure 52: Availability of specific services for preventive and curative care for children <5 .....	88
Figure 53: Map of availability and readiness for child health services by district, and associated referral hospitals.....	89
Figure 54: Availability of trained staff, guidelines and equipment for preventive and curative services for children <5.....	90
Figure 55: Availability of individual essential medicines to treat child health conditions in 318 PHC facilities .....	90
Figure 56: Availability of utilities, infection prevention, equipment and guidelines in pediatric wards .....	92
Figure 57: Availability of 20 essential medicines for obstetric care in hospitals providing delivery services.....	99
Figure 58: Map of availability and readiness for TB services, by district, with locations for NCDC centers .....	104
Figure 59: Available methods to diagnose TB in 22 NCDC facilities .....	105
Figure 60: Availability of services, guidelines and trained staff for TB in NCDC facilities.....	106
Figure 61: Most commonly prescribed TB medicines in 16 NCDC facilities .....	107
Figure 62: Availability of individual TB medicines in six specialist hospitals .....	107
Figure 63: Map of availability and readiness for HIV counselling and testing services, by district ....	109
Figure 64: Number of hospitals with individual ARV medicines available in Libya. ....	111
Figure 65: Map of availability and readiness of PMTCT services, by district.....	113
Figure 66: Map of availability and readiness of STI services, by district, with referral hospitals .....	115
Figure 67: Diagnosis and treatment methods for leishmaniasis in 36 PHC facilities.....	117
Figure 68: Map of availability of leishmaniasis services, by district .....	118
Figure 69: Map of availability of brucellosis services, by district.....	120
Figure 70: Diagnosis and treatment methods for brucellosis in 28 PHC facilities .....	121
Figure 71: Availability and stock-outs of individual anti-infective medicines in 79 hospitals .....	126
Figure 72: Map of availability and readiness for diabetes services, by district, with referral hospitals .....	130
Figure 73: Availability of individual essential medicines for diabetes in 79 hospitals and 318 PHCs.	131
Figure 74: Map of availability and readiness for CVD services, by district, with referral hospitals....	134
Figure 75: Availability of individual essential medicines for cardiovascular diseases in 79 hospitals and 318 PHC facilities.....	135
Figure 76: Map of availability and readiness of chronic respiratory disease services, by district, and referral hospitals.....	137

Figure 77: Availability of individual essential medicines for chronic respiratory diseases in 79 hospitals and 318 PHC facilities .....	138
Figure 78: Map of availability and readiness for cervical cancer services, by district, with referral hospitals .....	140
Figure 79: Proportional cancer mortality in Libyan women in 2014 (33) .....	141
Figure 80: Map of availability of breast cancer services, by district .....	143
Figure 81: Map of availability of mental health services, by district .....	146
Figure 82: Availability of individual essential medicines for mental health in hospitals and PHC facilities .....	147
Figure 83: Availability of individual essential medicines for NCDs in PHC facilities .....	152
Figure 84: Availability and stock-outs of individual NCD medicines in hospitals .....	156
Figure 85: Availability of specific medical emergency services in hospitals .....	159
Figure 86: Availability of specific emergency procedures in hospitals .....	159
Figure 87: Map of availability and readiness of emergency services in hospitals, by district, and ambulance service centers .....	160
Figure 88: Availability (on-site or on-call) of staff categories in 65 emergency room facilities .....	162
Figure 89: Availability of guidelines and trained staff for hospital emergency services .....	162
Figure 90: Availability of standard precautions for infection prevention in hospital emergency rooms .....	163
Figure 91: Availability of essential medicines in hospital emergency services.....	163
Figure 92: Availability of medical equipment and materials for hospital emergency services .....	164
Figure 93: Availability of 24-hour imaging services in hospital emergency rooms .....	165
Figure 94: Availability of specific minor surgical procedures in hospitals and PHC facilities .....	167
Figure 95: Map of availability and readiness of minor surgery services in PHCs and hospitals, by district .....	168
Figure 96: Availability of functional equipment for minor surgery in PHC facilities.....	170
Figure 97: Availability of materials or medicines for minor surgery in hospitals and PHC facilities ..	171
Figure 98: Availability of standard precaution measures for infection prevention in surgery areas of PHC facilities and hospitals .....	171
Figure 99: Proportion of hospitals offering specific major surgical procedures.....	173
Figure 100: Proportion of hospitals providing specialist types of major surgery .....	173
Figure 101: Map of availability and readiness of major surgery services in hospitals, by district.....	175
Figure 102: Type of anesthesiology staff available in hospitals offering major surgery .....	176
Figure 103: Availability of individual anesthetic drugs in 79 hospitals.....	176
Figure 104: Availability of individual IV fluids in 79 hospitals.....	177
Figure 105: Map of availability and readiness of blood transfusion services in hospitals, by district	178
Figure 106: Proportion of identifying data noted on a random sample of 5 blood transfusion bags in hospitals .....	181
Figure 107: Map of the availability of dental health facilities per 100,000 population in all facility types, by district.....	191
Figure 108: Map of the availability of diagnostic imaging services, by district .....	195
Figure 109: Number of hospitals providing specific imaging services, equipment and trained staff.	196
Figure 110: Map of the availability and readiness (for hospitals) of laboratory testing facilities, by district .....	198
Figure 111: Availability of diagnostic medical materials, by item and type of facility .....	200
Figure 112: Availability of functional laboratory equipment, by item and facility type.....	200
Figure 113: External quality controls conducted for laboratory tests in hospitals.....	202

Figure 114 : Availability of guidelines and SOPs in hospital laboratories .....	202
Figure 115: Standard precautions for infection prevention in hospital laboratories .....	203
Figure 116 : Standard precautions for infection prevention in hospital laboratories .....	203
Figure 117: Reporting forms used and source of routine laboratory commodities in hospitals.....	204
Figure 118: Map of availability of medicines in hospitals, and location of medical warehouses.....	220
Figure 119: Map of availability of PHC facilities dispensing medicines, and medicine availability (in numbers) by district .....	221
Figure 120: Availability of essential medicines in PHC facilities by treatment category .....	224
Figure 121: Person responsible for pharmacy management in PHC facilities .....	225
Figure 122: Availability of essential medicines and medical materials in hospitals, by treatment category .....	227
Figure 123: Medicines available in hospitals per treatment category .....	227
Figure 124: The availability of pharmaceutical supply and management systems for the hospitals.	230
Figure 125: Mean scores for warehousing quality for primary dispensing pharmacy and bulk storage facility in hospitals .....	231
Figure 126: Availability of guidelines on management of pharmaceutical storage conditions in hospitals .....	231
Figure 127: Person responsible for managing medical supplies in "other" facilities, including medical stores .....	235
Figure 128: Map of core health workforce density as a multiple of the target of 23 health workers per 100,000 population .....	237
Figure 129: Total staff allocated to and employed in hospitals, by type.....	239
Figure 130: Staff support available, and major human resources issues identified in hospitals .....	243
Figure 131: Human Resources availability in PHC facilities .....	245
Figure 132: Facilities available for record keeping in hospitals .....	250
Figure 133: Storage conditions for hospital records.....	251
Figure 134: Type of systems used for recording admissions and discharges in hospitals.....	251
Figure 135: Professional qualification and training of data management staff .....	252
Figure 136: Availability of policies for data quality checks in hospitals.....	253
Figure 137: Proportion of hospital delivery records containing specific types of information .....	253
Figure 138: Availability of hospital facility support services.....	254
Figure 139: Availability of quality assurance mechanisms in hospitals .....	255
Figure 140: Availability of case reviews and death reviews for quality assurance in hospitals .....	255
Figure 141: Availability of utilities (electricity, water, communication) in the hospitals .....	256
Figure 142: Availability of measures to ensure appropriate waste management in hospitals .....	256
Figure 143: Availability of functional sterilization equipment in hospitals .....	257
Figure 144: Availability of routine maintenance activities in hospitals .....	257



## List of Summary Boxes

Box 1: ANC services availability and readiness .....	66
Box 2: Delivery and EmONC services availability and readiness.....	70
Box 3: FP availability and readiness .....	80
Box 4: Immunization schedule for Libya .....	81
Box 5: Immunization availability and readiness.....	86
Box 6: Preventive and curative services for children under 5 in PHCs: availability and readiness.....	90
Box 7: Tuberculosis services availability and readiness .....	105
Box 8: HIV counselling and testing services availability and readiness .....	109
Box 9: Prevention of Mother to Child Transmission of HIV services: availability and readiness.....	111
Box 10: Sexually Transmitted Infection services: availability and readiness .....	116
Box 11: Leishmaniasis services: availability and readiness.....	118
Box 12: Brucellosis services: availability and readiness.....	121
Box 13: Diabetes services: availability and readiness .....	131
Box 14: Cardiovascular diseases services: availability and readiness.....	133
Box 15: Chronic respiratory diseases services: availability and readiness .....	136
Box 16: Cervical cancer diagnosis: availability and readiness.....	140
Box 17: Breast cancer services: availability and readiness .....	142
Box 18: Mental health services: availability and readiness .....	145
Box 19: Emergency services: availability and readiness .....	161
Box 20: Minor surgery services: availability and readiness .....	169
Box 21: Major surgery services: availability and readiness .....	174
Box 22: Blood transfusion services: availability and readiness.....	179
Box 23: Dental services: availability and readiness .....	190
Box 24: Imaging services - availability.....	194
Box 25: Laboratory services - availability and readiness .....	199



## Abbreviations and Acronyms

AEFI	Adverse event following immunization
ANC	Antenatal Care
ARV	Anti-Retroviral
BCG	Bacillus Calmette–Guérin (tuberculosis vaccine)
BEmONC	Basic Emergency Obstetric and Newborn Care
CEmONC	Comprehensive Emergency Obstetric and Newborn Care
CSPRO	Census and Survey Processing System
CT	Computerized Tomography
CRD	Chronic Respiratory Disease (i.e. asthma, chronic obstructive pulmonary disease)
CVD	Cardiovascular Disease
DHO	District Health Officer
DOTS	Directly Observed Treatment Short course
ENT	Ears, Nose and Throat
ECG	Electrocardiograph
ECHO	European Commission’s office on Humanitarian Aid and Civil Protection
EEG	Electro encephalograph
EH	Ethambutol + Isoniazid fixed drug combination for tuberculosis
EmONC	Emergency Obstetric and Neonatal Care
EMRO	Eastern Mediterranean Regional Office
EPI	Expanded Program on Immunization
FDC	Fixed Drug Combination (for treatment of tuberculosis)
GHs	General Hospital
GP	General Practitioner (physician)
HC	Health Center
HDR	Human Development Report
HIC	Health Information Center
HIS	Health Information Systems
HIV/AIDS	Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome
HMIS	Health Management Information System
HQ	Headquarters
ICD-10	International Classification of Diseases, 10 <sup>th</sup> Revision
ICU	Intensive Care Unit
IEC	Information, Education, Communication
IMCI	Integrated Management of Childhood Illnesses
IMEESC	Integrated Management for Emergency & Essential Surgical Care
IMPAC	Integrated Management of Pregnancy and Childbirth
IMR	Infant Mortality Rate
IPTp	Intermittent Preventive Therapy (for malaria) in pregnancy
IYCF	Infant and Young Child Feeding
KMC	Kangaroo Mother Care
MDGs	Millennium Development Goals
MFL	Master Facility List
MoH	Ministry of Health
MMR	Maternal Mortality Ratio
MRI	Magnetic Resonance Imaging
MSO	Medical Supply Organization
NAP	National AIDS Program
NCDC	National Center for Disease Control
NCMR	National Council for Medical Responsibilities

NGO	Non-Governmental Organization
NICU	Neonatal Intensive Care Unit
NMR	Neonatal Mortality Rate
NPOT	National program for organ transplantation
OB/GYN	Obstetrics and Gynecology
OPD	Out-Patient Department
ORS	Oral Rehydration Solution
PCR	Polymerase Chain Reaction
PHC	Primary Health Care
PHCC	Primary Health Care Clinic
PHCU	Primary Health Care Unit
PLHIV	People living with HIV
PMTCT	Prevention of mother to child transmission
PPH	Postpartum Hemorrhage
PROM	Premature rupture of membranes
PWID	People who inject drugs
RHE	Rifampicin + Isoniazid + Ethambutol fixed drug combination for tuberculosis
RHZ	Rifampicin + Isoniazid + Pyrazinamide fixed drug combination for tuberculosis
RMNCH	Reproductive, Maternal, Neonatal and Child Health
SARA	Service Availability and Readiness Assessment
SARA-H	Service Availability and Readiness Assessment tool for Hospitals
SDGs	Sustainable Development Goals
SOP	Standard Operating Procedures
STI	Sexually Transmitted Infection
TB	Tuberculosis
TMC	Tripoli Medical Center
TT	Tetanus Toxoid (vaccination)
TOT	Training of Trainers
U5MR	Under 5 Mortality Rate
UNICEF	United Nations International Children's Emergency Fund
VCT	Voluntary counselling and testing
WHO	World Health Organization

## Executive Summary

The Service Availability and Readiness Assessment (SARA) survey is a systematic survey which aims to provide reliable information on availability and readiness of health services delivery. This is the second SARA survey conducted in Libya, with the first one completed in 2012. The survey was a collaborative effort between the World Health Organization (WHO) Libya office and the Health Information Center (HIC) of the Libyan Ministry of Health (MoH), with financial support provided by ECHO, the EU, and the WHO. Conducted as a census survey, it covered all 1,656 public health facilities and used two separate tools: a set of seven hospital survey questionnaires, and a core questionnaire used for all PHC and other facilities. Data collection for the hospital survey was done from August to December 2016, and the PHC-level data collection started in September 2016 and ended in February 2017. Additional data on service utilization was provided by the Libyan MoH, while the population estimates for 2017 for Libya's 22 districts were provided by the Libyan Bureau of Statistics.

### General availability and readiness

Of the 97 public hospitals, 1,355 primary health care facilities (primary health care units, centers and polyclinics), and 204 other specific health service facilities in Libya, 19% were closed at the time of survey. This includes 17 hospitals (18%), 273 primary health care facilities (20%) and 18 other specific health services (8%). The main reason for closure of a facility was maintenance (51% of the 308 closed facilities), followed by inaccessibility due to conflict (20%), damage (19%), and occupation by other parties (11%).

### General services availability

The General Service Availability Index is a composite score of indicators calculated from three domains: health infrastructure, health workforce, and service utilization. The health infrastructure score is a composite score that includes two domains: facility density per 10,000 population and inpatient bed density per 10,000 population. The service utilization score is also a composite of two domains: outpatient visits and hospital utilization.

The overall score for the General Service Availability Index for Libya is 81%, which indicates that potential access to health services is good. This relatively high score can be attributed to perfect scores in three domains:

- The health facility density of 2.8 public and private health facilities per 10,000 population is well above the target of two health facilities per 10,000 population.
- The health workforce index of 76 core health workers per 10,000 population is three times higher than the WHO target of 23 per 10,000 population, and far above the SDG target of 45 per 10,000.
- Maternity bed density scores are also well above 100% of target, with 13 beds per 1,000 pregnant women, as compared to an international target of 10 beds.

Three domains reduced the overall General Service Availability score due to targets which were not met:

- Inpatient bed density scores (combined for public and private facilities) are at 61% of the target of 25 beds per 10,000 population.
- The hospital utilization score is at 78% of a target of 10 admissions per 100 population.
- Utilization of outpatient services in the public sector, with an estimated need (target) of 5 visits per person per year, scored 36% of target.

Increasing hospital bed density is relatively straightforward, as some hospitals are scheduled to re-open, and only 39% of hospital beds were functional at the time of the survey. Low utilization of hospital and outpatient services indicates that a significant proportion of services is likely being supplied by the private sector.

### General services readiness

Service readiness scores are a composite score, based on the availability of tracer items in five domains: basic amenities (six tracer items), standard precautions for infection prevention (seven tracer items), basic equipment (five tracer items), basic medicines (20 tracer items), and diagnostics (seven tracer items), each of which are needed to provide adequate basic services. Scores were calculated separately for hospitals and PHC facilities, using different tracer items for the two types of facilities. The general readiness score for the provision of basic services by hospitals was 69%, indicating a fair readiness capacity for service provision. The overall score was primarily lowered as a result of the low availability of basic medicines (44%) and a fairly limited availability of diagnostic tests (63%). The general readiness score of 45% for PHC facilities is unacceptably low, and indicates that the capacity to provide basic health services in these facilities is severely constrained. The greatest limitation lay in the availability of basic medicines, with a score of only 16%. The availability of standard precautions and diagnostics was higher, at 49% and 48%, respectively, while the basic amenities score was 50%. The highest scoring domain was basic equipment at 60%. Urgent action is required to restore essential medicine supplies and improve the availability of diagnostics, as these two domains represent both the highest need and the best potential for improvement for both hospitals and PHC facilities.

### Service-specific availability and readiness

The table below provides an overview of the availability and readiness scores for each specific service provided through the PHC facilities in Libya. The services offered by the largest number of facilities include immunization, child health services, and diagnosis and treatment for the four main non-communicable diseases. Laboratory and pharmacy services are available in over 30% of the health facilities. The main focus of the Libyan health services appears to be on non-communicable diseases and immunization.

Readiness scores for each of the services are composite indices measuring the availability of service-specific tracer items in selected domains such as basic medicines, basic equipment, basic diagnostics, as well as the availability of staff having been trained in the given service during the past two years, and service-specific guidelines. The readiness scores are higher for hospital services than for those offered through the PHCs. PHC facilities score below 45% for all services except immunization (69%). A number of specific services warrant greater availability in terms of potential demand, but also an improvement in overall readiness capacity of the already available services. These are mental health, family planning, and the diagnosis and control of STIs, including HIV.

## Availability and readiness of specific services provided by hospitals and PHC facilities

	General overview (% of 1142 total PHC and hospital facilities)	Hospitals (% of all 80 hospitals)	Hospital Readiness score	PHC facilities (% of 1069 PHC facilities)	PHC Readiness score	Other facilities
<i>Antenatal care (ANC)</i>	222 (19%)	38 (48%)	43%	184 (17%)	40%	
<i>Delivery</i>	68 (6%)	52 (65%)	54%	17 (2%)	20%	
<i>BEmONC</i>	51 (4.4%)	51 (64%)	54%	1 (0.1%)		
<i>CEmONC</i>	43 (3.7%)	43 (54%)	55%	0		
<i>Family Planning</i>	18 (2%)	0	-	18 (2%)	8%	
<i>Infertility treatment</i>	5*	0	-	0		*5 infertility centers
<i>Immunization</i>	519 (45%)	52 (65%)		467 (44%)	69%	
<i>Child Health</i>	386 (34%)	59 (74%)	-	327 (31%)	35%	
<i>Adolescent health</i>	-	-	-	-	-	-
<i>Tuberculosis</i>	27* (2%)	4 (5%)	-	23*	44%*	*23 NCDC clinics
<i>HIV/AIDS: counselling &amp; testing</i>	8 (0.7%)	5 (6%)	32%	3 (0.3%)	47%	1 CDC & Immunology center
<i>HIV/AIDS: PMTCT</i>	4 (0.3%)	4 (5%)	36%	0	-	
<i>STIs</i>	15 (1%)	9 (11%)	29%	6 (0.6%)	33%	
<i>Leishmaniasis</i>	36 (3%)	-	-	36 (3%)	-	
<i>Brucellosis</i>	28 (2%)	-	-	28 (3%)	-	
<i>Diabetes</i>	605 (53%)	55 (69%)	56%	550 (51%)	40%	3 diabetes treatment centers
<i>Cardiovascular diseases</i>	565 (49%)	55 (69%)	42%	510 (48%)	24%	
<i>Chronic respiratory diseases</i>	523 (46%)	45 (56%)	40%	478 (45%)	18%	
<i>Cervical cancer</i>	44 (4%)	10 (13%)	45%	34 (3%)	28%	1 oncology center
<i>Breast cancer</i>	-	-	-	396 (37%)	-	
<i>Mental health</i>	14 (1%)	8 (10%)	-	6 (0.6%)	-	1 mental health clinic
<i>Other</i>		-	-			26 dialysis centers
<i>Emergency services</i>	67 (0.06%)	67 (84%)	47%			47 ambulance service centers
<i>Minor Surgery</i>	244 (21%)	72 (90%)	32%	172 (16%)	24%	
<i>Major surgery</i>	47 (0.04%)	47 (59%)	52%			
<i>Blood transfusion</i>	57 (5%)	53 (66%)	60%	4 (0.04%)	35%	5 blood banks
<i>Dental services</i>	215 (19%)	28	-	187 (17%)	-	12 dental clinics
<i>Diagnostic imaging</i>	204 (18%)	78 (98%)	-	103 (10%)	-	23 facilities
<i>Laboratory testing</i>	430 (38%)	78 (98%)	69%	300 (28%)	39%	52 facilities
<i>Pharmacy services</i>	397 (33%)	79 (99%)	41%	318 (30%)	10%	52 medical supply warehouses

### Reproductive, Maternal, Neonatal and Child Health services

Although **antenatal care (ANC)** in Libya can boast of high coverage figures, both the availability and readiness of this service are limited at the national level. Lack of essential medicines, guidelines, and trained staff contribute to a low readiness score of 40% in the 184 PHC facilities that offer ANC, and 43% for the 38 hospitals offering these services. Notwithstanding the high coverage, the overall quality and effectiveness of ANC services requires attention across the country. The districts of Wadi Ashati, Al Jifarah, and Ghat each have one facility providing ANC services, accompanied by low readiness scores, suggesting that ANC services are essentially unavailable here. The fact that nearly 50% of municipalities do not have a facility offering basic ANC service is indicative of an inequitable distribution of services.

All districts in Libya have one or more facilities that provide **delivery services**. Delivery services in the districts of Sirt, Wadi Al Haya, and Ghat are provided only through PHC facilities, none of which provide all seven signal functions of Basic Emergency Obstetric and Neonatal Care (BEmONC). In addition to

the unavailability of EmONC services, the readiness indicators for delivery services through the PHC facilities in these three districts are unacceptably low at 9%, 36% and 24%, respectively.

The small number of public facilities offering **family planning (FP)** services (18 for the entire country), the limited number of contraceptive methods provided, and the low readiness score of 36% for the available services, suggest that reliable FP services through the public sector are virtually non-existent in Libya. Data from 2007 indicates that the unmet need for family planning is relatively low, whilst the level of contraceptive use is reasonably high, although later data seems to suggest that these rates are changing. The demand for FP services in Libya appears to be met primarily through the private sector.

The availability of **immunization services** is good across the country, as reflected by the numbers of facilities offering services, and the high coverage rates reported. However, the continued presence of measles cases suggests that significant gaps in coverage do exist. There is clear room for improvement in terms of quality of services, with facilities located in the districts of Aljufra, Al Jabal Al Gharbi, Nalut, Wadi Ashati, and Ghat requiring specific attention to training and availability of guidelines on immunization. At municipality level no immunization is available in Espeaa, Rigdaleen and Sidi Assayeh, and virtually non-existent in Arrajban.

The availability of **preventive and curative services for children <5 in Libya** is limited. Over one-third of municipalities cannot provide child health care to their constituents. Where PHC facilities do offer them, the service package is generally limited, focusing primarily on diagnosis and treatment of malnutrition, and treatment of pneumonia. Few staff have been trained on growth monitoring and IMCI, and there is limited availability of tools such as functional equipment to measure height and weight, and growth monitoring charts.

#### Communicable diseases

Diagnosis and treatment for **Tuberculosis (TB)** was available through 22 functional NCDC facilities located in 15 districts, and four specialist hospitals. The referral capacity of PHC facilities to TB diagnostic and treatment services was not measured. The overall readiness score of 44% indicates that there is still considerable room for improvement in the readiness domains, especially in terms of the availability of diagnostics and key medicines.

Just eight facilities in Libya offer **counselling and testing for HIV**. The general capacity for referral of suspect HIV cases to these facilities was not examined. The overall readiness scores for counselling and testing services is 32% for hospital-based facilities and 47% for PHC-based facilities, which indicates a need for improvement in terms of staff training, availability of condoms, and improvement in terms of the privacy of counselling rooms.

Four facilities offer services for the **Prevention of Mother to Child Transmission (PMTCT)** of HIV/AIDS in Libya. Most sites offer the full package of PMTCT services, with an average availability score of 75%, but overall readiness scores are low at 37%. This low score is due to a lack of guidelines and trained staff available in the hospitals, a significant shortage of medicines, and the limited availability of relevant diagnostics.

Although the overall prevalence of **Sexually Transmitted Infections (STIs)** in Libya is unknown, it can be assumed that transmission is not limited to specific geographical areas. Nevertheless, only eight out of 22 districts have STI services available, with only six PHC facilities and nine hospitals reportedly offering diagnosis and treatment. Training of staff and availability of medicines are low, and readiness

scores do not exceed 35%, indicating that there is a considerable gap in service availability and readiness for STIs.

**Leishmaniasis** services are primarily provided in those areas of the country where transmission is known to occur. With only 36 facilities located in nine districts providing services, availability across the country is limited. The capacity to deliver these services is further constrained by the low availability of relevant diagnostics methods and medicines.

**Brucellosis** services are primarily provided in the northwest of the country where transmission primarily occurs. Only 28 facilities located in five districts provide diagnostic and treatment services. The capacity to deliver these services is limited by the low availability of relevant diagnostic methods and medicines.

### Non-Communicable Diseases

All districts and 97% of municipalities have a health facility available that can offer **diabetic** patients diagnosis and management services for their disease. The actual capacity to provide these services is limited, however, as low readiness scores for hospitals (56%) and PHC facilities (40%) reflect a lack of staff with up-to-date training and a significant lack of essential medicines.

Although nearly half of the hospitals and PHC facilities in Libya can provide diagnosis and management of **cardiovascular diseases (CVD)**, and 96% of municipalities have at least one facility offering CVD care, the readiness scores of 24% for PHC facilities and 42% for hospitals reflect the existence of a great shortage of well-trained staff and essential medicines for the diagnosis and treatment of CVDs.

Diagnosis and management of **chronic respiratory diseases (CRD)** is available in nearly half of the hospitals and PHC facilities in Libya, with 96% of municipalities having at least one facility offering CRD care. However, the readiness scores of 18% for PHC facilities and 43% for hospitals reflects significant shortages in well-trained staff and essential medicines for the diagnosis and treatment of CRDs.

The number of facilities offering diagnosis of **cervical cancer** is limited to only 4% of all public health facilities in Libya. Ten hospitals and 34 PHC facilities report offering diagnostics, with 8 hospitals offering specific oncology services and large areas of the country lacking services altogether. No national screening program is in place. Readiness of the available services is low, at 28% for PHC facilities and 45% for hospitals. Even the facilities offering cervical cancer diagnosis lack trained staff, equipment, and diagnostics, and are often unable to offer adequate services to the population.

Basic **breast cancer** screening is widely available in Libya, with 396 PHC facilities reporting the capacity to give an initial diagnosis through medical examination. There are 12 mammography machines available, while a good majority of hospitals can offer a more refined diagnosis through ultrasound (89%) and biopsy (76%). Oncology services are reportedly available in eight hospitals.

Although **mental health** needs in Libya are likely to be considerable, especially given the ongoing conflict, service delivery is limited to only eight districts. Six hospitals, one mental health clinic, and four PHC facilities are available to cover all the needs, which is grossly insufficient for a population of over six million. Trained staff, guidelines and essential medicines are in short supply in the PHC facilities and hospitals. Mental health service delivery in Libya needs urgent attention.



### Emergency, surgical, and blood transfusion services

**Emergency services** in Libya are primarily provided through 67 hospitals and cover all districts except Wadi Al Haya and Ghat. Treatment for medical emergencies is most widely available (91% of facilities), while emergency newborn care is limited (36%). Readiness scores are low, at 48%, with weak areas primarily consisting of the limited availability of guidelines (21%), trained staff (18%) and diagnostic services (40%). Access to the hospitals is supported by 47 functional ambulance centers, which are available in 19 out of 22 districts, with an overall availability of 0.7 centers per 100,000 population.

There are 244 health facilities that offer **minor surgery** (172 PHC facilities and 72 hospitals), but the readiness scores for both types of facilities are low (24% and 32% respectively). Although hospitals consistently outperform the PHC facilities in terms of readiness scores, 67 out of 72 hospitals still score below 50% for minor surgery readiness. A concerted effort is needed to address shortcomings in training, the availability of guidelines, and the availability of essential medicines. That the achievement of a good score is possible is demonstrated by Emhamd Al Meqrif Hospital in Ejdabiya and Misslata hospital, with respective readiness scores of 100% and 97%.

There are 47 hospitals which offer **major surgery**, mostly orthopedic and general surgery, although there is also a capacity to do organ transplants and cardio-thoracic surgery. Four districts (Sirt, Aljufra, Wadi al Haya, and Ghat) do not have major surgical services available, while eight districts have readiness scores for major surgical services below 50%. The overall readiness score is 52%, indicating that action is needed, specifically in terms of staff training, guidelines, and the availability of essential medicines.

Seventy-two facilities report offering **blood transfusion** services. These consist of four PHC facilities, 53 hospitals, and 15 other facilities, which includes three blood banks and 11 dialysis centers. Sirt, Wadi al Haya, and Ghat do not have blood transfusion services available at the district level. Readiness scores for blood transfusion are very low for PHC facilities (35%) and higher for hospitals (60%), and indicate that there is a need for the improvement of the services, specifically in terms of staff training, guidelines, and the availability of diagnostics.

### Dental services

**Dental services** in Libya are provided through 226 facilities located in hospitals, PHC centers and dental clinics, with an average of 3.5 dental facilities per 100,000 population. Approximately 300 PHC facilities have dental chairs available but do not offer dental services. Dental services are available in 21 out of 22 districts, with no services available in Wadi Ashati. Coverage is highest in in Al Jabal Al Akhdar district (9.1 clinics/100,000 pop) and Azzawya (8.1 clinics/100,000). Most facilities offer simple dental treatment upon demand, with less attention to preventive services such as the provision of health information. Staff in 30% of the 187 PHC-based dental clinics had been trained in the last two years.

### Diagnostic services

**Diagnostic imaging** services such as X-rays are provided through 203 facilities, including 103 PHC facilities, 77 hospitals and 23 NCDC centers. All districts have a theoretical availability of imaging services, but Ghat district had no functional equipment, and thus no real capacity to provide services. Sirt and Al Jifarah have a low ratio of imaging facilities available per population. Forty-one out of 101 municipalities have functional services available. The most widely available imaging service is X-ray, followed by ultrasound. Overall availability of functional equipment in hospitals is 93%, with an average availability of suitably trained staff of 85%.



**Laboratory** services are available in 430 health facilities, the majority of which are PHCs (70%), followed by hospitals (18%) and other facilities such as NCDC clinics (12%). All districts have laboratory services available although Wadi Ashati, Sirt, and Al Jifarah have a lower ratio of lab facilities to population than the other districts. Readiness scores range from 39% in the PHC facilities to 69% in the hospital laboratories, with the low score in PHC facilities primarily due to a lack of medical materials such as rapid tests and urine dipsticks. There is a significant need to address general quality control measures in the hospital laboratories.

### Essential medicines, and human resources

The general availability of a comprehensive set of **essential medicines** in hospitals is low at 41%, while for the PHC facilities and medical stores, levels are extremely low at 10% and 13%, respectively. The availability of medicines does not tend to differ considerably across treatment categories in PHCs or hospitals, with the exception of medicines for mental health, the stocks of which are near zero in all types of facilities. Stocks of family planning medicines, provided only through PHCs, are also virtually non-existent at 2%. A number of hospitals and municipalities report relatively high availability of medicines, and it would be worthwhile to study their systems, as they could serve as examples of “good practices” for other health facilities.

The **health workforce** in Libya meets both the targets for minimum availability of health workers set by WHO, as well as the minimum numbers estimated to be needed for the achievement of the SDGs. Specialist medical doctors is the only category where shortages appear to exist. The average number of staff, including administrative staff, employed per PHC facility is 88. The 302 PHC facilities that reported not providing any services employ 14,598 staff, while the 175 facilities that report providing only a single service, such as immunization, employ an average of 61 staff per facility. These numbers indicate that there is a need to review human resources requirements and deployment across the PHC facilities.

### Hospital record keeping, organization, and management

**Hospital record-keeping and reporting** remains a challenge in the Libyan hospitals. Adequate staff and infrastructure is available to complete manual reporting, but access to computers and internet is limited to 36% of hospitals, and only 28% of hospitals have computer-based record keeping available. Four out of 80 hospitals use the ICD-10 classifications in their reporting. Routine data quality checks in hospitals are rarely done, and only 14% of hospitals had evidence available of any data quality checks being conducted. In a random sample of delivery records, the overall presence of 16 trace data indicators was 62%.

**Hospital management** systems are in place in most hospitals, but management training has been received by less than half of the management team members. Other responsible staff that require training include those for infection prevention and quality assurance systems, as a number of systems could benefit from strengthening. Over 90% of hospitals had electricity and running water, with 80% having a functioning back-up generator. All hospitals had functional computers, but only 36% had access to internet. Twenty-four percent of hospital facilities were in good repair, medium-size repairs were required in 64% of hospitals, and major repairs were needed in 12% of buildings.

## Structure of the report

**Chapter 1** of this report gives a brief introduction into the Libyan health system, looking at both the public and the private sector. The organigram of the MoH has been updated and included, and a figure was created that provides an overview of the services provided through the hospitals and PHC facilities. The last page of the chapter consists of an overview of the most recent national health indicators for Libya.

**Chapter 2** describes the methodology used for the implementation of the SARA survey and subsequent analysis. The indicators, cut-off points and analytic approaches for SARA are briefly described. The questionnaires used for the survey are not included in this report but will be made available online on the MoH website, or copies can be requested from either the Health Information Center or the WHO Libya office.

**Chapter 3** reports findings focusing on the general availability of services, carefully following the SARA methodology for the calculation of general service availability and readiness indicators at the national and district level (22 districts). Maps provide an overview of the location of the health facilities and provide a geographic overview of district-level results for the general service availability and readiness analysis indicators. All maps use the same cut-off indicators to ensure comparability.

Colour-coding is used for the data presented in nearly all the maps and tables in this report:

- Red: Data from hospital facilities only
- Blue: Data from PHC facilities only
- Yellow: Data from Other facilities only
- Green: Combined data (Public/private, Hospital/PHC/Other)

**Chapters 4 to 9** follow a systematic approach in analyzing and presenting available results for five service domains. These are Reproductive, Maternal, Neonatal, and Child Health (RMNCH) services (Chapter 4), Communicable Disease services (Chapter 5), Non-Communicable Disease (NCD) services (Chapter 6), Emergency, surgical, and blood transfusion services (Chapter 7), Dental services (Chapter 8), and finally, Diagnostic imaging and Laboratory services (Chapter 9).

Each of the five domain-specific chapters is divided into sub-sections that explore the individual services, with the description of each specific service following the same approach:

- The first part of each service-specific section presents the availability and readiness scores for the given service. Availability is defined by the number of health facilities that report providing the services, while readiness is calculated as a composite index of the availability of a selected number of relevant tracer items for up to five domains (trained staff, guidelines, medicines, diagnostic tests/equipment, and basic amenities/equipment). The tracer items are different for each service, and may also be different for each type of facility. Maps are included for each specific service. The maps present the ratio of the total number of facilities providing a specific service in a district per 100,000 population. The lighter colours in the maps show a lower availability of facilities, with the darker colours indicating a higher availability. If a service is provided through only one type of health facility, this is reflected in the colour of the shading, but most maps are green, indicating a combination of PHC and hospital data. The accompanying readiness scores are included in the maps as numbers (percentages), normally presenting only the scores for the type of facility that most frequently

offers these services. The referral hospitals for the specific services are also mapped, while hospitals that do not provide the specific services are not included.

- The second part of the service-specific section presents national level availability data for most of the tracer items used to calculate the readiness scores, with a focus on the availability of trained staff, guidelines, and essential medicines. At times, additional data on infrastructure, standard precautions, or other relevant domains are also included here. These data are provided separately for each type of facility, in the event that services are provided by both hospitals and PHC facilities. Some services, such as brucellosis and breast cancer diagnostics, were included in the survey upon the request of the MoH, and did not have sufficient data or a clear methodology for a calculation of readiness scores, but even for these services, potentially relevant data are still included whenever available.

The last two sections in each of the five service domain chapters provide a subsequent level of disaggregation for all the sub-services together. For example, the availability of the individual RMNCH services, along with a number of potentially relevant sub-sections, is presented at the municipality level for all the PHC facilities, and also separately for the individual hospitals. The tables included in these sub-sections are quite extensive, and allow readers that are interested in particular hospitals or municipalities to explore data specific to the services provided at this level. Generally, the tables only include the hospitals or municipalities that offer the selected services. In the event that a municipality or hospital is not included in a table, it is safe to assume that the specific services are not available there.

**Chapter 10, 11 and 12** examine available data for three specific health systems building blocks: essential medicines, the health workforce, and health information. The chapters on essential medicines and human resources draw on information from three separate datasets: hospitals, PHC facilities, and “other” facilities, and results are presented accordingly. Chapter 12 relies primarily on data from the hospitals, as detailed questions on this subject were not included in the core questionnaire used for the PHC and other facilities.

**Chapter 13** provides a very brief overview of the organization and management of the hospital facilities, relying exclusively on data from a corresponding module in the SARA-Hospital questionnaire. The table at the end of this chapter provides an overview of all the relevant data collected for each hospital, in order to allow those interested in management issues for a specific hospital to explore this in more detail.

**Annex I** consists not only of the complete listing of all health facilities (the Master Facility List), but it also gives an overview of the number of staff employed and the specific services that each health facility reportedly provided. The reader interested in a specific health facility may wish to review this list first.

**Annex II** provides the 2017 estimates for population by district as provided by the Libyan Bureau of Statistics.

**Annex III** is provided for those who wish to do more detailed mapping of available data at district level, as it provides the P-codes (place codes) used by the humanitarian system for mapping, alongside the spelling of the district names that are used in this report, and alternate district names that were encountered during the process of preparing this report.

# 1 Introduction

## 1.1 General context

Libya is located in North Africa on the southern coast of the Mediterranean Sea between 18° and 33° north latitude and 9° and 25° east longitude. It has a land area of 1,665, 000 square kilometers, making it the fourth-largest country in Africa. It shares a border with six other African countries (Algeria, Chad, Egypt, Niger, Tunisia, and Sudan) and has a coastline of around 1900 kilometers. The main cities are located along the Mediterranean coast, in the northern part of the country.

The estimated population of Libya is 6.5 million people for 2017 (1). The population living in urban areas is high at 88% (2). However, with nearly four persons per square kilometer, Libya has one of the lowest population densities in the world, although this low population density is not uniform across the country. The coastal northern region is more densely populated, with 85% of the population living on 10% of the land area, while the larger southern region, consisting primarily of desert, is very sparsely populated.

Oil is the backbone of the Libyan economy, as the country holds the largest oil reserve in Africa. The United Nations Development Program listed Libya 100<sup>th</sup> out of 188 countries in the 2016 Human Development Index (3). Literacy rates are high at 91% in 2015 (4). Life expectancy at birth was 75 years in 2012 (2).

The administrative system of Libya is relatively decentralized. The country is divided into 101 municipalities, each with a functional council and with different directorates responsible for the planning, implementation, monitoring and evaluation of the health, education, economic, and other sectors.

## 1.2 Conflict and humanitarian context

The current conflict in Libya, which started in 2011, has resulted in a general deterioration of governance and infrastructure. The aftermath of this conflict and the proliferation of armed groups contributed to continued violence and instability across the country. A new wave of conflict erupted in 2014, and the ongoing crisis has resulted in tens of thousands of casualties since early 2011. During the conflicts, the output of Libya's economically crucial oil industry collapsed to a small fraction of its usual level, with many facilities blockaded or damaged by rival groups. This has contributed to a deterioration of public services and infrastructure.

Based on the 2015 Libya Multi-Sector Needs Assessment (5) and the 2017 Libya Humanitarian Needs Overview (6), access to life-saving medical care and essential medicines are considered to be the foremost humanitarian need. The country is facing a severe shortage of medicines, medical supplies, and vaccines due to a lack of security and interruptions in supplies delivery. It is estimated that approximately 1.3 million people do not have access to life-saving health care services and resources.

## 1.3 Health system

Libya's health care system has come a long way since 1951, when it started functioning with meager resources: 14 hospitals (1,600 bed capacity) and a small number of health centers. In 1972 the process of planned development in the country started, with the first Three-year National Transformation Plan (1973-75) emphasizing that access to health services was the right of every citizen. Community health facilities were introduced between 1970 and 1979. "Health for all" has been the mandate since 1980, with the government of Libya providing free universal coverage of health services.

Decentralization of the health system started in 2000, when the central body (Secretariat of health) was dismantled in favor of the district level. In 2003 the Authority of Health Care Planning was established, and the General Health Inspector was appointed at the central level to supervise the district secretariats of health, which had no executive authority. The year 2006 saw a move back towards centralization. The Secretariat of Health was re-established and was authorized to supervise the central institutions and the secretariats of health at the district level. The Ministry of Health was established in 2011, and a Minister of Health was appointed. The onset of the second round of conflict in 2014 resulted in fragmented health care governance due to changes in the political system of the country.

Health services are now provided by a mix of public and private providers, with some traditional medicine also being prescribed. Health services have deteriorated considerably since 2011, with severe constraints in both technical capacity and financing.

### 1.3.1 Public Sector

The public health sector is the main health services provider. Health care including preventive, curative and rehabilitation services are provided to all citizens free of charge. At present, almost all levels of health services are decentralized except hospitals and specialized centers.

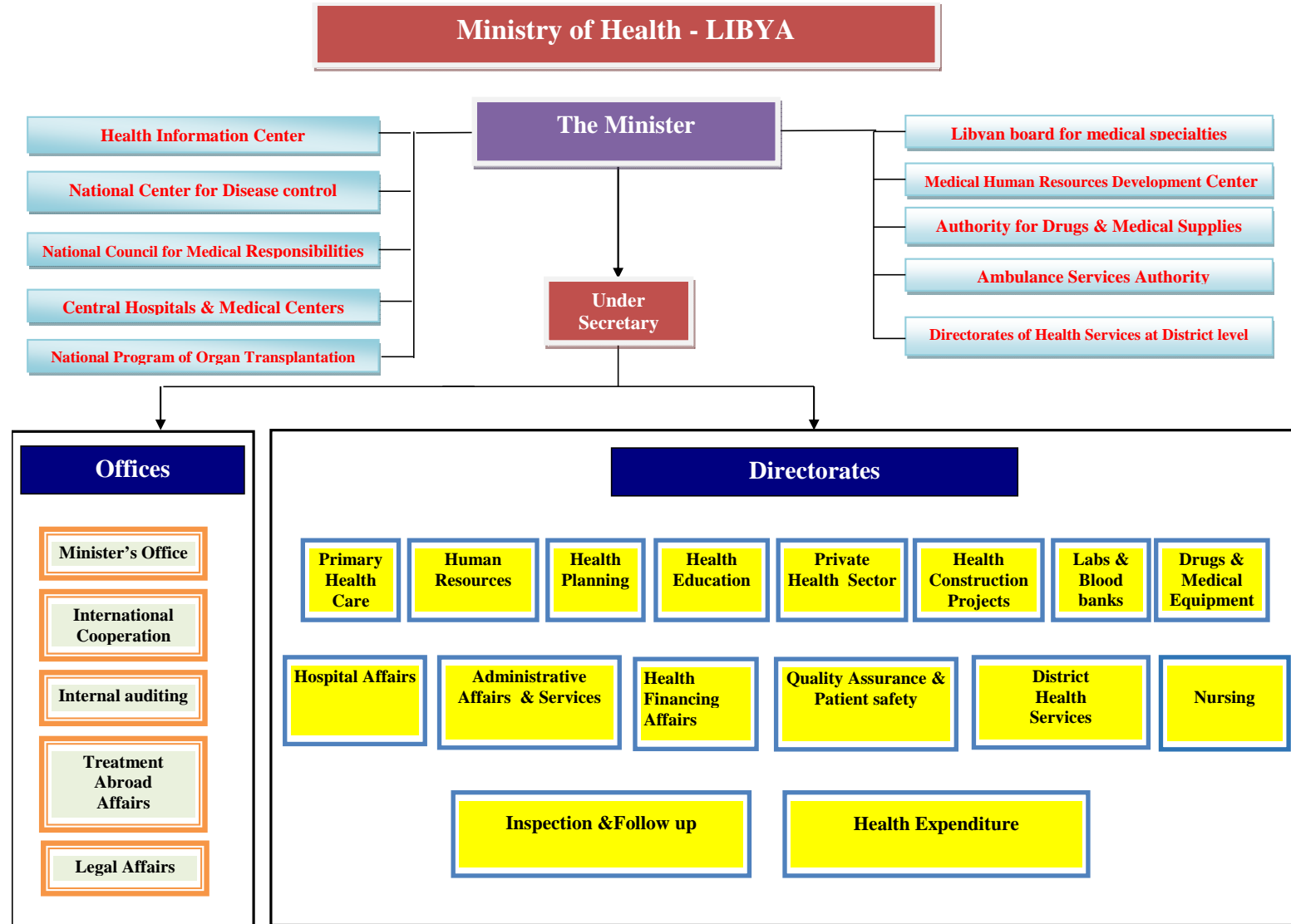
**The Ministry of Health** operates through an administrative and a technical workforce and has an extensive central organizational structure (Figure 1), headed by the Minister of Health, who directly supervises the following central institutions:

- Health Information Center (HIC)
- National Center for Disease Control (NCDC)
- National Council for Medical responsibilities (NCOMR)
- National program for organ transplantation (NPOT)
- Libyan board for medical specialties
- Medical Supply Organization (MSO)
- The center for human resource development
- Authority of ambulance services
- Hospitals and Medical Centers
- Directorates of health services at the municipality level

The Minister of Health is assisted by the undersecretary of health, who effectively works as the head of the staff of the Ministry of Health (MoH). He is administratively responsible for all 16 Directorates, the departments under each directorate, and the five Offices.

At the district level, the district health officer (DHO) is responsible for providing comprehensive health care. Promotive, preventive, curative, and rehabilitative services are provided to all citizens free of charge (public health law No 106 of 1973). Initially the DHO's responsibility included overseeing hospital care, but hospitals have now become autonomous. The DHO now oversees only the primary health care facilities working at the municipal level.

Figure 1: The structure of the Libyan Ministry of Health



Source: Ministry of Health, Libya

In Libya, there is a mixed system of public and private health care, rather than a purely state-run model. Health care is delivered through a series of primary health care units, centers, polyclinics, rehabilitation centers, and general hospitals in urban and rural areas, in addition to a number of tertiary care specialized hospitals. The health care delivery system (Figure 2) operates on three levels:

- 1) The first level consists of the Primary health care units (which provide curative and preventive services for 5,000 to 10,000 citizens); Primary health care centers (serve from 10,000 to 26,000 citizens); and polyclinics, staffed by specialized physicians and containing laboratories as well as radiological services and a pharmacy. These polyclinics serve approximately 50,000 to 60,000 citizens.
- 2) At the second level, there are general hospitals in rural and urban areas where care is provided to those referred from the first level.
- 3) The third level comprises of tertiary care specialized hospitals and medical centers.

#### 1.3.1.1 Hospitals

At the time of survey there were 97 hospitals in Libya, although recently an additional 64 health facilities have been upgraded and given “hospital” status. Of all hospital facilities, 27 (16.8%) are rural, 48 (29.8%) are general, and 22 (13.7%) are specialized hospitals (Table 1).

Table 1: Number and proportion of hospitals by region

	Rural Hospital	General Hospital	Specialized Hospital	Recently notified health facilities to be upgraded as hospitals	Total
Region	N (%)	N (%)	N (%)	N (%)	N (%)
East	06 (17.1)	07 (20.0)	00 (00.0)	22 (62.9)	35
Benghazi	04 (13.8)	08 (27.6)	08 (27.6)	09 (31.0)	29
Central	03 (16.7)	05 (27.8)	02 (11.1)	08 (44.4)	18
South	04 (23.5)	05 (29.4)	00 (00.0)	08 (47.1)	17
Tripoli	03 (11.1)	09 (33.3)	11 (40.7)	04 (14.8)	27
West	07 (20.0)	14 (40.0)	01 (02.9)	13 (37.1)	35
<b>Total</b>	<b>27 (16.8)</b>	<b>48 (29.8)</b>	<b>22 (13.7)</b>	<b>64 (39.8)</b>	<b>161 (100)</b>

Source: Ministry of Health, Libya.

#### 1.3.1.2 Primary Health Care Facilities

In addition to the hospitals, service delivery in Libya is provided through 1,559 public health care facilities (Table 2). Nearly half of them (47%) are health care units, 37% are health care centers, 4% are polyclinics, and 13% are other types of facilities such as dental clinics and tuberculosis (TB) centers.

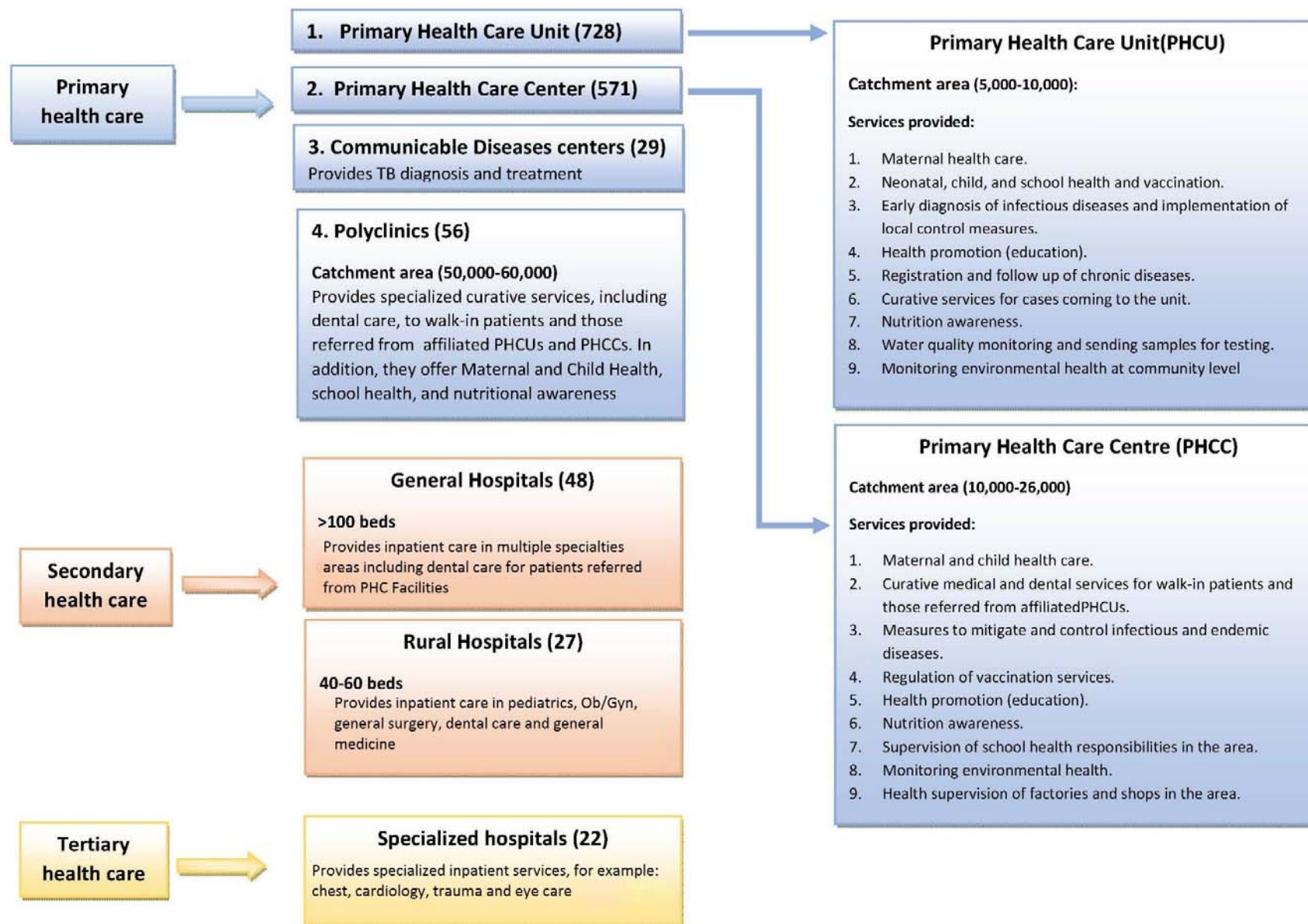
Table 2: Number and type of primary health care facilities

Category	Number	Percent
Health care centers	571	36.6%
Health care units	728	46.7%
Polyclinics	56	3.6%
Others	204	13.1%
<b>Total</b>	<b>1559</b>	<b>100 %</b>

Source: Ministry of Health, Libya.



Figure 2: Libyan health care delivery system





## 1.3.2 Private Sector

### 1.3.2.1 Hospitals

Libya has 157 private inpatient facilities with an inpatient capacity of 2,812 beds. Most private facilities are located in Tripoli, Benghazi, Aljafara and Misrata. The private sector furthermore consists of 503 outpatient clinics, 302 dental clinics, 2,254 pharmacies and 426 laboratories (Table 3).

The continuously growing private health sector was initially hampered by the lack of an overall private sector policy approach by the MoH. In the absence of a clear and consistent government policy, private clinics generally faced deep uncertainty and could not afford to invest in their expansion and development. These clinics were granted licenses to operate without clear criteria or inspection policies, which led owners to fear that their license could be revoked arbitrarily by the authorities. Staffing in the private sector relied on health care professionals who worked in the public sector and transferred to the private sector. An unwelcome decree in January 2006 barred this “dual practice”, which obviously had serious implications for both the public and private sector, as most doctors relied on private work for most of their income. At present, services delivered through private providers are generally restricted to basic activities such as simple operations, as the absence of health insurance means that the population would have to pay out of pocket for more expensive treatment in the private sector.

Table 3: Number and type of private sector health facilities by district

District	Inpatient Clinics (hospitals)	No of beds (inpatient clinics)	OPD Clinics	Dental Clinic	Pharmacies	Laboratory
Al Betnan	1	40	1	1	27	3
Aljufra	0	0	4	1	17	4
Alkufra	0	0	3	2	11	1
Almargeb	6	95	18	20	103	15
Al Wahat/Ajdabia	2	12	18	4	54	11
Aljafara	20	205	47	21	230	121
Almarj	3	0	24	0	63	12
Azzawya	4	138	42	14	152	8
Benghazi	12	205	49	27	185	24
Darnah	2	50	7	6	36	6
Ghat	0	0	2	0	8	1
Al Jabal al Akhdar	2	31	17	5	76	5
Al Jabal al Gharbi	12	140	40	12	77	17
Misratah	20	452	35	15	149	15
Murzuq	0	0	5	7	15	5
Nalut	0	0	10	3	26	2
Sebha	5	74	15	9	49	5
Sirt	0	0	6	3	52	5
Tripoli	61	1250	136	145	787	147
Wadi Ashati	0	0	8	0	40	4
Wadi Al Haya	0	0	4	2	32	6
Zwara (Zwara)*	7	120	12	5	65	9
<b>Total</b>	<b>157</b>	<b>2812</b>	<b>503</b>	<b>302</b>	<b>2254</b>	<b>426</b>

\*Zwara: Jamel, Ragdaleen, Alasaa, Sabrata, Zwara, Alagelat Source: Ministry of Health, Libya.

### 1.3.2.2 Not for profit

The establishment of non-governmental organizations (NGOs) was first allowed in 1971 and the Association Act. Act no 19, issued in 2004, allowed for an expanded role of NGOs in the health sector and organized their registration mechanisms, role, and scope of work. The Libyan Red Crescent Society and a small number of international, national and sub-national NGOs provide health care in the areas of disability, mental health, HIV/AIDS, infertility, kidney disease and cancer.

### 1.3.2.3 Traditional

There are several outlets which sell herbal and traditional medicines and a few traditional medicine clinics but this sector is not regularized and data is not available on their number and activities.

## 1.4 Health indicators

Over the three decades prior to 2011, the Libyan authorities invested significantly in the health sector, which has led to major improvements in health service delivery and the general health of the population. This is clearly demonstrated by Libya's attainment of the Millennium Development Goals (MDG) health targets. Under-five mortality is estimated to have decreased by almost 70%, from 42 deaths per 1,000 live births in 1990 to 13 per 1,000 in 2015 (7). During the same period, maternal mortality ratios (MMR) are estimated to have decreased by over 75%, from 39 per 100,000 live births to nine per 100,000 live births in 2015 (8). Skilled birth attendance coverage was reported to be at 99.8% in 2013 (9).

With the MDGs having come to an end in 2015, Libya committed itself to the achievement of the Sustainable Development Goals (SDGs) by 2030. SDG 3, the "Health" goal, aims to ensure healthy lives and promote well-being for all at all ages. This broad and visionary goal encompasses new areas of work and new targets (Figure 3, below) for the MoH. Libya's health system will need to undergo profound and significant changes if SDG3 is to be achieved. It is hoped that the results presented in this report will be useful in planning for the delivery of those services that will contribute to the successful achievement of the SDG3 targets.

Figure 3: The Health SDG and its targets (10)

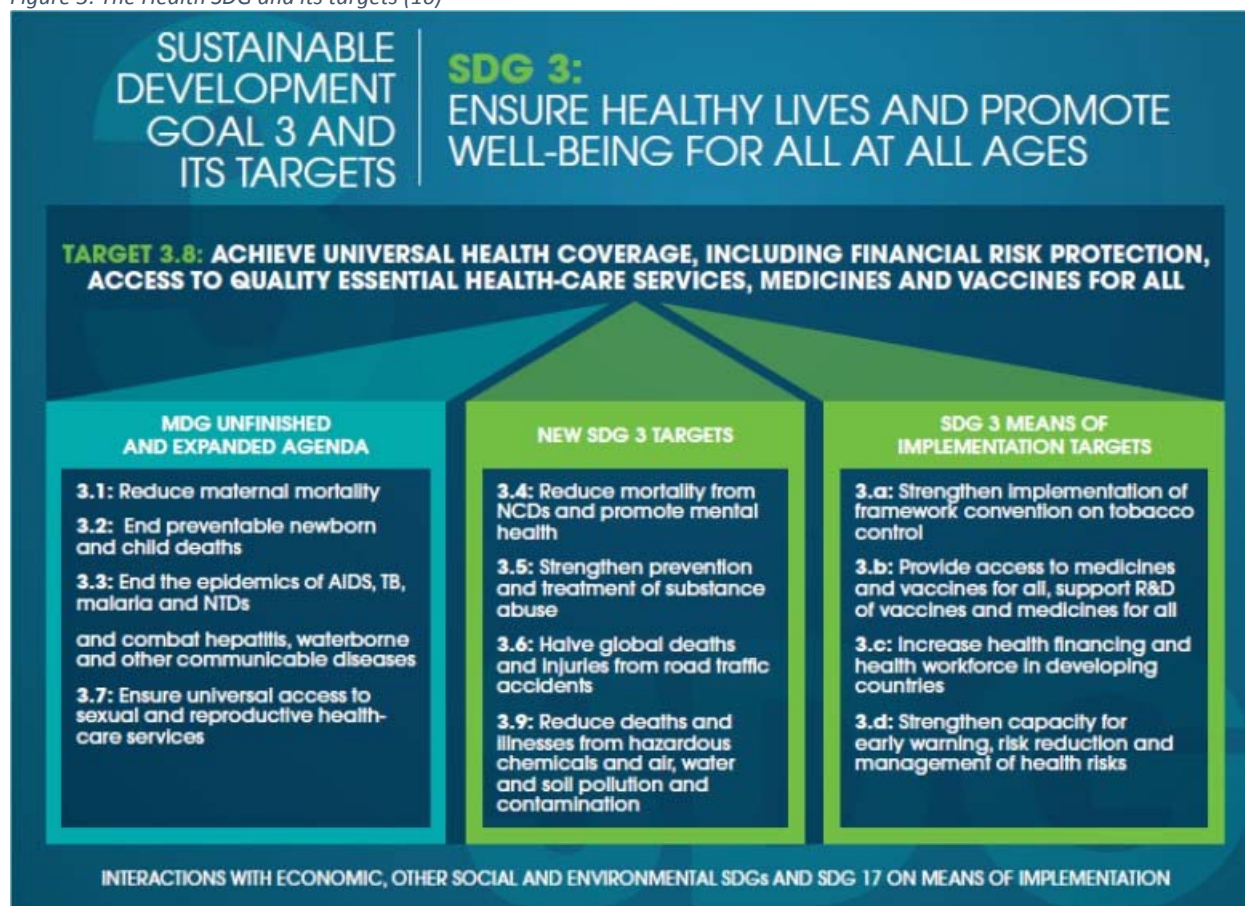


Table 4: Libya health indicators

Demographic indicators		
population 2016	total (1000s)	6246
	urban	88%
population growth, 2012		1.80%
Life expectancy at birth (years), 2015	total	72.7
	male	70.1
	female	75.6
Total fertility, 2015		3.4

Coverage of selected interventions	
Antenatal care coverage (1+ visits), 2014	99%
Antenatal care coverage (4+ visits), 2014	66.3%
Skilled birth attendance, 2014	99%
DTP3-containing vaccine/pentavalent coverage among children under 1 year, 2014	98.6%
Measles immunization coverage, 2015	96.8%
Tuberculosis treatment success rate of new bacteriologically confirmed cases, 2014	61%

Health Financing	
Per capita total expenditure on health, US\$, 2014	372
Out-of-pocket expenditure as % of total health expenditure, 2014	26.5%
General government expenditure on health as % of general government	4.9%

Service Delivery		
Annual outpatient visits per capita, 2010		3
PHC facilities per 10,000 population, 2013		2.6
Hospital beds per 10,000 population, 2013		37
Density per million population of selected medical devices in public and private health facilities, 2013	Computed Tomography	9.7
	Radiotherapy	1
	Magnetic Resonance Imaging	5.2

Sources: WHO, Libya MoH

Health status (mortality)		
Mortality rate per 1000 live births, UN-IGME 2015 estimates	Neonatal	7
	Infant	11
	Under-5	13
Maternal Mortality Ratio, 2015 estimate	Per 100 000 live births	9
Age-standardized mortality rates by major cause, per 100,000 population 2012	Communicable diseases	53
	Noncommunicable diseases	550
	Injuries	63
Mortality rate from road traffic injuries per 100 000 population	Reported, 2015	60.1

Health determinants and risks		
low birth weight among newborns, 2014		7.1%
exclusive breastfeeding 0-5 months of age, 2014		67%
Adults (18+ years) 2014	raised blood glucose	17%
	raised blood pressure	21.9%
Children under 5 who are 2014	stunted	21%
	wasted	6.5%
	Overweight	22%
	obese	10.5%
Adults (18+ years), 2014	Overweight	68.7%
	Obesity	33.1%
Tobacco use (13-15 years), 2010	male	11.0%
	female	5.0%
Access to improved drinking water, 2014		98%
Access to improved sanitation facilities, 2014		97%

Health Workforce		
Personnel per 10 000 population, 2015	Physicians	19.5
	Nursing and midwifery	71
	Dentists	7
	Pharmacists	6

## 2 Methodology

Monitoring performance at health facilities provides information on whether health services are present and are being provided at the expected level. Aggregated data can also give an indication of how investments in the formal health sector are resulting in changes at the level of service delivery. A deeper understanding of service access affects utilization of services and ultimately impacts population-level health outcomes.

The World Health Organization (WHO) Service Availability and Readiness Assessment (SARA) tool was developed for the collection of data on the condition of the health system that are comparable both across countries and within countries (i.e., across regions and/or districts). SARA surveys generally rely on a standard core questionnaire, which is adapted to meet the needs at the national level. The tool focuses on the physical presence of services (availability) and the capacity to deliver both general and specific health services (readiness), but does not attempt to measure the quality of services or resources (11).

A first SARA survey in Libya was conducted in 2012 in order to inform the country progress and performance review processes happening then. The survey aimed to assess the infrastructure, service delivery and system resources (including organizational structure and management, human resources, supply-chain system, technologies, and financial resources). It also assessed facilities readiness and any damage which could have been sustained during the conflict, and measured system outputs, service utilization and their adequacy. The 2012 survey consisted of a census of all hospitals and primary health care (PHC) facilities in Libya. It was divided into two parts: the Hospital and the PHC survey, with each part relying on a separate set of data collection tools. The 2012 survey covered 86 hospitals (33 teaching tertiary hospitals, 20 secondary hospitals, 31 rural hospitals and two “other” hospitals) and 1379 primary health facilities (736 primary health care units [PHCUs], 496 primary health care center [PHCCs], and 147 other types of facilities) (12,13).

In 2016 it was decided to conduct a second SARA survey. The MoH Health Information Center (HIC) and the WHO collaborated on the implementation of this survey, with financial support coming from the WHO and the European Commission’s office on Humanitarian Aid and Civil Protection (ECHO). The identified outputs for the SARA 2017 survey were as follows:

- Valid information to inform policy and plans
- Updated baseline information for monitoring interventions
- Identification of existing gaps in service delivery
- Identification of progress made in service delivery since 2012
- A basis upon which continued reorganization and modernization of the health delivery system and its governance can take place
- Improved capacity of the HIC to implement national health surveys

### 2.1 Selection of health facilities

Planning for SARA activities started with a workshop in Tunis, jointly conducted by MoH and WHO from 20-22 May 2016, and attended by all the relevant stakeholders. It was agreed that a census survey was to be conducted, with complete coverage of all public health facilities. The following types of facilities were to be included in the survey.

Table 5: Types of public health facilities included in the 2017 SARA surveys

Survey	Facilities
<b>Hospitals</b>	Rural public hospitals Secondary public hospitals Tertiary public hospitals
<b>Primary health care services</b>	Primary health care units (PHCUs) Primary health care centers (PHCCs) Polyclinics
<b>Other health facilities</b>	Dental clinics Dialysis Centers Medical Supply warehouses Ambulance service centers Referral medical laboratories Blood Banks Infertility specialized centers Diabetes treatment centers NCDC branches (TB centers)

A Master Facility List (MFL) of all known public health facilities was prepared by the Libyan Health Information Center, using data from both the SARA 1 survey and the Health Management Information System (HMIS). All facilities were included in the survey regardless of status, even facilities which were known to be closed. The final list included 97 hospitals, 1355 PHC facilities, and 204 other facilities. The MFL is included as Annex I.

## 2.2 Survey tools

During the planning workshop it was also agreed that public hospitals were to be assessed using the SARA-Hospital (SARA-H) tool, while the public PHC and other facilities were to be assessed using the SARA Core tool. This approach is consistent with that of the 2012 survey, although the tools have undergone several updates since then, and are no longer directly comparable.

The SARA Core tool for primary health care facilities has one module which includes many of the questions included in the seven modules of the SARA Hospital tool (below), but is limited to functions performed by the primary health care facilities.

The SARA-H tool consists of seven modules:

1. Outpatient services
2. Overview, services, governance, management systems, human resources and capacity
3. Emergency services, procedures and surgical services
4. Delivery and inpatient services
5. Blood transfusion, diagnostics and pharmaceutical commodities
6. Infrastructure and support services
7. Facility information system and statistics

A team from both WHO and MoH extensively reviewed the Core and the Hospital tools and modified questions for the Libyan context, taking into account the local types of facilities, managing authority of facilities, national guidelines for services, staffing categories, tuberculosis and HIV/AIDS medicines, and routine immunization schedules. The final versions of the tools were formally approved by the MoH prior to data collection. The final versions of the questionnaire are available on the MoH SARA website.



## 2.3 Training of surveyors

The surveyors were all medical doctors employed by MoH. They were trained by staff from the HIC and WHO Eastern Mediterranean Regional Office (EMRO). The Training of Trainers (TOT) trainings were conducted separately for surveyors of hospitals (17-21 July 2016) and of PHC facilities (3-6 September, 2016). The TOT trainings were followed by a cascade of trainings conducted in Tripoli and Albeida. Twenty-eight surveyors were trained for hospital assessment, and 73 were trained for the PHC assessments.

Figure 4: Photographs of surveyors training workshops



Training consisted of a mix of lectures and practical sessions on topics such as the overall purpose of the survey; the consequences of poor quality data; how to administer and record responses using the SARA questionnaire, the purpose and meaning of each question, and how to develop good rapport with the respondent; ethical issues involved in conducting a health facility survey; problem-solving in the field; how to enter data and collect geographical coordinates of visited sites using GPS; and common data collection and data entry mistakes. The training included extensive practice, including dummy data entry on the electronic tablets used for data collection, in order to test the tools and the system.

### 2.3.1 Geographic regions

Depending on feasibility and on the indicator being calculated, results were disaggregated and further analyzed by regional, district, municipality and health facility levels. As there is no clear-cut distinction between rural and urban areas in Libya, analysis was not done at this level. Furthermore, no clear-cut regions were ever defined for Libya, but in order to provide data conducive for planning purposes at a scale greater than that of the 22 districts defined at the time of survey, health facilities were grouped into six health zones on the basis of access and referral to the nearest tertiary care facilities. Table 6 gives a rough indication of which districts in each region, although border areas of some districts may be part of an adjoining region. A detailed breakdown of health facilities by region is part of the MFL in Annex I. The

SARA Summary Report 2017 provides a breakdown per region. This full report provides national data and data disaggregated by district. PHC facility data is disaggregated by municipality, while hospital data is reported individually.

Table 6: Districts included in the six health regions defined for SARA

No	Health Region	Districts
1	Benghazi	Alkufra Al Wahat/Ajdabia Benghazi
2	Central	Aljufra Misratah Sirt
3	East	Al Jabal Al Akhdar Almarj Darnah Al Betnan
4	South	Wadi Ashati Ghat Murzuq Sebha Wadi Al Haya
5	Tripoli	Al Jifarah Almargeb Tripoli
6	West	Al Jabal Al Gharbi Azzawya Nalut Zwara

## 2.4 Data collection

Hospital data collection was done between August and mid-December 2016. Data collection for the PHC facilities started in September 2016 and ended in February 2017. Each facility, whether a hospital or a PHC, was surveyed by a single surveyor. Duration of data collection varied from one to several days, depending on the size of the facility surveyed. Each surveyor was issued with an electronic tablet for data entry. Data was collected in part through key informant interviews (usually the head of the health facility and/or their representative) and in part through observation (such as the presence of essential drugs and medical materials). It was subsequently entered on the tablet, and was automatically uploaded to the server in the WHO regional office in Cairo at the end of each data collection cycle, either at the end of the working day and/or upon completion of an individual questionnaire.

## 2.5 Data entry and quality checks

Data entry was done using electronic tablets at the field level. A specific program was developed to facilitate data entry using CSPro, with separate questionnaires for hospitals (the seven SARA-H modules) and primary health care facilities (the single SARA core module). The software included data for quality checks like interview timings, GPS coordinates, contact details of interviewers and pictures of the facility.

Data quality assurance was implemented at three levels:

1. At the level of the survey teams: teams were trained extensively on data quality assurance and problem-solving techniques. WHO focal points were used as independent monitors to verify whether the survey teams had visited the facilities.
2. By reviewing individual questionnaires: a core team of health systems experts from the MoH met once a month to review all the data collected up to that point. Each questionnaire was carefully examined and validated as outlined in Table 7.
3. At the aggregate level: internal consistency checks on completeness, consistency and accuracy of the completed databases were conducted by a WHO consultant. When internal inconsistencies were noted, Health Information Systems (HIS) officers were asked to follow up and identify the correct responses.



During the data validation processes for the hospital survey, the core team identified consistent problems with the quality of the data on human resources and functional beds for the hospitals. The 80 functional hospitals were re-surveyed by the MoH's HIS teams, and data on only these two indicators were re-collected in all hospitals, with the databases updated accordingly.

Table 7: Procedure for field level data quality checks for each questionnaire

No	Validation	Actions
1	Check whether site visit has actually taken place	<ol style="list-style-type: none"> <li>1. Check for presence of photographs of the facility, if the size of the facility corresponds to the type, and whether the signage on the facility corresponds with the facility name entered in the database</li> <li>2. Check against the MFL whether the uploaded GPS point corresponds to the expected location of the facility</li> </ol>
2	Check timing and duration of data collection	<ol style="list-style-type: none"> <li>3. Check against the survey schedule whether entered survey dates correspond to the scheduled dates</li> <li>4. Check against the list of interview timings whether the calculated duration of the interview corresponds to the expected duration</li> </ol>
3	Check for errors/omissions	<ol style="list-style-type: none"> <li>5. Using available data such as the SARA 1 database and your personal experience and familiarity with the Libyan health system, check for any potential errors and/or inconsistencies in the entered data. When identifying a questionable data entry, review this with one of your colleagues, and take action if both agree it is required.</li> <li>6. Prepare a list of potential errors/omissions/inconsistencies</li> </ol>
4	Verify data and create a list of required corrections	<ol style="list-style-type: none"> <li>7. Phone the interviewer who completed the section to ask for clarification/explanation AND</li> <li>8. Phone the head of the health facility to verify the responses provided by the interviewer AND</li> <li>9. Phone the WHO focal point covering that particular health facility to follow up on any further doubts and discrepancies</li> <li>10. Prepare a list of required corrections, adding your signature once completed</li> </ol>
5	Add approved corrections to the database	<ol style="list-style-type: none"> <li>11. The first data entry specialist updates the database according to the list of corrections provided, and signs the list once corrections have been entered</li> <li>12. A second data entry specialist checks the database against the list of corrections to verify whether they have been correctly entered, and signs the list once the checks are completed</li> </ol>

## 2.6 Data analysis

Final data editing, cleaning, consistency checks, and analysis was done by a consultant hired by WHO, using SPSS version 21, in accordance with the guidelines for the SARA surveys (11,14). This includes the analysis of the core SARA indicators for service readiness and availability for hospitals and PHC facilities, as described in Section 2.6.1. The indicators were calculated in the same way for both Hospitals and PHC facilities. In order to further facilitate planning processes by the various stakeholders in the health sector, indicators were calculated for different geographical regions. These regions are described in Section 2.3.1.

It is important to note that the 64 PHUs that have been upgraded to hospital status since the survey took place are included in the analysis of the PHC facilities, as the SARA-H tools were not used for data collection in these facilities.

For the final analysis and reports, almost all the data was taken from the SARA surveys. The 2017 population estimates for the 22 districts were provided by the Bureau of Statistics, Libya. Where additional data was provided by the HIC, it has been identified accordingly in the text.

## 2.6.1 Indicators

### 2.6.1.1 Service Availability

General Service availability refers to the physical presence of health service delivery components. This is computed as a density of health services per unit population and measured by the following tracer indicators:

- *Health Infrastructure density*
  - Facility density per 10,000 population. It is primarily an indicator of outpatient services
  - Inpatient bed density per 10,000 population. Indicator of the inpatient service access. It includes pediatric beds but excludes maternity beds.
  - Maternity bed density per 1000 pregnant women. Maternity bed density provides an indicator of access to delivery services. Data on maternity beds can be used calculate the density of maternal beds per 1000 pregnant women per year. The denominator is estimated from the population data. The indicator does not include delivery beds.
- *Health workforce density*
  - Core medical professionals per 10,000 population. (Physicians, clinicians, registered nurses and midwives; includes part-time physicians who are given the value of 0.5 in the scoring).
- *Service Utilization*
  - Outpatient visits per person per year. Number of visits for ambulant care, not including immunization, over the population.
  - Hospital discharges per 100 population (excluding deliveries). This indicator provides additional information on the availability and access to inpatient services.

Indicators are expressed as a percentage score compared with a target or benchmark established by WHO. Table 8 shows the computation of each service availability indicator and the associated target. If the tracer indicator score exceeds the target, it will be scored as 100%.

Table 8: Service availability indicators and associated targets (14)

	Indicator	Target	Score
<b>Health infrastructure</b>			Score = $n / \text{target}$
(a) Facilities	$n$ per 10 000 population	2	$n / 2 * 100$ (max.100)
(b) Inpatient beds	$n$ per 10 000 population	25	$n / 25 * 100$ (max.100)
(c) Maternity beds	$n$ per 1000 pregnant women	10	$n / 10 * 100$ (max.100)
<b>Health workforce</b>			
(d) Core health workforce	$n$ per 10 000 population	23	$n / 23 * 100$ (max.100)
<b>Service utilization</b>			
(e) Utilization	Outpatient visits per person/year	5	$n / 5 * 100$ (max.100)
(f) Utilization	Hospital discharges per 100 pop/year	10	$n / 10 * 100$ (max.100)

The service availability indices for health services infrastructure, health workforce, and service utilization and the overall service availability index are calculated using the formulas in Table 9 and are represented as percentage scores.

For general service availability, since the indicators are density measures, SARA data were supplemented by other data sources such as health statistics reports provided by the HIC. This was done to ensure the highest possible level of accuracy of the results.

Table 9: Service availability indices

	Indicator	Target	Score
Health Services Infrastructure Index	Average score of the three indicators: facility density, inpatient beds, maternity beds	100	$((a) + (b) + (c)) / 3$
Health Workforce Index	Core health workers	100	D
Service Utilization Index	Average score of the two indicators: outpatient visits, hospital discharges	100	$((e) + (f)) / 2$
Service Availability Index	Un-weighted average of the three areas: infrastructure, workforce, and utilization	100	$(((a + b + c)/3) + d + ((e + f) / 2)) / 3$

### 2.6.1.2 General Service Readiness

General Service Readiness refers to the overall capacity of health facilities to provide general health services. Readiness is defined as the availability of five specific components required to provide services:

1. **Basic amenities:** mean availability of each of seven tracer items (power, improved water source, room with privacy, adequate sanitation facilities, communication equipment, access to computer with internet, and emergency transportation);
2. **Basic equipment:** mean availability of each of six tracer items (adult scale, child scale, thermometer, stethoscope, blood pressure apparatus, and light source)
3. **Standard precautions for infection prevention:** mean availability of each of nine tracer items (safe final disposal of sharps, safe final disposal of infectious wastes, appropriate storage of sharps waste, appropriate storage of infectious waste, disinfectant, single-use disposable/auto-disable syringes, soap and running water or alcohol-based hand rub, latex gloves, and guidelines for standard precautions)
4. **Diagnostic capacity:** mean availability of each of eight laboratory tests with appropriate equipment (hemoglobin, blood glucose, malaria diagnostic capacity, urine dipstick for protein, urine dipstick for glucose, HIV diagnostic capacity, syphilis RDT, and urine pregnancy test)
5. **Essential medicines:** mean availability of each of 20 essential medicines (Amitriptyline tablet, amlodipine tablet or alternative calcium channel blocker, amoxicillin [syrup/suspension or dispersible tablets], amoxicillin tablet, ampicillin powder for injection, beclomethasone inhaler, ceftriaxone injection, enalapril tablet or alternative ACE inhibitor [e.g., lisinopril, ramipril, perindopril], fluoxetine tablet, gentamicin injection, glibenclamide tablet, ibuprofen tablet, insulin regular injection, metformin tablet, omeprazole tablet or alternative [e.g., pantoprazole, rabeprazole], oral rehydration solution, paracetamol tablet, salbutamol inhaler, simvastatin tablet or other statin [e.g., atorvastatin, pravastatin, fluvastatin], thiazide [e.g., hydrochlorothiazide], and zinc sulphate [tablet or syrup]).

General Service readiness is described by an index using the five general service readiness domains. The approach is similar to the calculation of the indices for service availability (Table 8), where a mean score is generated per domain based on the proportion of each of the tracer elements present in all facilities (calculated as *number of facilities with a tracer element present/number of facilities surveyed \* 100*). An overall general readiness score is calculated based on the unweighted mean of the five domains.

### 2.6.1.3 Service Specific Readiness

Service Specific Readiness refers to the ability of health facilities to offer a specific service and the capacity to provide that service measured through selected service-specific tracer items from five domains: trained staff, guidelines, equipment, diagnostic capacity, and medicines and commodities. A full list of tracer items for each specific service can be found in the SARA Reference manual (14) and will also be briefly described along with the results in the related sections of the report. Summary scores were calculated for each

service on the basis of proportion of availability of each tracer item, and unweighted means of the relevant domains. Readiness indicators could not be calculated for every specific service, as for some services a list of tracer items has not yet been developed, and/or detailed information was not collected. Where services were provided through both hospital and PHC facilities, readiness indicators were calculated separately for each level of service provision.

#### 2.6.1.4 Additional indicators of interest

After completion of the summary report, numerous requests for additional data came in from donors, consultants, NGOs, other UN agencies, and other stakeholders. If available, and if deemed relevant to a larger body of stakeholders by the coordinating committee, these indicators were also incorporated in the report. If required, the relevant methodology will be described in the corresponding sections of this report.

#### 2.6.2 Mapping

Maps were created using ArcView GIS, using data at district level. The mapping used the same cut-off indicators whenever possible. Colours were used systematically. Maps coloured in green rely on availability data from multiple sources. Usually this is a combination of PHC facilities and Hospitals, although for some general availability and readiness indicators, private sector data is also included. Maps coloured red uses data only from hospitals, while maps with blue shading uses data from only PHC facilities. The maps in Chapters 3 to 9 present availability of services as a ratio of number of facilities to 100,000 population, with readiness scores for the corresponding service included as numbers. Additionally, active hospitals or other health facilities are mapped which act as a referral facility for the particular service.

### 2.7 Limitations

SARA surveys are quite specific in terms of what they measure, and are limited to availability or readiness. They do not attempt to measure the quality of services or resources. Furthermore, service availability as measured using the existing SARA methodology does not include more complex dimensions such as geographic barriers, travel time, and user behavior, which require more complex input data.

### 2.8 Ethical clearance

For national health surveys, ethical clearance is implied once approval for the methodology and tools has been given by the MoH. For the SARA 2017 survey, the MoH extensively reviewed the methodology and tools, and provided signed approval at all levels, from planning to implementation to the individual chapters of the final report.

### 2.9 Overview of chapters

Chapter 3 outlines the results of the survey using the “Service availability” and “General Service Readiness” indices. It also provides disaggregated data for each index individually for hospitals, PHC facilities, and other facilities. The “Service Specific Readiness” results are presented in Chapters 4 to 8, clustered by type of services, including Reproductive, Maternal, Newborn and Child Health (RMNCH, Chapter 4), Communicable Diseases (CD, Chapter 5), Non-Communicable Diseases (NCDs, Chapter 6), Emergency and Surgical Services (ESS, Chapter 7), Dental Services (Chapter 8), and Diagnostic imaging and laboratory services (Chapter 9). The remaining chapters cover management-related data for hospitals and PHC facilities, and do not follow a specific methodological approach.

### 3 General services availability and readiness

This chapter provides a general overview of Libya's health services delivery capacity. The first section of this chapter (Section 3.1) provides an overview of the available health care facilities included in the survey, their functionality, and reasons for closure. Section 3.2 presents the results of the survey according to the "Service Availability" indices outlined in Chapter 2. Finally, Section 3.3 provides the results for the "General Service Readiness" component, separately for hospital and PHC facilities. Results include both national and district level scores, as well as the disaggregated data for the five readiness domains (essential medicines, diagnostics, basic equipment, basic amenities, and standard precautions).

#### 3.1 Health facilities overview and functionality

An understanding of the available infrastructure through which health services delivery takes place is essential for current and future planning exercises. This section provides a general overview of the number and type of facilities available across the country, as well as their functionality status, given that a number of facilities were closed at the time of survey.

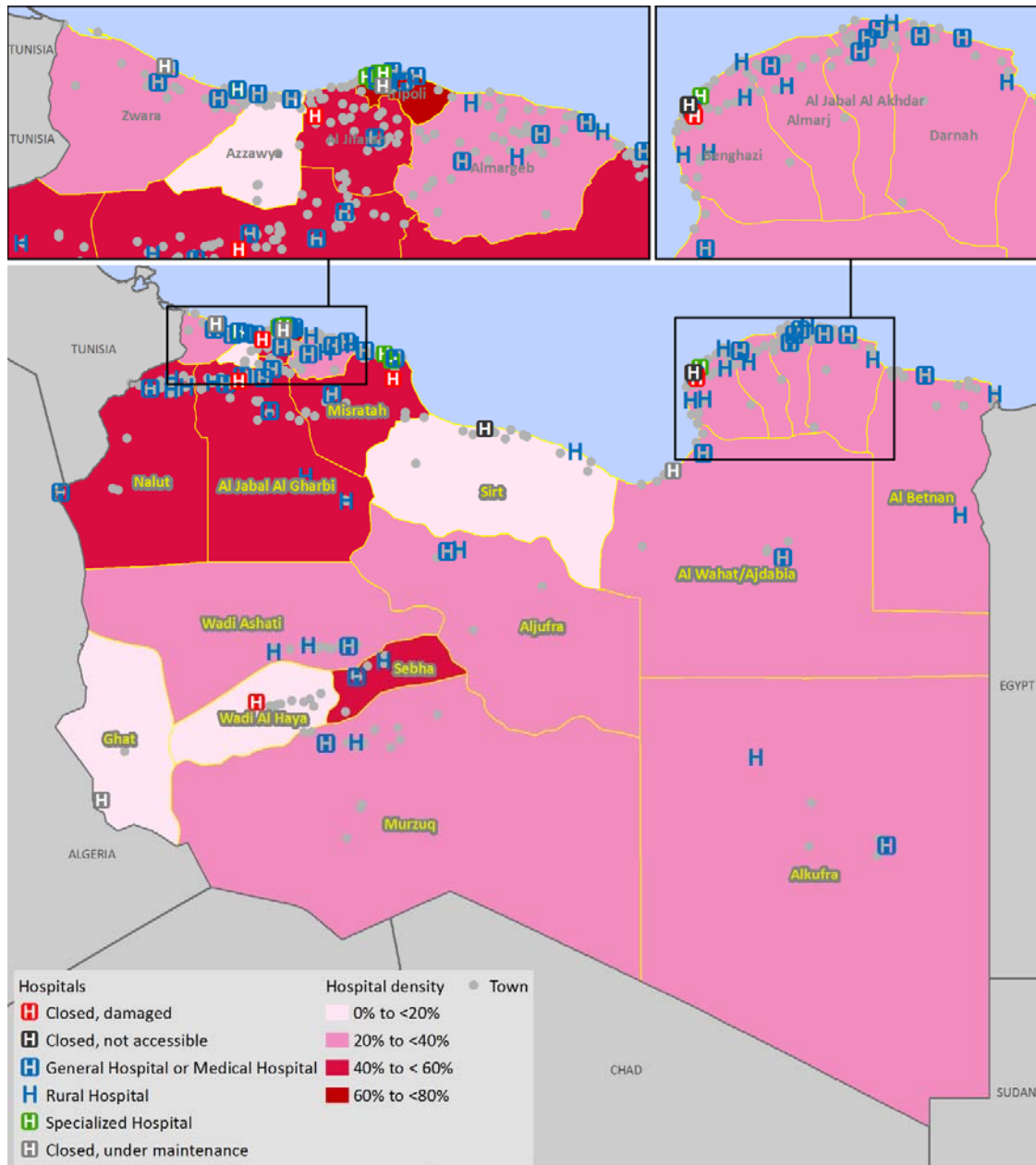
All officially recognized health facilities, including 97 public hospitals, 1,355 primary health care facilities (primary health care units, centers and polyclinics), and 204 other specific health service facilities in Libya were included on the MFL to be visited by the surveyors. At the time of the survey 17 hospitals (18%), 273 primary health care facilities (20%) and 18 other specific health services (8%) were closed (Table 10). The Benghazi region was most affected in terms of health facility closures as a result of ongoing conflict (Figure 5 and Figure 6).

Twenty-seven of the 97 hospitals were rural (2 closed), 48 were general hospitals (10 closed), and 22 were specialized hospitals (5 closed). The specialized hospitals were concentrated in the surroundings of Tripoli (50%) and Benghazi (36%), and Figure 5 indicates that no specialized hospitals existed in the east and the south of Libya. The majority of hospitals (74%) provided both inpatient and outpatient services, while 12 hospitals (15%) provided OPD services and nine hospitals (11%) provided inpatient services only. All 97 hospitals in Libya belong to Ministry of Health, except Mitiga Hospital which is a military hospital. This hospital is managed by civilian doctors, however, and all civilians have access to this hospital.

Figure 6 indicates that the PHC facilities are mostly clustered in areas with higher population concentrations, with the exception of the north of Al Betnan district, where there are a considerable number of towns that do not have a (functional) PHC facility.

As a result of insecurity, 61 facilities (4% of total) could not be accessed at the time of survey, while the remaining closed facilities were visited by surveyors.

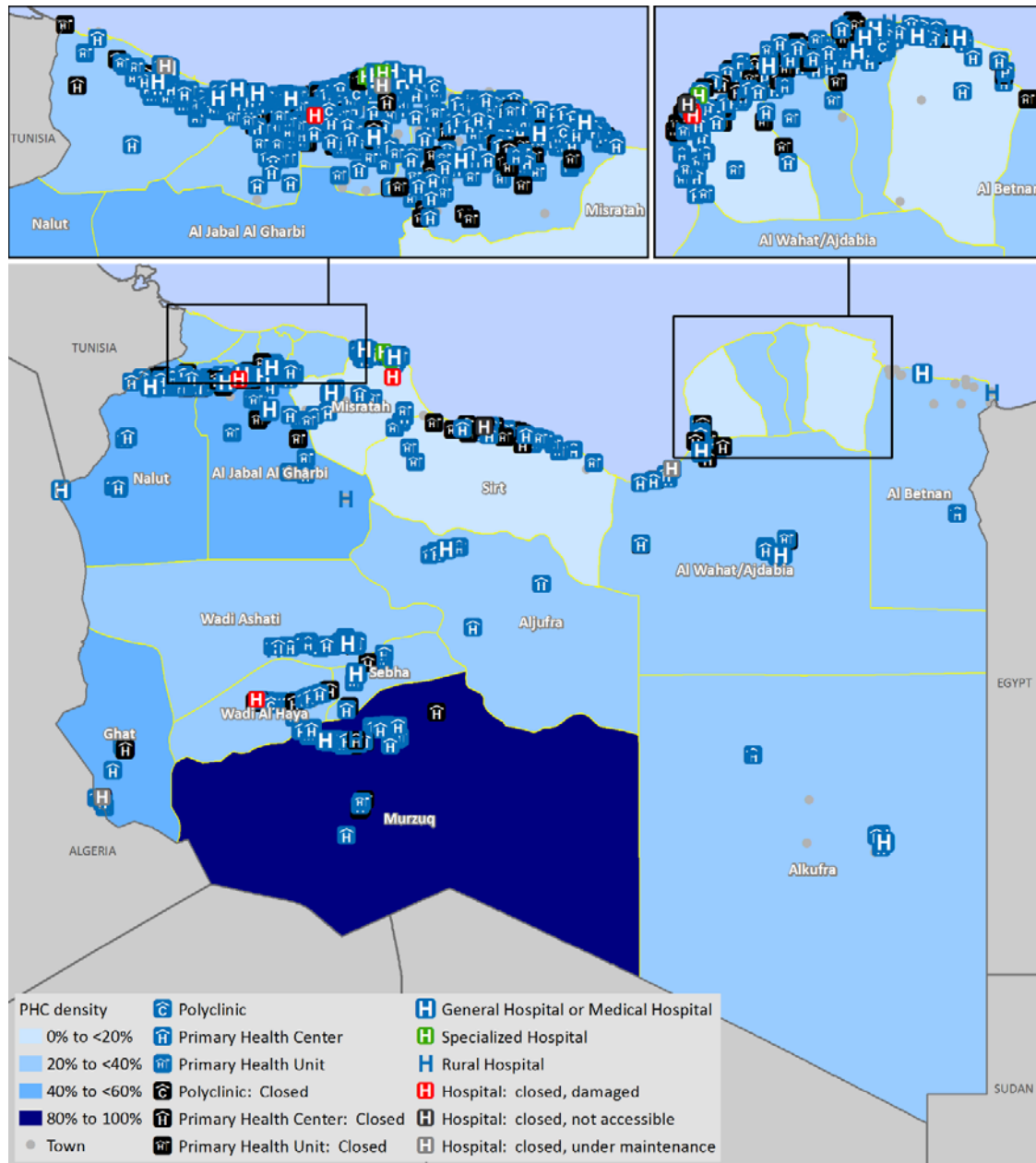
Figure 5: Map of functional status of public hospital facilities and public & private hospital facility density per 10,000 population



The reasons for hospital closure include damage (nine hospitals), inaccessibility (four hospitals), and maintenance (four hospitals). Out of the 1,355 PHC facilities (polyclinics, centers and units), closed facilities included 194 out of 728 PHCUs (27%), 73 out of 571 PHCCs (9%), and six out of 56 polyclinics (11%). The reasons for closure of primary health care facilities were as follows:

- 150 primary health care facilities were under maintenance.
- 52 primary health care facilities were not accessible.
- 38 primary health care facilities were damaged.
- 33 primary health care facilities were occupied by people/entities

Figure 6: Map of functional status of public PHC facilities and public & private PHC facility density per 1,000 population



Other specific services facilities include 27 NCDC branches, 31 dialysis centers, and 12 dental clinics. In addition, Libya has 51 ambulance centers, eight referral medical laboratories, six regional blood banks, six infertility centers, three diabetes treatment centers and one communicable disease control and immunology center, totaling 204 “other facilities”. Among these “other” facilities, 18 (9%) were closed at the time of survey (Table 10). Closed “other” facilities include four NCDC branches, five dialysis units, two medical supply warehouses, four ambulance centers, one referral medical laboratory, one blood bank, and one infertility center. Reasons for closure for “other” facilities included damage (5%), inaccessibility (2%), and maintenance (1%).



Table 10: Functional status of health facilities at time of survey

Facility type	status	N	% closed	comments
Public Hospitals	Open	80	18%	9 damaged, 4 inaccessible, 4 under maintenance
	Closed	17		
	Total	97		
PHC	Open	1082	20%	150 under maintenance, 52 not accessible, 38 damaged, 33 occupied by other people/entities
	Closed	273		
	Total	1355		
Dental Clinic	Open	12		
	Closed	0		
	Total	12		
NCDC Branches	Open	23	15%	Two inaccessible (Benghazi region); two damaged (Sirt, Mizda)
	Closed	4		
	Total	27		
Dialysis Center	Open	26	16%	Three damaged (Misrata, Ubari, Kikkla); one under maintenance (Sirt); one inaccessible (Benghazi)
	Closed	5		
	Total	31		
Medical Supply Warehouse	Open	52	4%	Two damaged (Sebha, Sirt)
	Closed	2		
	Total	54		
Ambulance Service Center	Open	47	8%	Three damaged (Sirt, Algatroun, Kikkla); one under maintenance (Ghat)
	Closed	4		
	Total	51		
Referral Medical Laboratory	Open	7	13%	One not accessible (Benghazi)
	Closed	1		
	Total	8		
Blood Bank	Open	5	17%	One under maintenance (Albayda)
	Closed	1		
	Total	6		
Infertility Centre	Open	5	17%	One not accessible (Benghazi)
	Closed	1		
	Total	6		
Diabetes Treatment Center	Open	3		
Mental clinic	Open	1		
Oncology Center	Open	1		
Physiotherapy Centre	Open	1		
CDC& Immunology	Open	1		
Diagnostics and Imaging center	Open	2		
<b>Total</b>	<b>Open</b>	<b>1348</b>	<b>19%</b>	<b>157 (9%) under maintenance, 61 (4%) not accessible, 57 (3%) damaged, 33 (2%) otherwise occupied</b>
	<b>Closed</b>	<b>308</b>		
	<b>Total</b>	<b>1656</b>		

The main reason for facility closure was maintenance (51% of the 308 closed facilities), followed by inaccessibility due to conflict (20%), damage (19%) and occupation by others (11%). All the individual facilities, regardless of their functionality status, are listed in the MFL in Annex I. Table 11 provides an overview of the PHC and other facilities available per municipality.

Figure 7: Map of "other" health facilities, by facility type

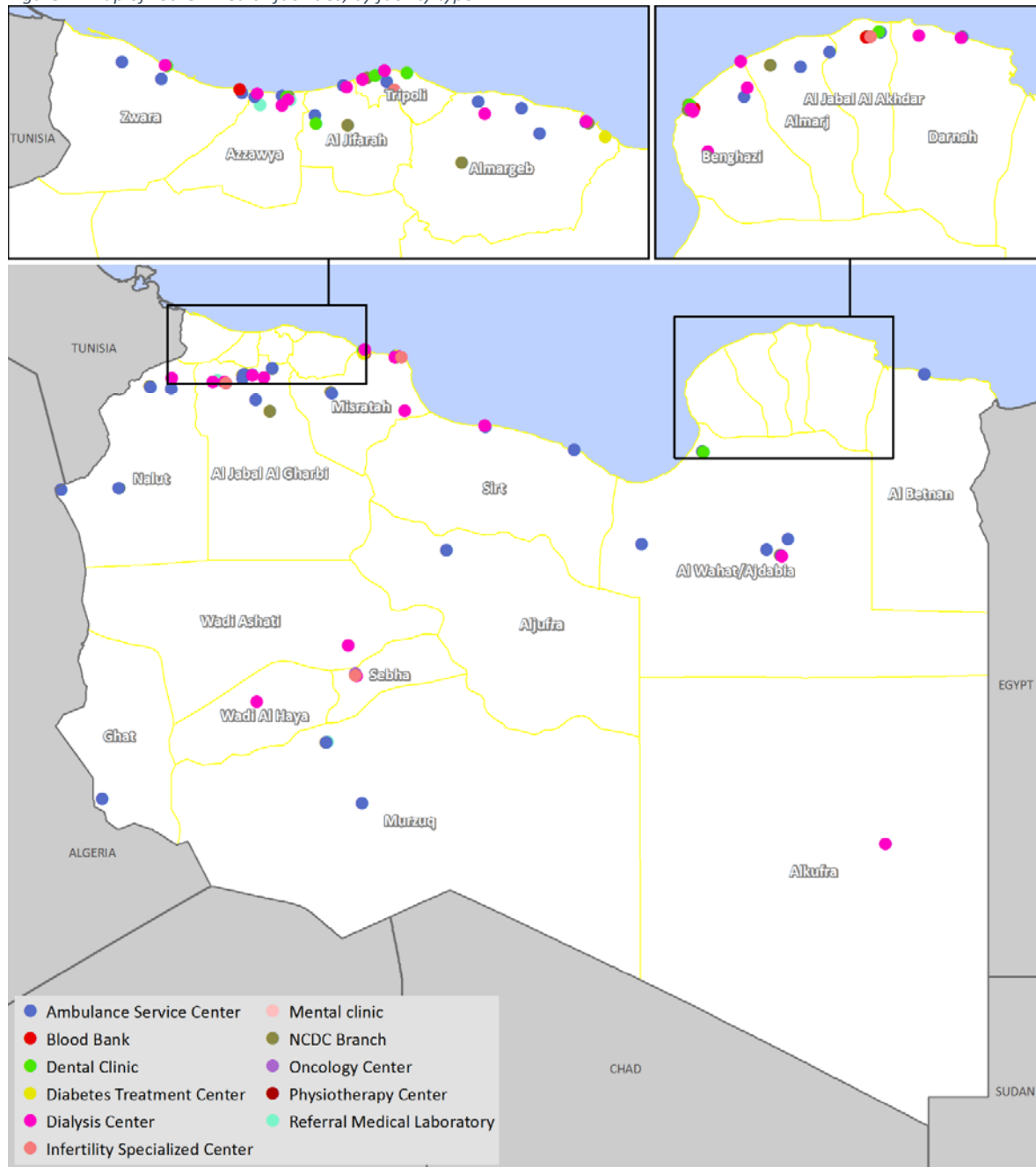


Figure 7 does not include the 52 Ambulance Service Centers, given that the data points on the map were already quite crowded. The Ambulance Service Centers are included in Figure 87 in Section 7.1.1, which maps the availability of emergency services.

Table 11: Number of PHC and other facilities, by municipality and facility type

	Primary Health Unit	Primary Health Center	Polyclinic	Dental Clinic	NCDC Branches	Dialysis Center	Medical Supply Warehouse	Ambulance Service Center	Referral Medical Laboratory	Blood Bank	Infertility Specialized Centre	Diabetes Treatment Center	Mental clinic	Oncology Center	Physiotherapy Centre	CDC& Immunology	Diagnostics and Imaging center	Total
Abu Qurayn	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
Abusliem	0	13	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15
Ain Zara	3	8	1	0	0	0	0	1	0	0	1	0	0	0	0	0	0	14
Al Ajaylat	14	7	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	22
Al Aziziya	7	7	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	15
Al Galaa	3	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	5
Al Jagboub	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Al Maya	5	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Al Shate Al Garbe	11	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20
Al Shate Al Sharge	8	7	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	18
Al Swani	7	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11
Alabyar	3	9	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	15
Alasabaa	8	5	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	14
Albawanees	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Albayda	8	8	5	0	1	0	2	1	0	0	1	0	0	0	0	0	1	27
Albrayga	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
Algatroun	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Algaygab	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Alghrayfa	6	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11
Algurdha Ashshati	12	7	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	20
Alharaba	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
Alhawamid	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Aljmail	10	6	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	19
Aljufra	7	6	0	0	1	0	1	1	0	0	0	0	0	0	0	0	0	16
Alkhums	7	22	3	0	1	1	1	1	0	0	0	1	0	0	0	0	0	37
Alkufra	6	11	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	20
Almarj	3	5	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	10
Alqubba	0	6	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	8
Alsharguiya	6	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11
Arrajban	0	3	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	4
Arrayayna	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Arrhaibat	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
Ashshgega	2	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	4
Assahel	6	6	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	14
Aujala	6	2	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	10
Azzahra	9	7	0	1	0	0	1	1	0	0	0	0	0	0	0	0	0	19
Azzawya	28	6	1	1	1	2	1	1	1	0	0	0	0	0	0	0	0	42
Azzintan	3	8	0	0	0	1	1	1	0	0	1	0	0	0	0	0	0	15
Bani Waleed	8	8	1	0	1	0	1	1	0	0	0	0	0	0	0	0	0	20
Baten Aljabal	2	4	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	8
Benghazi	5	16	4	1	0	1	2	0	0	1	0	0	0	0	0	1	1	32
Bint Bayya	6	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10
Bir Alashhab	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Daraj	3	5	0	0	1	0	1	1	0	0	0	0	0	0	0	0	0	11
Darnah	4	8	2	0	1	1	1	1	1	0	0	0	0	0	0	0	0	19
Ejdabia	0	11	1	1	1	0	1	1	0	0	0	0	0	0	0	0	0	16
Ejkherra	1	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	4
Emsaed	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Espeaa	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Garaboli	8	10	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	21
Gasr Akhyar	8	3	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	13
Gasr Bin Ghasheer	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Gemienis	5	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
Ghadamis	0	1	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	3

	Primary Health Unit	Primary Health Center	Polyclinic	Dental Clinic	NCDC Branches	Dialysis Center	Medical Supply Warehouse	Ambulance Service Center	Referral Medical Laboratory	Blood Bank	Infertility Specialized Centre	Diabetes Treatment Center	Mental clinic	Oncology Center	Physiotherapy Centre	CDC& Immunology	Diagnostics and Imaging center	Total
Gharb Azzawya	8	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11
Ghat	5	4	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	10
Ghiryān	32	18	1	0	1	0	1	1	0	0	0	0	0	0	0	0	0	54
Hai Alandalus	5	11	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	19
Hrawa	7	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	10
Jadu	6	1	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	10
Jalu	5	4	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	13
Janzour	8	11	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	22
Jardas Alabeed	0	5	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	6
Kabaw	3	2	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	7
Kikkla	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
Labriq	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Marada	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	2
Misrata	11	11	3	1	1	2	2	1	0	1	1	1	0	0	0	0	0	35
Mizda	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Msallata	9	4	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	14
Murzuq	6	3	1	0	1	0	1	1	1	0	0	0	0	0	0	0	0	14
Nalut	1	2	0	0	1	0	1	1	0	0	0	0	0	0	0	0	0	6
Nesma	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
Rigdaleen	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
Sabratha	14	6	0	0	0	0	1	1	0	1	0	0	0	0	0	0	0	23
Sebha	6	11	1	1	1	1	1	1	1	1	1	0	1	1	0	0	0	28
Shahhat	17	7	2	1	0	0	1	1	0	0	0	0	0	0	0	0	0	29
Sidi Assayeh	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Sirt	2	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
Sug Aljumaa	9	8	4	0	0	1	0	0	0	1	0	0	0	0	0	0	0	23
Sug Alkhamees	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
Suloug	3	2	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	6
Surman	10	3	1	1	0	1	1	2	1	0	0	0	0	0	0	0	0	20
Tajoura	9	5	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	19
Taraghin	8	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11
Tarhuna	16	17	1	0	1	0	1	0	0	0	0	0	0	0	0	0	0	36
Tazirbu	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	3
Thaher Aljabal	3	2	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	6
Tobruk	12	12	2	0	1	0	1	1	0	0	0	0	0	0	0	0	0	29
Toukra	1	4	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	7
Tripoli	1	11	1	1	0	0	1	1	1	0	0	0	0	0	0	0	0	17
Ubari	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Umm arrazam	0	8	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	9
Wadi Etba	10	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13
Wazin	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Yefren	4	1	0	0	1	0	1	1	0	0	0	0	0	0	0	0	0	8
Ziltun	5	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	8
Zliten	11	10	4	1	1	1	1	1	0	0	0	1	0	0	1	0	0	32
Zwara	2	3	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	10
<b>Total</b>	<b>534</b>	<b>498</b>	<b>50</b>	<b>12</b>	<b>23</b>	<b>26</b>	<b>52</b>	<b>47</b>	<b>7</b>	<b>5</b>	<b>5</b>	<b>3</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>1268</b>

## 3.2 General Service Availability

General Service Availability refers to the physical presence of health service delivery components. It is one of the core SARA indicators, and is calculated as a density of health services per unit population. Results are presented at the national level the district level, as districts are the smallest geographical unit for which population data are available. General Service Availability is calculated on the basis of three main health service delivery components: health infrastructure (Section 3.2.1), health workforce (Section 3.2.2), and service utilization (Section 3.2.3). The final Service Availability Index that is calculated from these three components is presented in Section 0.

### 3.2.1 Health infrastructure density

The Health Infrastructure Density index consists of three components: (1) facility density per 10,000 population, (2) inpatient bed density per 10,000 population, and (3) maternity bed density per 1,000 pregnant women.

#### 3.2.1.1 Facility density per 10,000 population

Health facility density is primarily an indicator of outpatient service access, with the limitation that it counts the number of facilities only, and does not take into account the size of these facilities. All the public health facilities which were open and working at the time of survey were included in the calculation of the facility density. For this indicator, private facilities were also included, with the assumption that they were all functional at the time of the survey. Eighty public hospitals and 157 private inpatient clinics (hospitals), 1,082 public primary health care facilities, and 503 private outpatient clinics were included.

Table 12: Facility numbers and density per 10,000 population by district, according to facility type

	Hospitals			Primary Health Care					Total (Hospitals and PHCs) n (density)
	Public n (density)	Private n (density)	Total n (density)	Primary Health Unit n (density)	Primary Health Center n (density)	Polyclinic n (density)	Private outpatient clinics n (density)	Total (PHCs) n (density)	
<i>Al Wahat/Ajdabia</i>	2 (0.10)	2 (0.10)	4 (0.20)	59 (0.59)	84 (1.18)	11 (0.05)	18 (0.89)	172 (2.71)	176 (2.91)
<i>Alkufra</i>	2 (0.37)	0 (0)	2 (0.37)	6 (1.12)	12 (2.23)	0 (0)	3 (0.56)	21 (3.9)	23 (4.28)
<i>Benghazi</i>	6 (0.08)	12 (0.16)	18 (0.24)	13 (0.18)	21 (0.28)	4 (0.05)	49 (0.66)	87 (1.18)	105 (1.42)
<i>Al Betnan</i>	3 (0.16)	4 (0.21)	7 (0.37)	15 (0.78)	15 (0.78)	2 (0.1)	12 (0.63)	44 (2.3)	51 (2.66)
<i>Al Jabal Al Akhdar</i>	4 (0.16)	2 (0.08)	6 (0.25)	33 (1.36)	24 (0.99)	7 (0.29)	17 (0.7)	81 (3.33)	87 (3.58)
<i>Darnah</i>	3 (0.15)	2 (0.1)	5 (0.25)	4 (0.2)	22 (1.12)	2 (0.1)	7 (0.36)	35 (1.78)	40 (2.04)
<i>Almarj</i>	4 (0.18)	3 (0.14)	7 (0.32)	7 (0.32)	23 (1.04)	0 (0)	24 (1.09)	54 (2.45)	61 (2.77)
<i>Sirt</i>	1 (0.06)	0 (0)	1 (0.06)	13 (0.8)	7 (0.43)	0 (0)	6 (0.37)	26 (1.61)	27 (1.67)
<i>Aljufra</i>	2 (0.35)	0 (0)	2 (0.35)	7 (1.22)	6 (1.05)	0 (0)	4 (0.7)	17 (2.97)	19 (3.32)
<i>Misratah</i>	5 (0.08)	20 (0.32)	25 (0.4)	30 (0.48)	29 (0.46)	8 (0.13)	35 (0.56)	102 (1.62)	127 (2.02)
<i>Almargeb</i>	6 (0.12)	6 (0.12)	12 (0.24)	48 (0.94)	57 (1.12)	4 (0.08)	18 (0.35)	127 (2.49)	139 (2.72)
<i>Al Jifarah</i>	1 (0.02)	20 (0.38)	21 (0.4)	36 (0.69)	26 (0.5)	0 (0)	47 (0.9)	109 (2.08)	130 (2.48)
<i>Tripoli</i>	14 (0.12)	58 (0.49)	72 (0.61)	35 (0.3)	67 (0.57)	13 (0.11)	125 (1.06)	240 (2.04)	312 (2.65)
<i>Azzawya</i>	2 (0.06)	4 (0.12)	6 (0.17)	60 (1.73)	17 (0.49)	3 (0.09)	42 (1.21)	122 (3.52)	128 (3.69)
<i>Zwara</i>	5 (0.15)	7 (0.2)	12 (0.35)	37 (1.08)	22 (0.64)	2 (0.06)	12 (0.35)	73 (2.13)	85 (2.48)
<i>Al Jabal Al Gharbi</i>	8 (0.23)	12 (0.34)	20 (0.57)	71 (2.02)	45 (1.28)	1 (0.03)	40 (1.14)	157 (4.47)	177 (5.04)
<i>Nalut</i>	5 (0.48)	0 (0)	5 (0.48)	17 (1.62)	16 (1.53)	0 (0)	10 (0.95)	43 (4.1)	48 (4.58)
<i>Wadi Ashati</i>	3 (0.33)	0 (0)	3 (0.33)	8 (0.88)	7 (0.77)	0 (0)	8 (0.88)	23 (2.53)	26 (2.86)
<i>Sebha</i>	2 (0.13)	5 (0.32)	7 (0.44)	9 (0.57)	12 (0.76)	1 (0.06)	15 (0.95)	37 (2.35)	44 (2.79)
<i>Wadi Al Haya</i>	0 (0)	0 (0)	0 (0)	15 (1.71)	9 (1.02)	1 (0.11)	4 (0.46)	29 (3.3)	29 (3.30)
<i>Murzuq</i>	2 (0.22)	0 (0)	2 (0.22)	53 (5.89)	33 (3.67)	1 (0.11)	5 (0.56)	92 (10.22)	94 (10.45)
<i>Ghat</i>	0 (0)	0 (0)	0 (0)	5 (1.86)	4 (1.49)	0 (0)	2 (0.74)	11 (4.09)	11 (4.09)
<b>Total</b>	<b>80 (0.12)</b>	<b>157 (0.24)</b>	<b>237 (0.36)</b>	<b>534 (0.82)</b>	<b>498 (0.77)</b>	<b>50 (0.08)</b>	<b>503 (0.77)</b>	<b>1,585 (2.44)</b>	<b>1,822 (2.8)</b>

Using the 2017 population estimates for Libya provided by the Bureau of Statistics (Annex 3), the health facility density calculated is 2.8 facilities per 10,000 population. This indicates that Libya has clearly

surpassed WHO's international target for health facility density of two facilities per 10,000 population, and that, notwithstanding the conflict it has experienced since 2010, Libya's health facility density is a strong asset for the delivery of current and future health services.

The breakdown of health facility density data by district (Table 12 and Figure 5 and 6) indicates that not all districts meet health facility density targets. Scores for Benghazi and Sirt fell below target due to the fact that both were conflict-affected, resulting in damaged or inaccessible facilities. In Sirt only a small number of private facilities were available to fill up the void. Given that the damaged public health facilities in Benghazi and Sirt are currently under rehabilitation, it is expected that both districts will achieve the health facility density target once these facilities re-open.

### 3.2.1.2 Inpatient bed density per 10,000 population

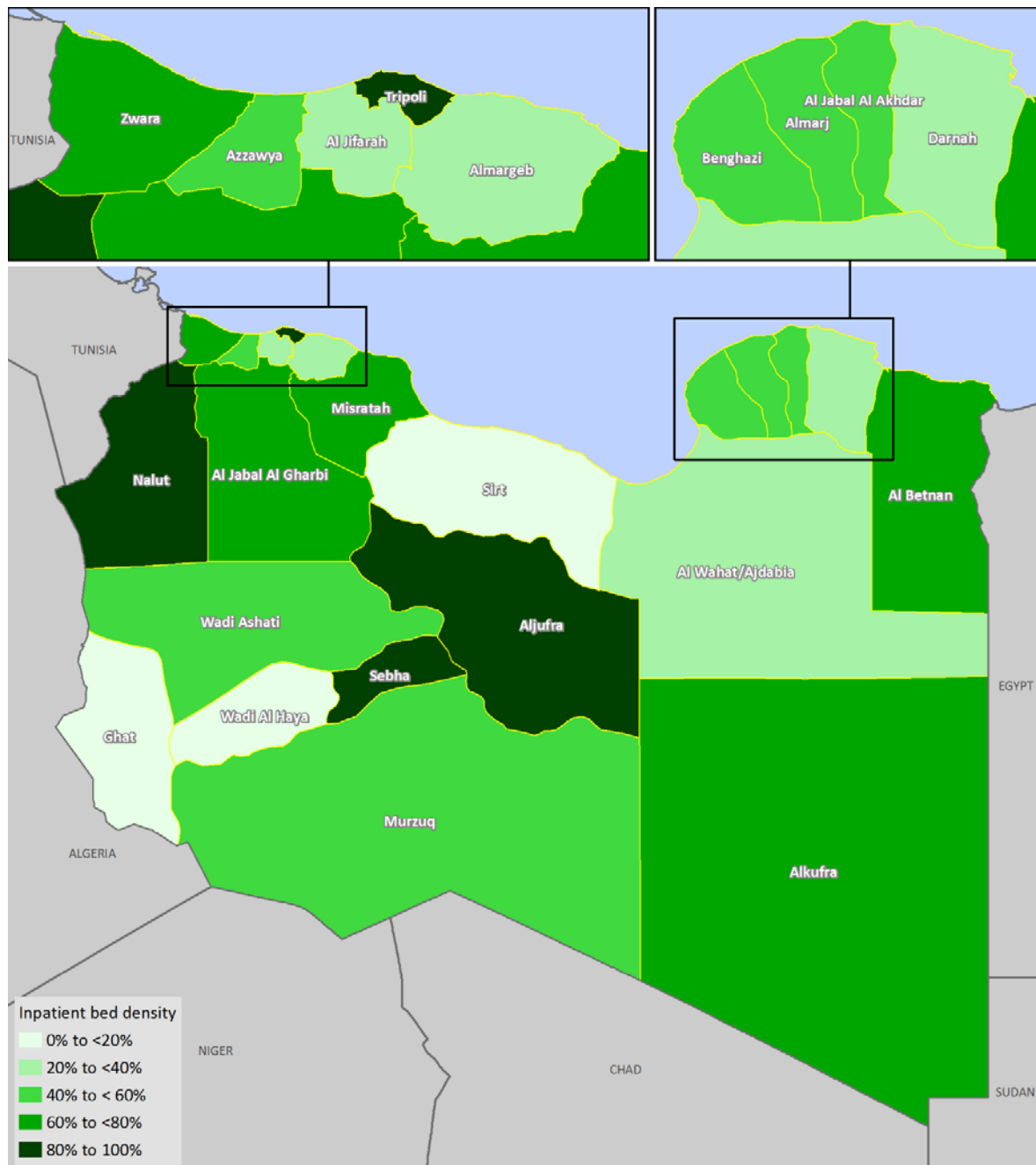
Inpatient bed density is an indicator of inpatient service access. The bed counts include pediatric beds but exclude maternity beds as these are calculated separately, and the indicator is calculated using both the functional public and all private inpatient beds. The target for this indicator is 25 beds per 10,000 population. Table 13 shows that the functional inpatient bed density in Libya is 15 beds per 10,000 population, which is significantly below the target value of 25 beds per 10,000 population. If we consider the 7,126 public inpatient beds only, the value is 11 beds per 10,000 population, or less than half of the target set by WHO.

Table 13: Inpatient bed density per 10,000 population by district and facility type

District	Hospitals				Primary Health Care		Total (Hospitals and PHCs)		Target achievement Score* <i>Target: 25/10,000 pop</i>
	Inpatient Beds (Public)	Inpatient Beds (Private)	Total inpatient Beds	Inpatient Bed Density per 10000 population	Inpatient Beds	Inpatient Bed Density per 10000 population	Inpatient Beds	Inpatient Bed Density per 10000 population	
<i>Al Wahat/Ajdabia</i>	161	12	173	9	8	0	181	9	36%
<i>Alkufra</i>	69	0	69	13	27	5	96	18	71%
<i>Benghazi</i>	809	205	1,014	14	0	0	1,014	14	55%
<i>Al Betnan</i>	219	80	299	16	31	2	330	17	69%
<i>Al Jabal Al Akhdar</i>	253	31	284	12	0	0	284	12	47%
<i>Damnah</i>	121	50	171	9	0	0	171	9	35%
<i>Almarj</i>	224	0	224	10	0	0	224	10	41%
<i>Sirt</i>	45	0	45	3	24	1	69	4	17%
<i>Aljufra</i>	147	0	147	26	0	0	147	26	103%
<i>Misratah</i>	425	452	877	14	59	1	936	15	60%
<i>Almargeb</i>	284	95	379	7	1	0	380	7	30%
<i>Al Jifarah</i>	80	205	285	5	15	0	300	6	23%
<i>Tripoli</i>	2,017	1,210	3227	27	4	0	3,231	27	110%
<i>Azzawya</i>	226	138	364	10	11	0	375	11	43%
<i>Zwara</i>	392	120	512	15	104	3	616	18	72%
<i>Al Jabal Al Gharbi</i>	441	140	581	17	60	2	641	18	73%
<i>Nalut</i>	368	0	368	35	0	0	368	35	140%
<i>Wadi Ashati</i>	107	0	107	12	0	0	107	12	47%
<i>Sebha</i>	221	74	295	19	55	3	350	22	89%
<i>Wadi Al Haya</i>	0	0	0	0	9	1	9	1	4%
<i>Murzuq</i>	109	0	109	12	0	0	109	12	48%
<i>Ghat</i>	0	0	0	0	0	0	0	0	0%
<b>Total</b>	<b>6,718</b>	<b>2,812</b>	<b>9,530</b>	<b>15</b>	<b>408</b>	<b>1</b>	<b>9,938</b>	<b>15</b>	<b>61%</b>

The majority of inpatient beds (94%) can be found in the hospital facilities. The private sector represents roughly a quarter (28%) of the total inpatient bed capacity. The districts of Aljufra, Tripoli and Nalut have inpatient bed densities above the target, likely because the hospitals in these districts serve as referral centers for a number of neighboring districts. In Tripoli, over one-third of total inpatient bed capacity can be found in the private sector, while the other two high-density districts do not have any private sector bed capacity. Sirt, Almargeb, Al Jifarah, Wadi al Haya, and Ghat have densities less than 25% of the target.

Figure 8: Map of inpatient bed density index scores by district (combined public & private)



A comparison between the officially allocated number of beds and the number of inpatient beds functional at the time of survey indicates that of the 17,058 beds that should officially be available at national level, only 6,718 (39%) of the beds are actually available. The greatest number of non-functioning inpatient beds can be found in and around Tripoli, although even without these non-functioning beds, this region still has the highest overall inpatient bed density.



### 3.2.1.3 Maternity bed density per 1,000 pregnant women

Maternity beds are inpatient beds that are used exclusively by pregnant women before and after delivery. Maternity bed density provides an indicator of access to delivery services. The indicator does not include delivery beds. The target is 10 maternity beds per 1,000 pregnant women. This indicator was calculated using only on data from public health facilities.

The maternity bed density was found to be 13 maternity beds for 1,000 pregnant women, indicating that the international standard of 10 maternity beds per 1,000 pregnant women has been met at the national level.

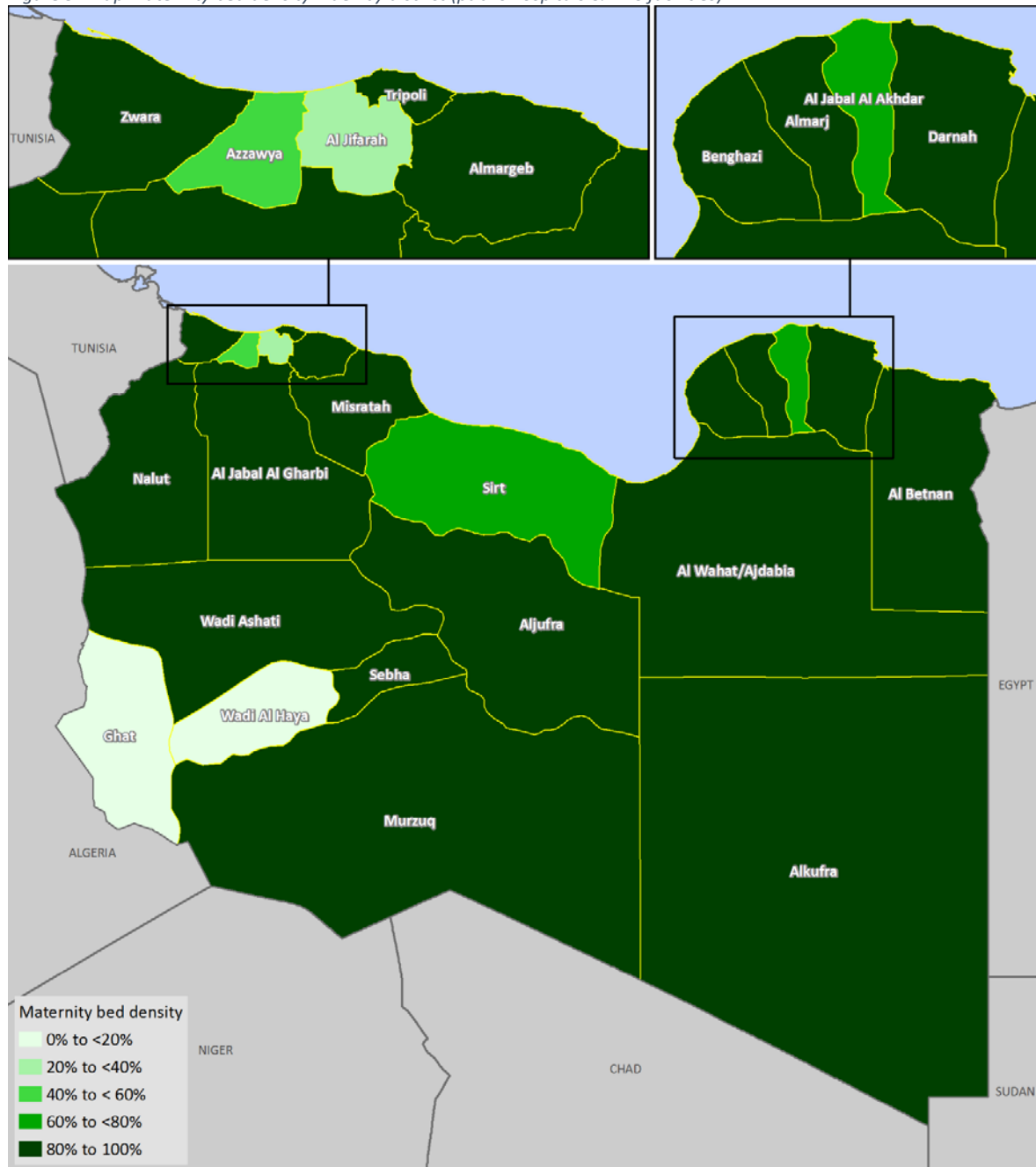
Table 14: Maternity bed density per 1000 pregnant women by facility type and district

	Hospitals		Primary Health Care		Total (Hospitals and PHCs)		Target achievement Score*
	N of Maternity Beds	Maternity Beds Density	N of Maternity Beds	Maternity Beds Density	N of Maternity Beds	Maternity Beds Density per 1000 population	
<i>Al Wahat/Ajdabia</i>	55	10.98	4	0.001	59	11.78	100%
<i>Alkufra</i>	24	21.74	8	0.007	32	28.99	100%
<i>Benghazi</i>	105	9.31	0	0	105	9.31	93%
<i>Al Betnan</i>	110	25.06	2	0	112	25.52	100%
<i>Al Jabal Al Akhdar</i>	54	7.10	0	0	54	7.10	71%
<i>Darnah</i>	81	23.61	0	0	81	23.61	100%
<i>Almarj</i>	72	12.77	0	0	72	12.77	100%
<i>Sirt</i>	15	6.60	2	0.001	17	7.48	75%
<i>Aljufra</i>	40	25.58	0	0	40	25.58	100%
<i>Misratah</i>	182	11.39	3	0	185	11.58	100%
<i>Almargeb</i>	193	15.18	0	0	193	15.18	100%
<i>Al Jifarah</i>	36	2.93	6	0	42	3.41	34%
<i>Tripoli</i>	380	16.30	4	0	384	16.47	100%
<i>Azzawya</i>	60	5.77	1	0	61	5.87	59%
<i>Zwara</i>	120	19.25	5	0.001	125	20.05	100%
<i>Al Jabal Al Gharbi</i>	168	18.30	0	0	168	18.30	100%
<i>Nalut</i>	85	35.76	0	0	85	35.76	100%
<i>Wadi Ashati</i>	36	13.69	0	0	36	13.69	100%
<i>Sebha</i>	59	19.28	15	0.005	74	24.18	100%
<i>Wadi Al Haya</i>	0	0	3	0.001	3	1.44	14%
<i>Murzuq</i>	24	8.63	0	0	24	8.63	86%
<i>Ghat</i>	0	0	0	0	0	0	0%
<b>Total</b>	<b>1,899</b>	<b>13.02</b>	<b>53</b>	<b>0</b>	<b>1,952</b>	<b>13.38</b>	<b>100%</b>

\* The target is 10 maternity beds per 1000 pregnant women

Although at the national level the availability of maternity beds meets the target, analysis by district reveals an inequitable distribution beds, with eight out of 22 districts having fewer than 10 maternity beds available per 1,000 pregnant women. These districts are Benghazi, Al Jabal Al Akhdar, Sirt, Al Jifarah, Azzawya, Wadi Al Haya, Murzuq and Ghat. The primary reason for the low availability of maternity beds here is that hospitals in these districts were closed, and could therefore not contribute any functional maternity beds. Alternative maternity services were being provided whenever possible, however. For example, one research team reported that in Ghat, where the only hospital was closed at the time of survey, maternity services were being provided from a temporary alternative facility, but these beds were not included in the survey and are therefore also not counted in the maternity bed density.

Figure 9: Map maternity bed density index by district (public hospitals & PHC facilities)



### 3.2.2 Health workforce density

The core health workforce density indicator focuses on the core medical professionals: physicians, medical licentiates, clinical officers, registered nurses and midwives. WHO estimates that countries fewer than 23 core health workers per 10,000 population will be unlikely to achieve adequate coverage rates for key primary health care interventions. The overall core health worker density in Libya of 76 per 10,000 population is more than three times this target, indicating that there are no shortages of core staff at the national level.

Table 15: Health workforce density per 10,000 population by facility type and district

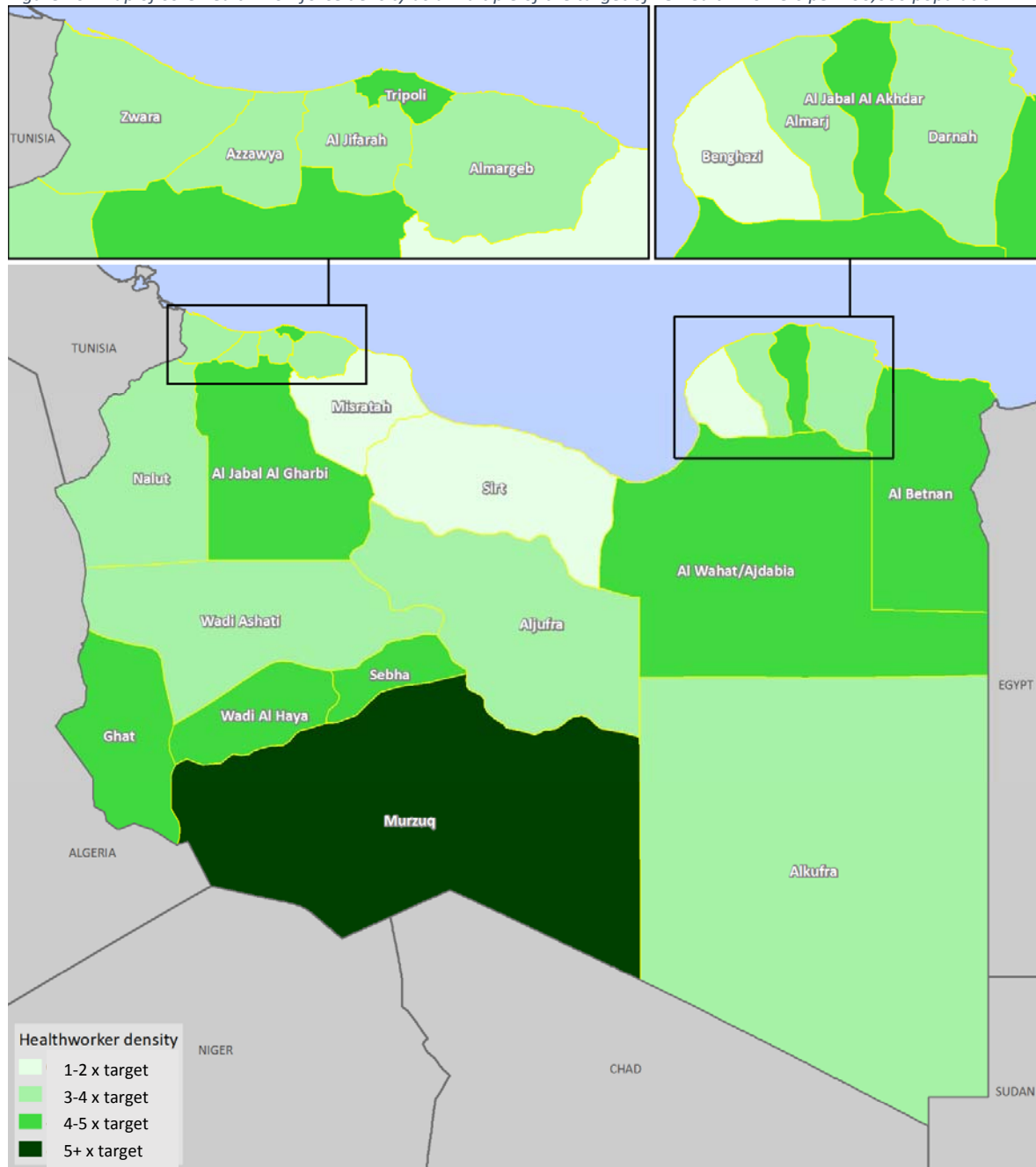
District	Hospitals		Primary Health Care		Total (Hospitals and PHCs)		Health workforce density score**
	N of core health workers*	Health worker density/ 10,000 pop	N of core health workers*	Health worker density/ 10,000 pop	N of core health workers*	Health worker density/ 10,000 pop	
<i>Al Wahat/Ajdabia</i>	652	32	1,337	66	1,989	98	100%
<i>Alkufra</i>	182	34	283	53	465	86	100%
<i>Benghazi</i>	1,956	27	1,094	15	3,050	41	100%
<i>Al Betnan</i>	871	46	1,562	82	2,433	127	100%
<i>Al Jabal Al Akhdar</i>	796	33	1,430	59	2,226	92	100%
<i>Darnah</i>	657	34	1,001	51	1,658	85	100%
<i>Almarj</i>	385	17	1,100	50	1,485	67	100%
<i>Sirt</i>	117	7	287	18	404	25	100%
<i>Aljufra</i>	169	30	237	41	406	71	100%
<i>Misratah</i>	1,216	19	794	13	2,010	32	100%
<i>Almargeb</i>	790	15	2,326	46	3,116	61	100%
<i>Al Jifarah</i>	582	11	1,833	35	2,415	46	100%
<i>Tripoli</i>	6,594	56	4,826	41	11,420	97	100%
<i>Azzawya</i>	667	19	1,570	45	2,237	64	100%
<i>Zwara</i>	1,477	43	1,623	47	3,100	91	100%
<i>Al Jabal Al Gharbi</i>	992	28	2,700	77	3,692	105	100%
<i>Nalut</i>	405	39	379	36	784	75	100%
<i>Wadi Ashati</i>	272	30	377	41	649	71	100%
<i>Sebha</i>	643	41	800	51	1,443	92	100%
<i>Wadi Al Haya</i>	0	0	1,161	132	1,161	132	100%
<i>Murzuq</i>	319	35	2,881	320	3,200	356	100%
<i>Ghat</i>	0	0	274	102	274	102	100%
<b>Total</b>	<b>19,742</b>	<b>30</b>	<b>29,875</b>	<b>46</b>	<b>49,617</b>	<b>76</b>	<b>100%</b>

\* Health workers including physician, nurses and midwives

\*\*The target is 23 health workers per 10,000 population

Analysis by district shows that every district achieved the overall health workforce density target. Sirt's relatively low score when compared to the other districts can be explained by the ongoing insecurity, and is expected to increase again with the return of a more stable situation. The SARA methodology dictates that percentages above 100% are rounded down, but Al Betnan, Al Jabal Al Gharbi, Wadi Al Haya, Murzuq and Ghat all achieved health workforce densities of over 100 health workers per 10,000 population (more than four times the WHO target), with Murzuq having a reported health workforce density that is 15 times higher than the target.

Figure 10: Map of core health workforce density as a multiple of the target of 23 health workers per 100,000 population



### 3.2.3 Service utilization

The third component of general service availability is service utilization, which is measured by the number of outpatient visits per capita, with a target of five visits per capita per annum. Data on outpatient visits by district was provided by the MoH, using an average of the two most recent years of utilization figures. This data is from 2013/14, as complete reporting stopped during subsequent years as a result of the conflict. As the available utilization data predates the current conflict, these service utilization scores are an overestimation when compared to the current context. As Wadi Al Haya and Ghat did not have functional hospitals at the time of survey, no hospital outpatient data was included for these two districts.

The overall service utilization score is low at 36%. It is especially utilization of the PHC facilities which appears to be limited, even when the overestimation due to the use of pre-conflict data is not taken into consideration. A considerable need is most likely being met by the private sector. This is borne out by the results of national household surveys, which estimate the use of private pharmacies as the primary source for contraceptives at 49%, for example (15). The wide range of service utilization index scores by district, with lows of 5% and 6% respectively in Al Jifarah and Wadi al Haya, and a high of 89% in Al Wahat/Ajdabia could indicate that health facilities in certain districts provide services to populations from other districts, but even when taking overlapping catchment areas and the use of the private sector into account, there still remains a notable gap in service utilization, suggesting that access remains an issue for specific populations.

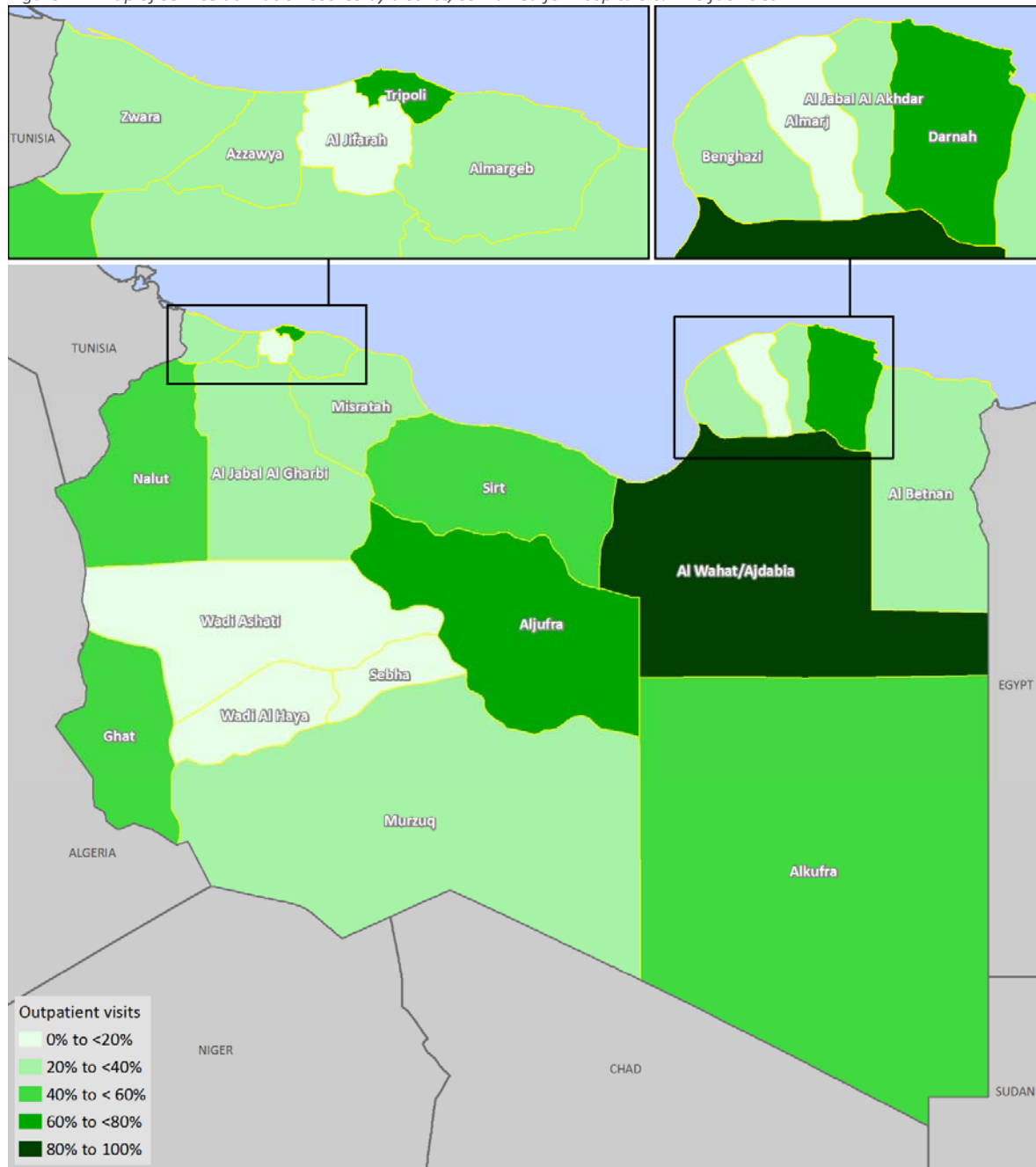
Table 16: Outpatient visits per capita per year by facility type and district

District	Hospitals		Primary Health Care		Total (Hospitals and PHCs)		Service utilization Score*
	N of outpatient visits	Outpatient service utilization	N of outpatient visits	Outpatient service utilization	N of outpatient visits	Outpatient service utilization	
Al Wahat/Ajdabia	209,313	1.03	690,974	3.41	900,287	4.44	89%
Alkufra	92,999	1.73	16,100	0.30	109,099	2.03	41%
Benghazi	410,971	0.56	409,716	0.56	820,687	1.11	22%
Al Betnan	51,489	0.27	143,093	0.75	194,582	1.02	20%
Al Jabal Al Akhdar	111,484	0.46	207,270	0.85	318,754	1.31	26%
Darnah	105,256	0.54	515,660	2.63	620,916	3.17	63%
Almarj	87,080	0.4	84,627	0.38	171,707	0.78	16%
Sirt	11,353	0.07	425,616	2.63	436,969	2.70	54%
Aljufra	154,300	2.70	38,754	0.68	193,054	3.38	68%
Misratah	238,636	0.38	967,245	1.54	1,205,881	1.92	38%
Almargeb	282,371	0.55	526,097	1.03	808,468	1.58	32%
Al Jifarah	60,424	0.12	65,638	0.13	126,062	0.24	5%
Tripoli	1,536,419	1.31	2,031,975	1.73	3,568,394	3.04	61%
Azzawya	83,121	0.24	544,491	1.57	627,612	1.81	36%
Zwara	91,344	0.27	264,656	0.77	356,000	1.04	21%
Al Jabal Al Gharbi	215,487	0.61	190,922	0.54	406,409	1.16	23%
Nalut	129,086	1.23	88,621	0.84	217,707	2.08	42%
Wadi Ashati	9,747	0.11	71,990	0.79	81,737	0.90	18%
Sebha	65,472	0.42	76,460	0.49	141,932	0.90	18%
Wadi Al Haya	-	0	28,180	0.32	28,180	0.32	6%
Murzuq	97,013	1.08	49,919	0.55	146,932	1.63	33%
Ghat	-	0	79,722	2.96	79,722	2.96	59%
<b>Total</b>	<b>4,043,365</b>	<b>0.62</b>	<b>7,517,721</b>	<b>1.16</b>	<b>11,561,086</b>	<b>1.78</b>	<b>36%</b>

\*the target is 5 visits per capita per year

For the calculation of the hospital inpatient utilization index, the methodology dictates that the number of discharges are calculated per 100 population per year. As reliable hospital discharge data was not available, hospital admissions data were used as a proxy. Given that overall hospital mortality rates are reported to be very low in Libya, it was felt that use of admissions data would not bias results to a great extent. The target was kept the same: 10 discharges (admissions) per 100 population. The national level score for hospital utilization was 78%. This indicates that the actual use of hospital services was at approximately three-quarters of the expected level. However, considering that the hospital bed capacity in the private sector is 30% of the total hospital beds available (see Table 13 for details), it seems that on the whole, the hospital utilization at national level meets general expectations.

Figure 11: Map of service utilization scores by district, combined for hospitals & PHC facilities



When disaggregated by district level, there is an indication that, as with outpatient service utilization, hospital utilization levels also varies greatly. There are very low levels of hospital utilization in Darnah, Sirt, and Al Jifarah districts, while Nalut, Al Betnan, and Al Jabal Al Akhdar have very high hospital utilization levels. On the whole, districts with higher outpatient service utilization scores also exhibit higher hospital utilization scores. Outliers are the districts of Darnah, Ghat, and Sirt, where the low hospital scores correspond to relatively high PHC service utilization, suggesting that outpatient clinics are, to some extent, covering for the lack of reliable hospitalization facilities. In contrast, districts such as Al

Jabal Al Akhdar, Almarj, Sebha, and Al Betnan have high hospital utilization scores corresponding to low PHC utilization scores. Analysis indicates that hospitals in these districts are likely to serve populations in such neighboring districts as Benghazi, Darnah and Wadi Al Haya, and reinforces the idea that the overall access to and quality of the three hospitals in Darnah district are limited.

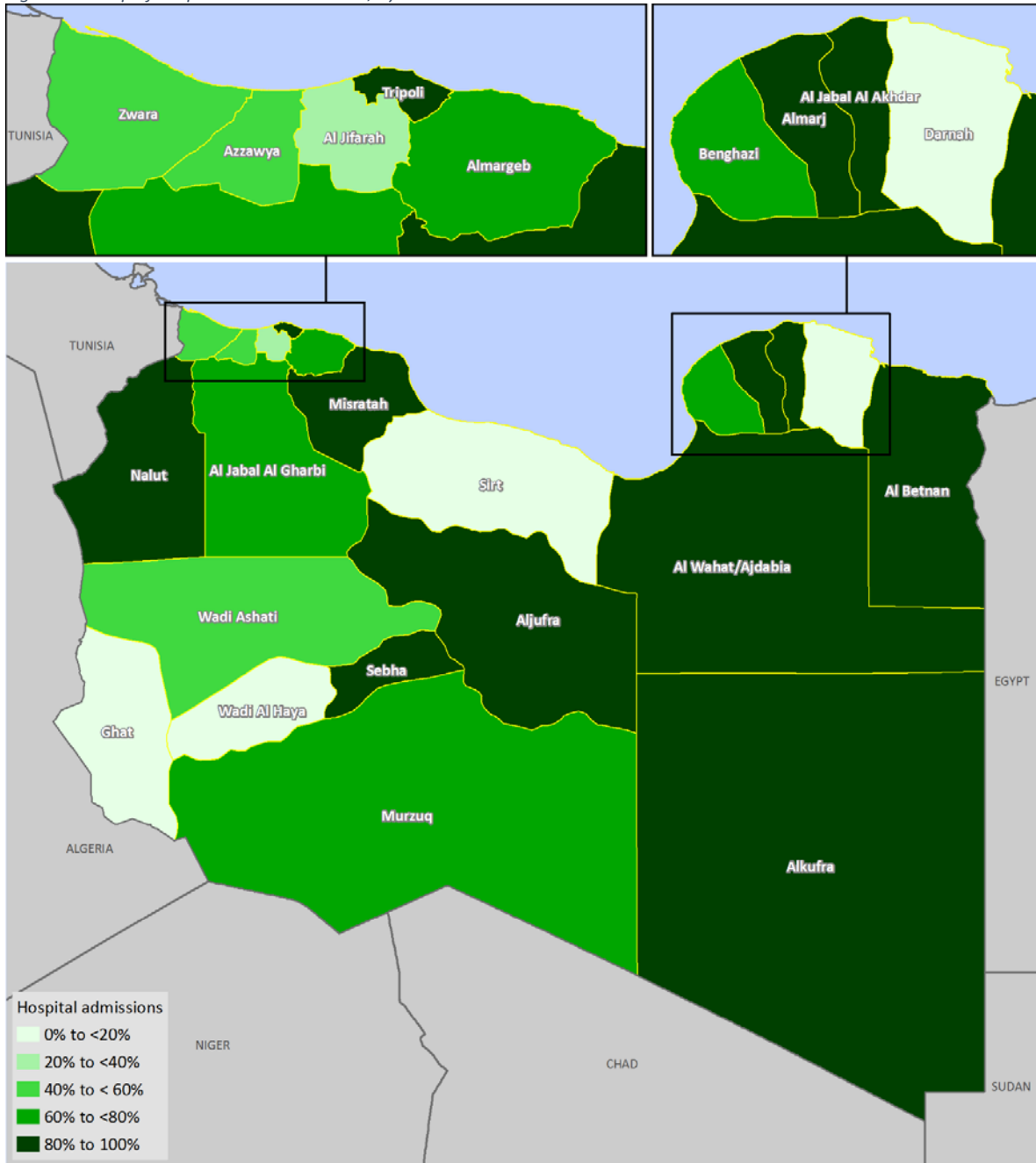
Table 17: Hospital inpatient service utilization per 100 population per year by district

District	Hospitals		Hospital utilization Score*
	N of hospital admissions	Hospital admissions per 100/year	
Al Wahat/Ajdabia	20,272	10	100%
Alkufra	4,427	8	82%
Benghazi	50,120	7	68%
Al Betnan	28,116	15	100%
Al Jabal Al Akhdar	39,684	16	100%
Darnah	2,522	1	13%
Almarj	22,806	10	100%
Sirt	1,946	1	12%
Aljufra	5,767	10	100%
Misratah	64,926	10	82%
Almargeb	36,766	7	72%
Al Jifarah	12,755	2	24%
Tripoli	113,015	10	96%
Azzawya	17,528	5	51%
Zwara	13,830	4	40%
Al Jabal Al Gharbi	25,079	7	71%
Nalut	20,121	19	100%
Wadi Ashati	5,288	6	58%
Sebha	14,858	9	94%
Wadi Al Haya	0	0	0%
Murzuq	5,907	7	66%
Ghat	0	0	0%
<b>Total</b>	<b>505,733</b>	<b>7.8</b>	<b>78%</b>

\* The target is 10 discharges per 100 population



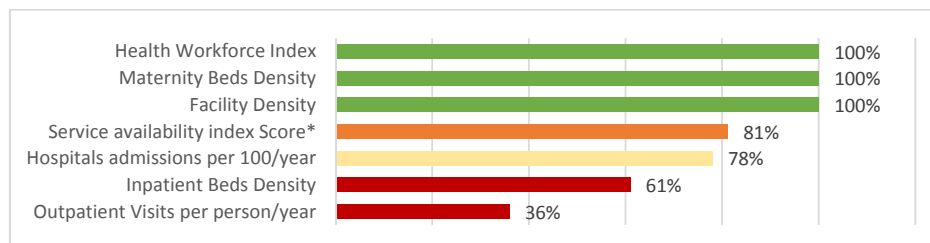
Figure 12: Map of hospital utilization scores, by district



### 3.2.4 Service Availability Index

The Service Availability Index is a reflection of the general availability of health services, and is calculated as the un-weighted average of the three areas described in the previous three sections: infrastructure, workforce, and utilization. For Libya, the national level general Service Availability Index was 81%.

Figure 13: Level of achievement of individual components of the service availability index



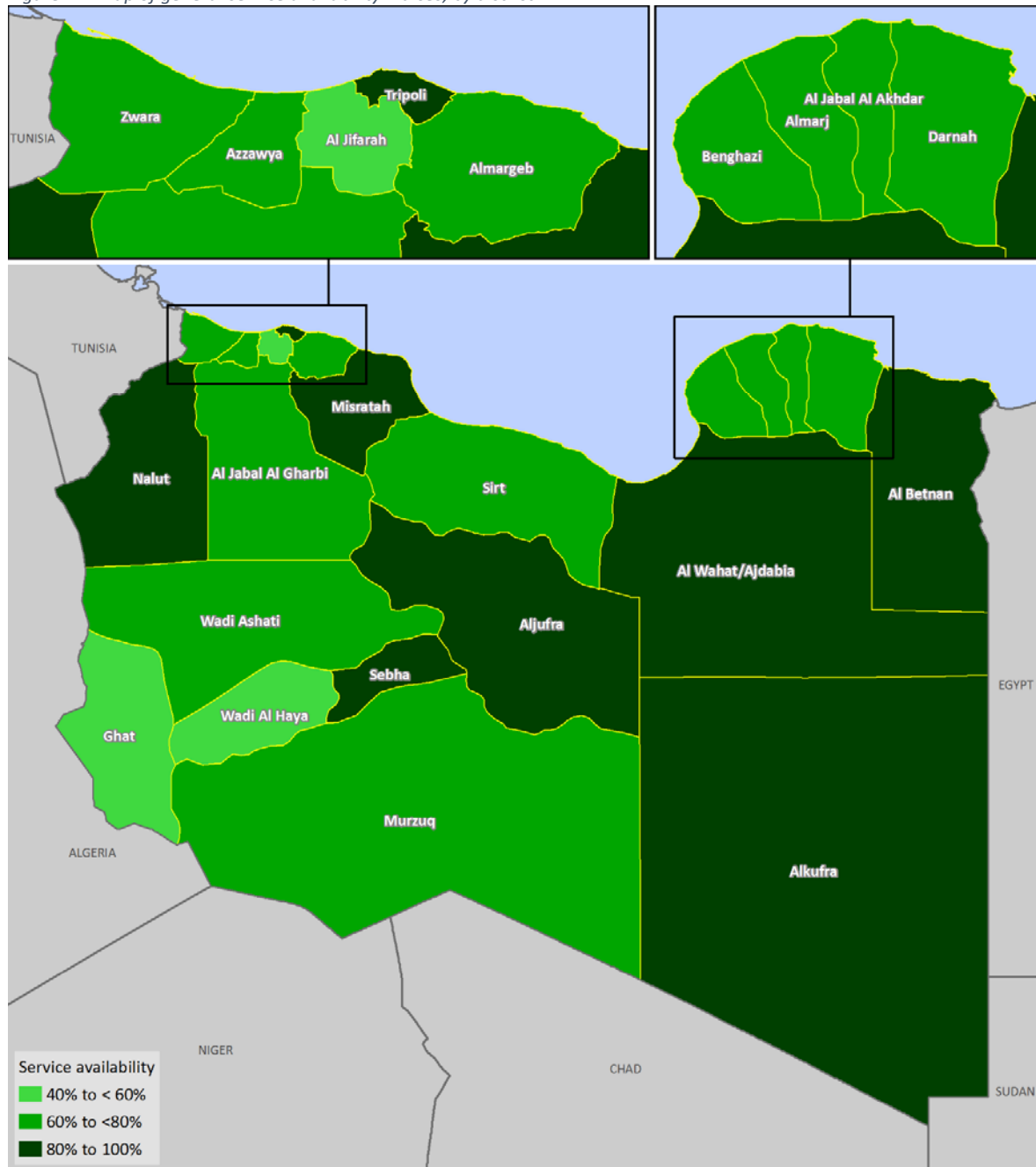
Facility density, maternity bed density, and core health worker density had a strong positive impact on the general service availability score, while low outpatient visit scores consistently contributed to reduced availability scores at national and district levels. At district level, general service availability scores ranged from a low of 48% in Wadi Al Haya and 54% in Ghat, to highs of 94% (Tripoli) and 95% (Nalut).

Table 18: General Service Availability summary index by district

District	Health Infrastructure Density Index				Health Workforce Density Index	Service Utilization Index			General Service availability index*
	Facility density	Inpatient bed density	Maternity bed density	Average score		Outpatient visits per person/year	Hospitals admission per 100/year	Average score	
Al Wahat/Ajdabia	100%	36%	100%	79%	100%	89%	100%	94%	91%
Alkufra	100%	71%	100%	90%	100%	41%	82%	61%	84%
Benghazi	71%	55%	93%	73%	100%	22%	68%	45%	73%
Al Betnan	100%	69%	100%	90%	100%	20%	100%	60%	83%
Al Jabal Al Akhdar	100%	47%	71%	73%	100%	26%	100%	63%	79%
Darnah	100%	35%	100%	78%	100%	63%	13%	38%	72%
Almarj	100%	41%	100%	80%	100%	16%	100%	58%	79%
Sirt	83%	17%	75%	58%	100%	54%	12%	33%	64%
Aljufra	100%	103%	100%	101%	100%	68%	100%	84%	95%
Misratah	100%	60%	100%	87%	100%	38%	100%	69%	85%
Almargeb	100%	30%	100%	77%	100%	32%	72%	52%	76%
Al Jifarah	100%	23%	34%	52%	100%	5%	24%	15%	56%
Tripoli	100%	110%	100%	103%	100%	61%	96%	78%	94%
Azzawya	100%	43%	59%	67%	100%	36%	51%	43%	70%
Zwara	100%	72%	100%	91%	100%	21%	40%	31%	74%
Al Jabal Al Gharbi	100%	73%	100%	91%	100%	23%	71%	47%	79%
Nalut	100%	140%	100%	113%	100%	42%	100%	71%	95%
Wadi Ashati	100%	47%	100%	82%	100%	18%	58%	38%	74%
Sebha	100%	89%	100%	96%	100%	18%	94%	56%	84%
Wadi Al Haya	100%	4%	14%	39%	100%	6%	0%	3%	48%
Murzuq	100%	48%	86%	78%	100%	33%	66%	49%	76%
Ghat	100%	0%	0%	33%	100%	59%	0%	30%	54%
<b>Total</b>	<b>100%</b>	<b>61%</b>	<b>100%</b>	<b>87%</b>	<b>100%</b>	<b>36%</b>	<b>78%</b>	<b>57%</b>	<b>81%</b>

\* Un-weighted average of the three areas: infrastructure, workforce, and utilization

Figure 14: Map of general service availability indices, by district



### 3.3 General Service Readiness

General Service Readiness refers to the overall capacity of health facilities to provide general health services. Readiness is defined as the availability of components required to provide services on the basis of five readiness domains, which are (1) basic amenities, (2) basic equipment, (3) standard precautions, (4) laboratory and imaging tests (called “diagnostics” in this document), and (5) medicines and commodities. General Service Readiness is described by a single index that is calculated using the individual scores of each of the five general service readiness domains. A score is generated per domain

based on the average number of domain elements present in each health facility, and then the overall General Service Readiness Score or Index is calculated based on the mean of the five domains (11,14). The composite scores of the domain-specific indicators are presented in this summary section, calculated separately for hospitals (Section 3.3.1) and PHC facilities (Section 3.3.2).

Sections 3.3.4 and 3.3.5 provide disaggregated data for the individual domain elements by service provider: hospitals (Section 3.3.4), and PHC facilities (Section 3.3.5). No indices were calculated for “other” facilities, given that this category covers a wide variety of different service providers for which calculating indices was not sensible.

For the diagnostic tests and essential medicines indicators, the tests and medicines used for the general service readiness indicator were selected to be representative across all services a health facility could potentially offer. A basic breakdown of the availability of diagnostics and medicines for specific services is provided in the relevant chapters, while a more complete overview of the overall availability of diagnostics and medicines is provided in Chapter 9 and Chapter 10, respectively.

### 3.3.1 Hospital level general service readiness

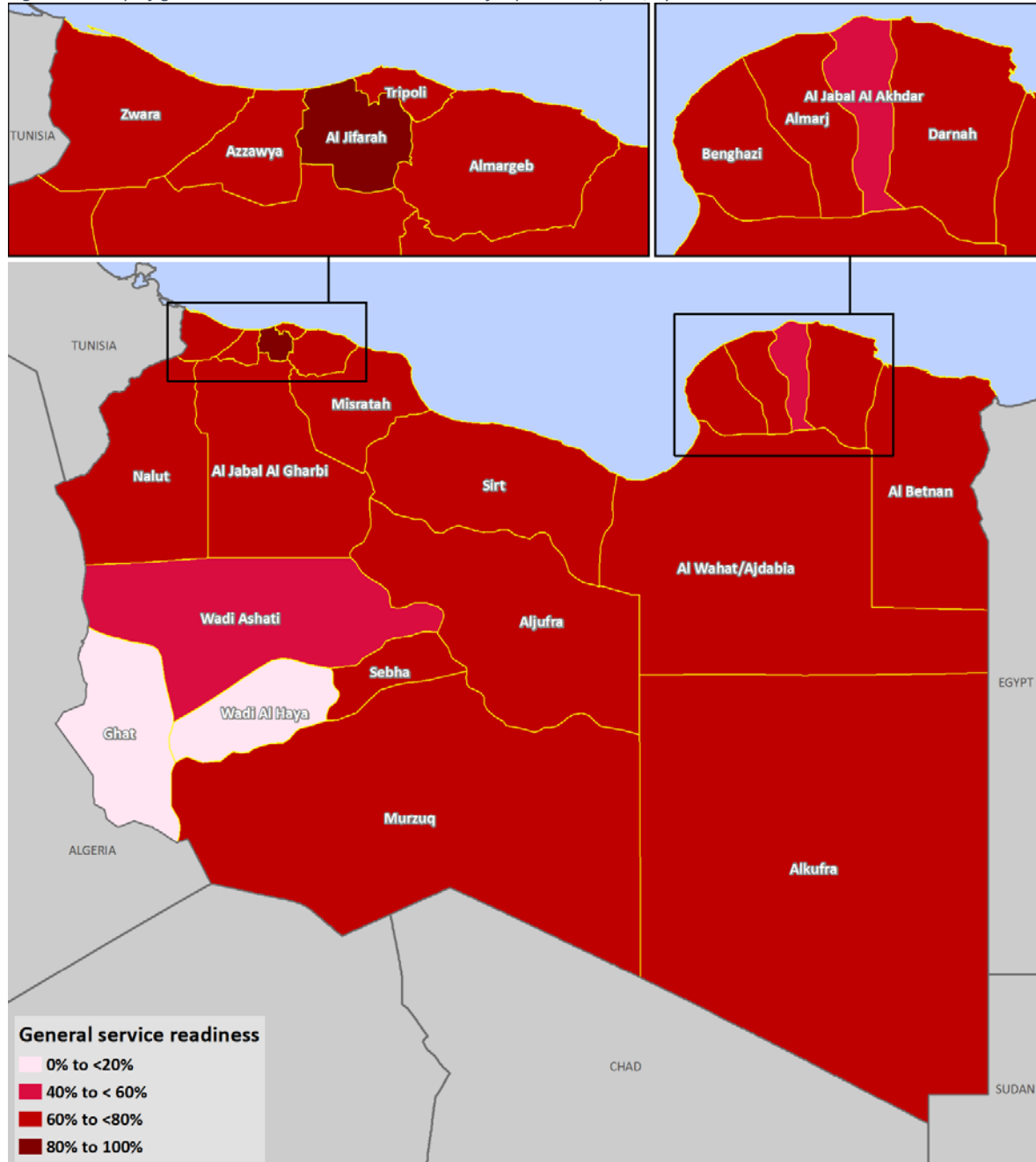
The overall General Service Readiness Index score for the public health hospitals in Libya was 69%. This is a relatively low score, indicating that even where services are available, there are a considerable number of limiting factors present that hinder the proper provision of many general services. For example, the lack of diagnostics and medicines can make it impossible for a facility to provide the correct diagnosis and treatment for a patient with cardiovascular disease. Any patient needing care from a functional hospital facility in Libya has a 69% chance of having their needs met. Ideally this should be 100%. Given that the scores are calculated on the basis of the availability of very basic items and utilities (see Section 3.3.4 for details), it is likely that the overall readiness for specialist services will be lower.

Table 19: General Service readiness for hospitals by district

District	N of hospitals	Basic amenities score	Standard precautions score	Basic equipment score	Basic medicine score	Diagnostics index score	Hospital General Services Readiness score
<i>Al Wahat/Ajdabia</i>	2	79%	89%	100%	38%	79%	77%
<i>Alkufra</i>	2	79%	100%	100%	25%	71%	75%
<i>Benghazi</i>	6	86%	80%	78%	28%	64%	67%
<i>Al Betnan</i>	3	76%	82%	83%	58%	76%	75%
<i>Al Jabal Al Akhdar</i>	4	68%	67%	63%	35%	36%	54%
<i>Darnah</i>	3	81%	63%	78%	33%	57%	62%
<i>Almarj</i>	4	68%	61%	58%	43%	75%	61%
<i>Sirt</i>	1	43%	89%	100%	60%	86%	76%
<i>Aljufra</i>	2	86%	67%	92%	38%	79%	72%
<i>Misratah</i>	5	89%	91%	87%	38%	69%	75%
<i>Almargeb</i>	6	81%	57%	69%	53%	67%	66%
<i>Al Jifarah</i>	1	86%	67%	100%	90%	100%	89%
<i>Tripoli</i>	14	88%	91%	79%	51%	59%	73%
<i>Azzawya</i>	2	79%	78%	92%	43%	64%	71%
<i>Zwara</i>	5	77%	80%	90%	45%	66%	72%
<i>Al Jabal Al Gharbi</i>	8	79%	69%	88%	43%	57%	67%
<i>Nalut</i>	5	74%	89%	97%	58%	60%	76%
<i>Wadi Ashati</i>	3	67%	70%	72%	25%	29%	53%
<i>Sebha</i>	2	71%	39%	42%	85%	86%	65%
<i>Wadi Al Haya</i>	0						
<i>Murzuq</i>	2	93%	83%	67%	38%	43%	65%
<i>Ghat</i>	0						
<b>Total</b>	<b>80</b>	<b>80%</b>	<b>77%</b>	<b>80%</b>	<b>44%</b>	<b>63%</b>	<b>69%</b>

The range of General Services Readiness scores at the district level is relatively narrow. The lowest score of 53% was recorded for the three hospitals in Wadi Ashati, followed by 54% for the four hospitals in Al Jabal Al Akhdar. High scores include 89% for the single hospital in Al Jifarah and 77% for the two Al Wahat/Ajdabia hospitals.

Figure 15: Map of general services readiness index scores for public hospitals, by district



### 3.3.2 PHC level general service readiness

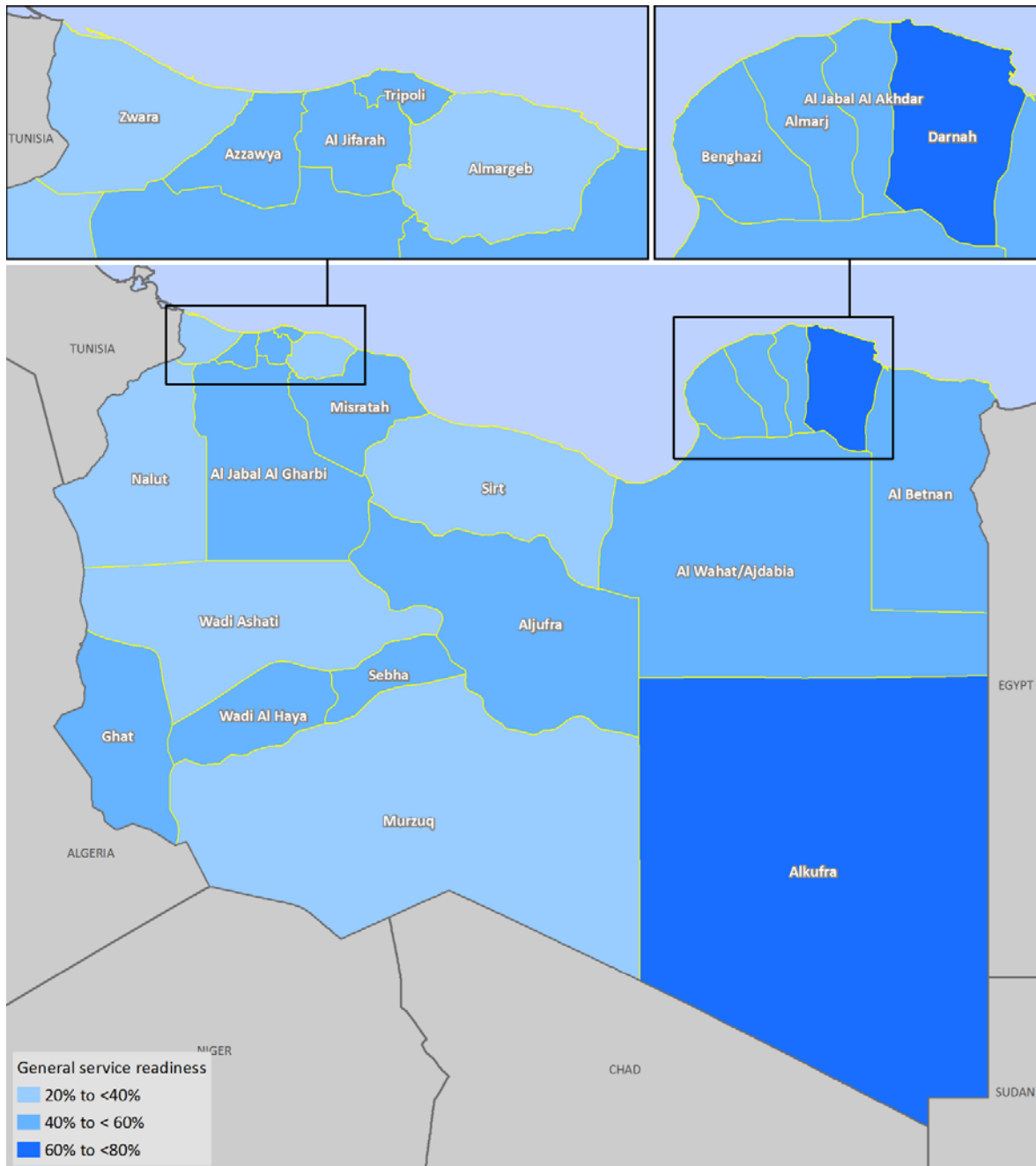
The General Service Readiness Index mean score for the PHC facilities is 45%. On the basis of the availability of basic items/utilities in the five readiness domains, this indicates that any patient seeking

general services from any one of the 1,082 PHC facilities in Libya has only a 45% likelihood that this facility can meet his/her needs; this is a score which is worryingly low and, accompanied by the low utilization rates described in Section 3.2.3, puts into question the overall value of PHC service delivery in the public sector. The greatest hindrance to service readiness is the availability of basic medicines at the PHC level, with a score of only 16%. Basic amenities, standard precautions, and diagnostics availability scores fall between 48% and 50%, indicating that these areas also need to be addressed to improve general service availability at PHC level. At district level, only nine out of 22 districts have a readiness score of over 50%, but even then the highest score is 66% for Darnah district. The lowest score was measured for Wadi Ashati district at 21%, suggesting that PHC services provided through the 28 available facilities in this district are essentially non-functional. The lowest overall scores were measured in the western half of the country.

Table 20: General Service Readiness for PHC facilities by district

	N of PHC facilities	Basic equipment score	Basic amenities score	Standard precautions score	Diagnostics index score	Basic medicine score	PHC General Services Readiness score
<i>Al Wahat/Ajdabia</i>	37	63%	52%	69%	38%	18%	48%
<i>Alkufra</i>	18	73%	55%	75%	71%	26%	60%
<i>Benghazi</i>	38	73%	60%	58%	53%	13%	51%
<i>Al Betnan</i>	32	32%	38%	22%	18%	89%	40%
<i>Al Jabal Al Akhdar</i>	64	59%	53%	66%	51%	58%	57%
<i>Darnah</i>	28	54%	50%	46%	91%	89%	66%
<i>Almarj</i>	30	66%	49%	39%	51%	50%	51%
<i>Sirt</i>	20	53%	58%	36%	43%	0%	38%
<i>Aljufra</i>	13	63%	65%	65%	43%	17%	50%
<i>Misratah</i>	67	78%	64%	74%	50%	15%	56%
<i>Almargeb</i>	109	61%	48%	40%	35%	4%	38%
<i>Al Jifarah</i>	62	55%	40%	50%	49%	24%	44%
<i>Tripoli</i>	115	81%	53%	65%	49%	14%	52%
<i>Azzawya</i>	80	66%	56%	62%	49%	11%	49%
<i>Zwara</i>	61	59%	45%	44%	29%	2%	36%
<i>Al Jabal Al Gharbi</i>	117	43%	35%	29%	54%	41%	41%
<i>Nalut</i>	33	55%	51%	35%	48%	6%	39%
<i>Wadi Ashati</i>	15	38%	46%	24%	0%	0%	21%
<i>Sebha</i>	22	73%	71%	65%	71%	9%	58%
<i>Wadi Al Haya</i>	25	64%	47%	38%	60%	0%	42%
<i>Murzuq</i>	87	43%	50%	32%	40%	0%	33%
<i>Ghat</i>	9	44%	43%	25%	64%	32%	42%
<b>Total</b>	<b>1,082</b>	<b>60%</b>	<b>50%</b>	<b>49%</b>	<b>48%</b>	<b>16%</b>	<b>45%</b>

Figure 16: Map of general readiness scores for PHC facilities, by district

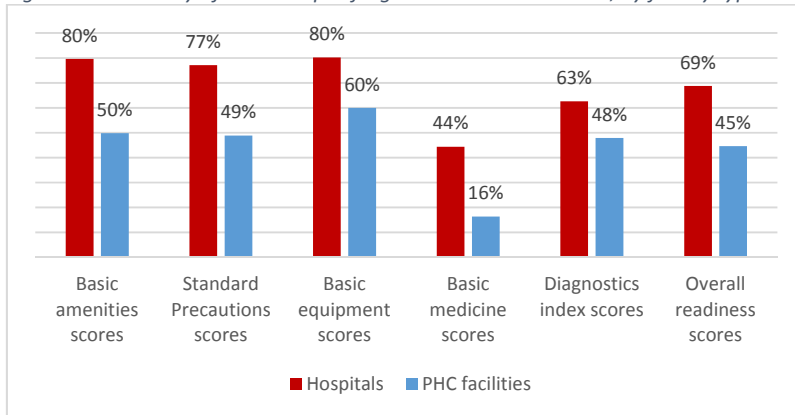


### 3.3.3 Comparison of general service readiness scores between facility types

Domain-specific general readiness scores for hospitals are consistently higher than those for the PHC facilities. Highest scores for both facility types are for the availability of basic equipment, while the lowest scores are for the availability of basic medicines (Figure 17).



Figure 17: Summary of domain-specific general readiness scores, by facility type



### 3.3.4 Disaggregated readiness data for hospitals

This section provides an overview of the five readiness domains for the hospital facilities, broken down by the individual domain elements at national level. Results are presented as the proportion of the 80 functional hospitals included in the survey where the individual domain element is available. The geographic distribution of the readiness indices at district level is shown with maps. Data broken down for each individual hospital facility can be found in Table 21.

#### 3.3.4.1 Basic amenities availability

The Basic Amenities index is calculated as the mean availability of seven domain elements that reflect the infrastructure needed to adequately perform routine work, including activities such as patient consultations (requiring a room with privacy), and ensuring hygiene (requiring a source of clean water). The score for the Basic Amenities Index across all hospitals in Libya was 80%, reflecting both strengths and weaknesses in the availability of basic hospital amenities. Overall, all hospitals surveyed have electricity available, and consultation rooms that offer both visual and auditory privacy. There is limited access to computers with internet (only 36% of hospitals), which could result in limited reporting capacity and limited access to up-to-date medical knowledge, and a shortage of functional communication equipment (64%) which can affect a hospital’s referral capacity as well as the capacity to do follow-up of patients and staff.

Figure 18: Overall availability of basic amenities in hospitals, by type

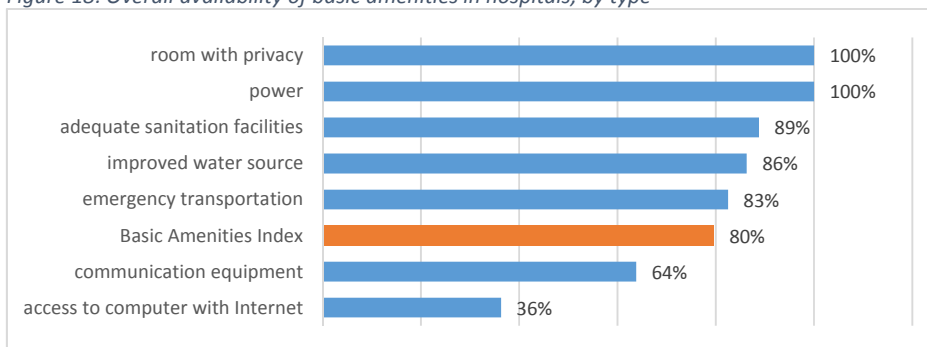
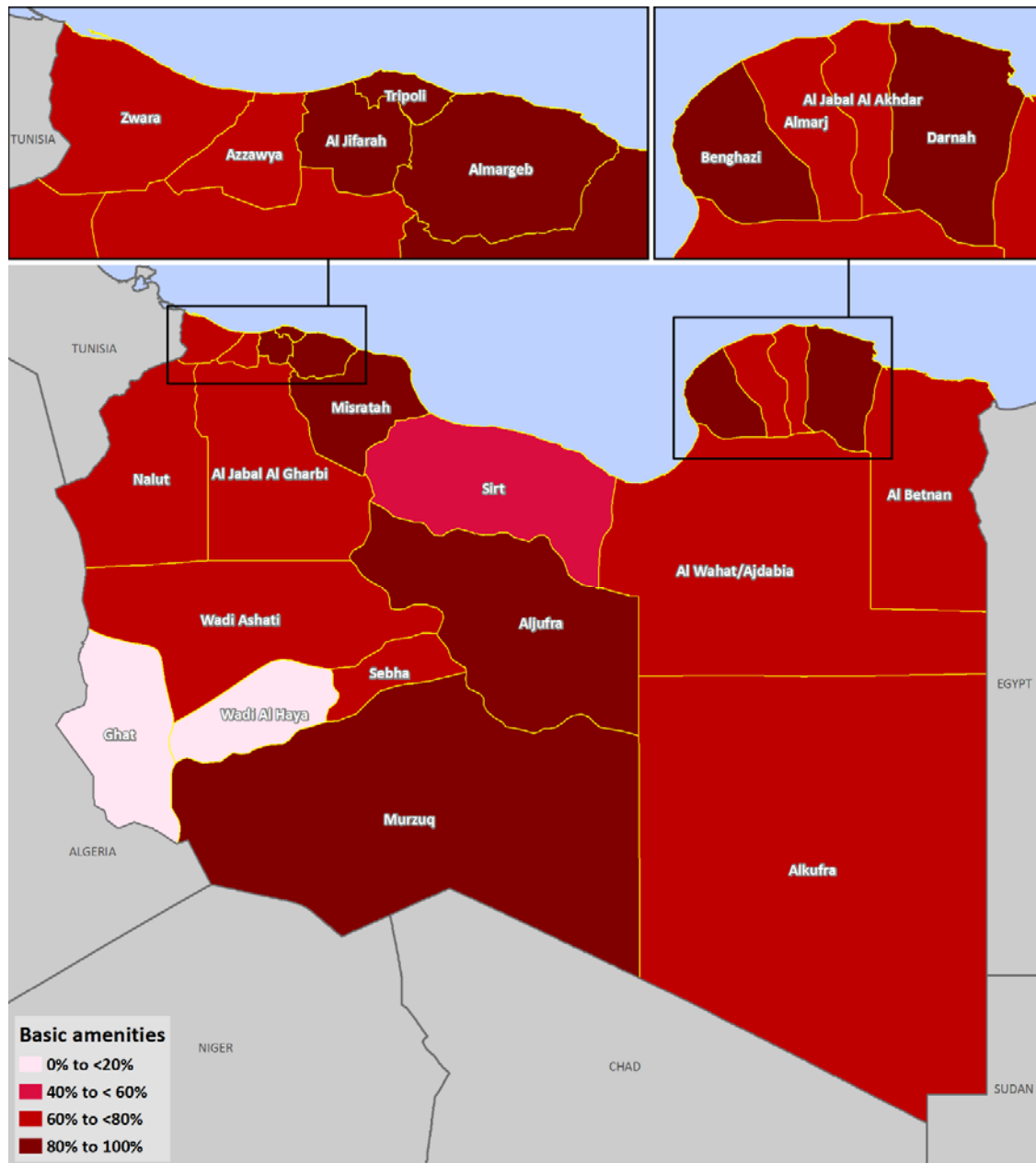


Figure 19: Map of basic amenities mean scores for hospitals, by district



### 3.3.4.2 Basic equipment availability

The Basic Equipment Index is calculated as the mean availability of six domain elements that reflect the materials needed to adequately perform adequate patient physical examination, such as blood pressure (BP) equipment, stethoscopes, and thermometers. The mean score for the Basic Equipment Index for the hospitals in Libya was 80%, reflecting both strengths and weaknesses. Basic materials for patient examination such as BP equipment, stethoscopes, and thermometers were almost universally available in the hospitals. Equipment in short supply included both adult weighing scales (53% availability) and child weighing scales (60%).

Figure 20: Overall availability of basic equipment in hospitals, by type

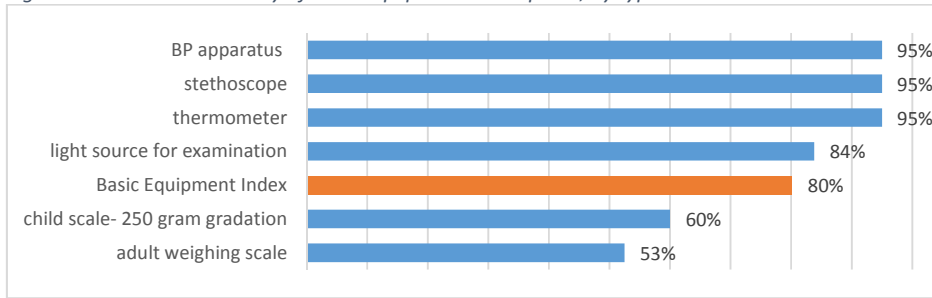
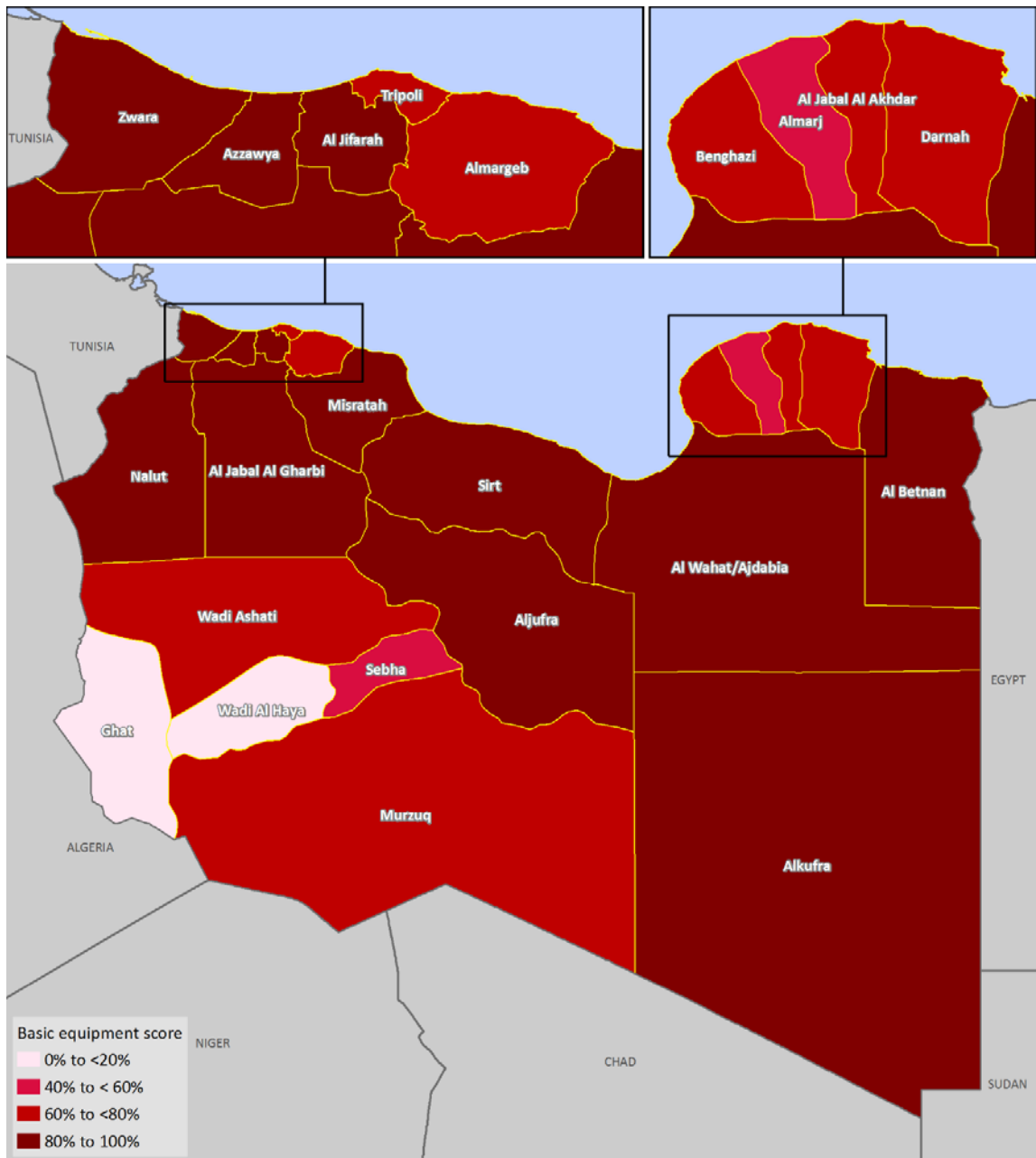


Figure 21: Map of basic equipment availability scores for hospitals, by district

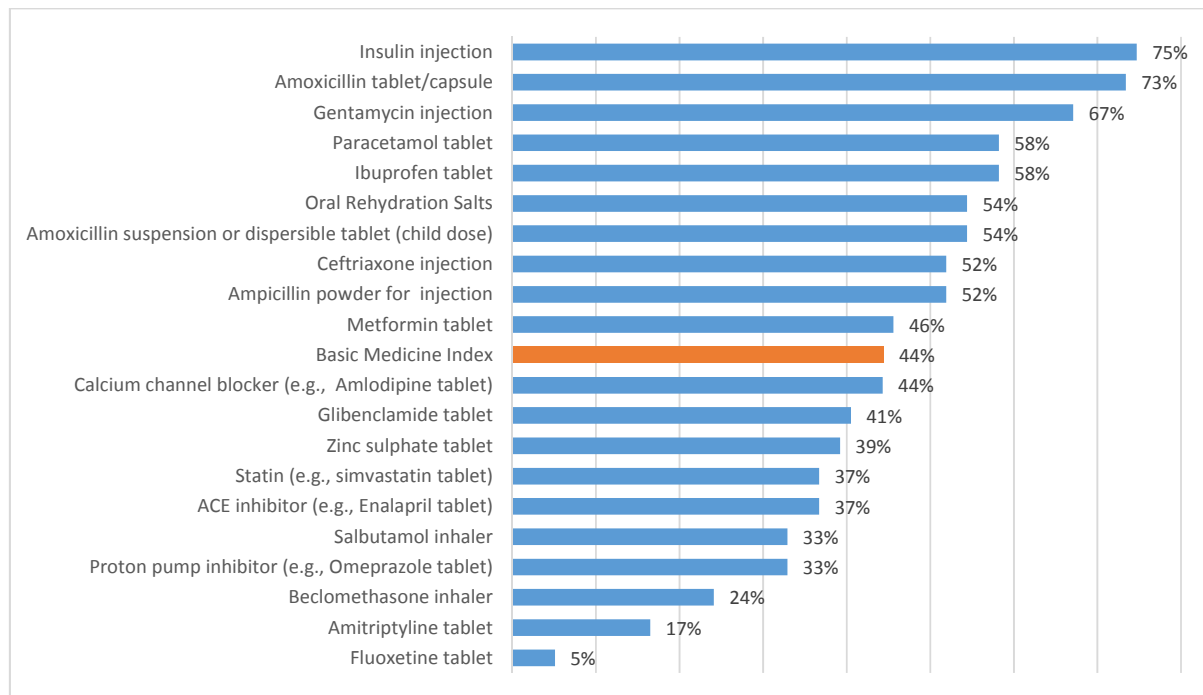


### 3.3.4.3 Basic medicines availability

The Basic Medicines Index is calculated as the mean availability of twenty essential medicines<sup>1</sup> that reflect those needed to treat the most commonly seen health conditions, such as antibiotics for infections like pneumonia, and antihypertensive drugs to treat high blood pressure. The essential medicines used for the calculation of this indicator are selected to be representative across all services. A more detailed breakdown of the availability of medicines for specific services is provided in the relevant chapters, and Chapter 10 provides a more complete overview of the availability of medicines in both hospitals and PHCs in Libya.

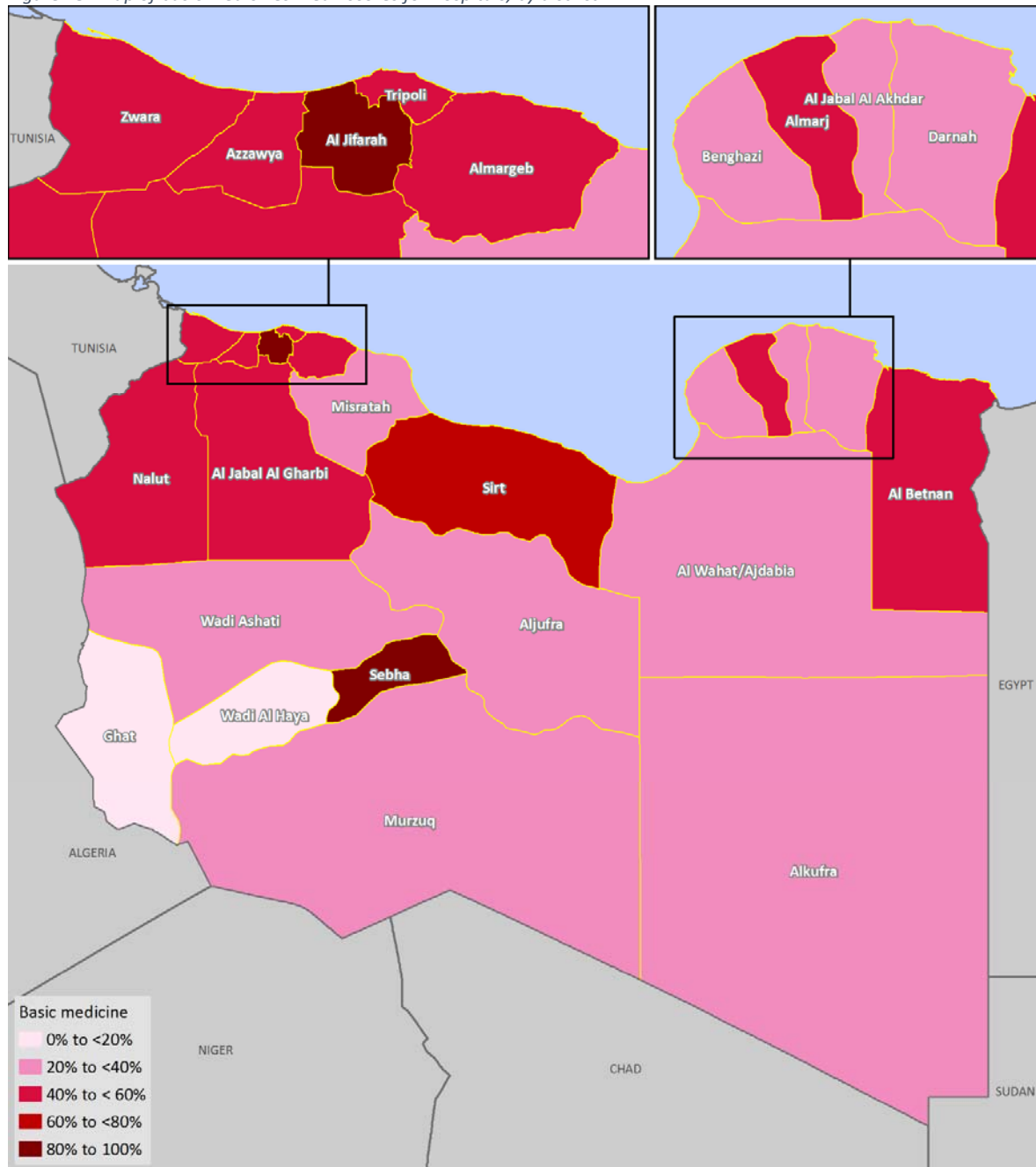
The score of 44% for the Basic Medicines Index reveals that medicines are generally in short supply across all public hospitals. There is a considerable variation in the availability of essential medicines, ranging from a reasonable availability of insulin for diabetes patients (75%) and antibiotics such as oral amoxicillin (73%) and injectable gentamycin (67%) to treat common infections, to a very low availability of medicines for mental health conditions such as amitriptyline (17%) and fluoxetine (5%).

Figure 22: Overall availability of basic medicines in hospitals, by type



<sup>1</sup> Chapter 10 provides details on a larger subset of essential medicines available in hospitals.

Figure 23: Map of basic medicines mean scores for hospitals, by district



#### 3.3.4.4 Diagnostics availability

The Diagnostics Index is calculated as the mean availability of seven simple diagnostic tests that can be used to diagnose important health conditions, such as for specific infections (dipsticks for urine protein, and syphilis, and HIV rapid tests) and conditions such as pregnancy (urine pregnancy test). The score of 63% for the Diagnostics Index reveals that diagnostic tests are generally in short supply across all public hospitals. Common tests are more widely available such as dipsticks for urine protein (82%) and glucose (87%). Worrying is the low availability of tests commonly used in antenatal care, such as hemoglobin testing (39%) and testing for syphilis (22%).

Figure 24: Overall availability of basic diagnostics in hospitals, by type

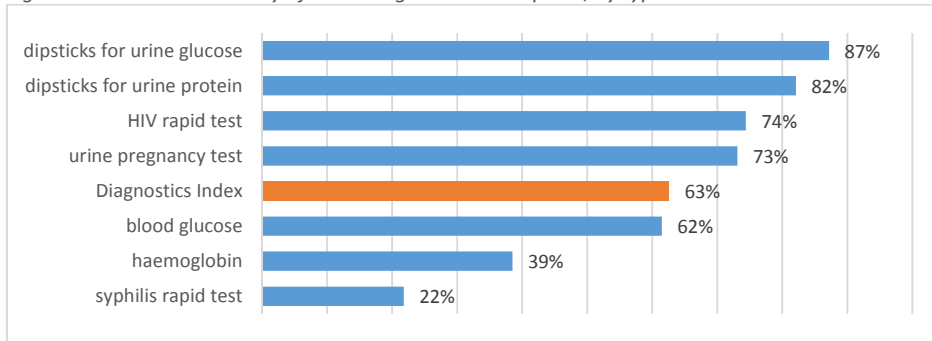
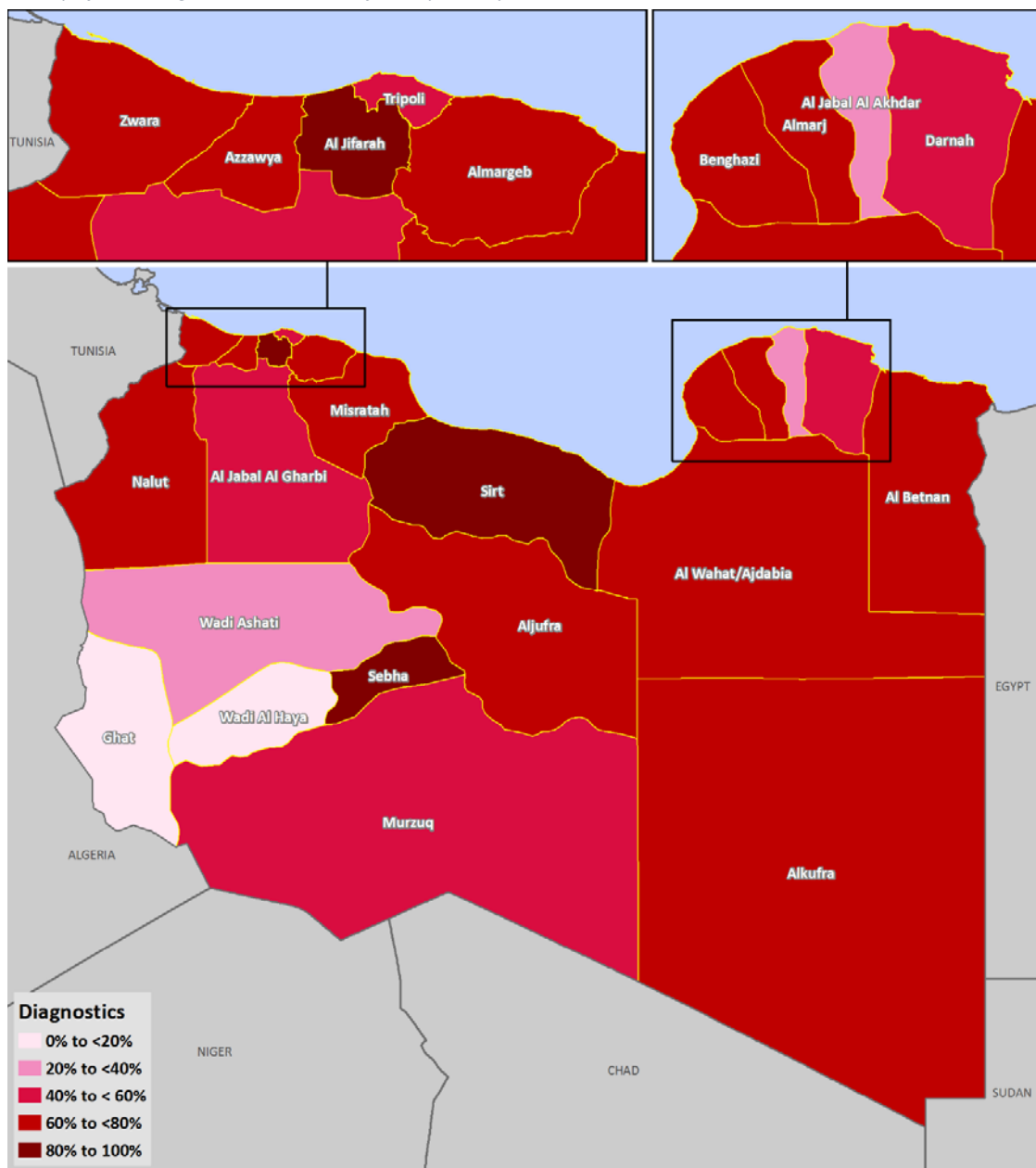


Figure 25: Map of basic diagnostics mean scores for hospitals, by district



### 3.3.4.5 Standard precautions availability

The Standard Precautions Index is calculated as the mean availability of nine pieces of equipment or materials that need to be used to limit the spread of infectious diseases or risk of injury for both patients and staff in any health facility. This includes hygiene materials such as disposable gloves and disinfectant, as well as means of minimizing needle-stick injuries, such as sharps containers and the means to dispose of these containers as well as other potentially infectious wastes in a safe manner.

The score of 77% for the Standard Precautions Index reveals that although precautions are fairly commonplace, there is still considerable room for improvement in order to minimize risks. Latex gloves, soap, and running water or alcohol-based hand rubs to minimize the infection risks through hands, are widely available at 95% and 94%, respectively. The safe final disposal of sharps (53%) and infectious wastes (50%) is reportedly practiced in approximately half of all facilities, while the availability of guidelines on standard precautions is limited to 49% of hospitals surveyed.

Figure 26: Overall availability of standard precautions in hospitals, by type

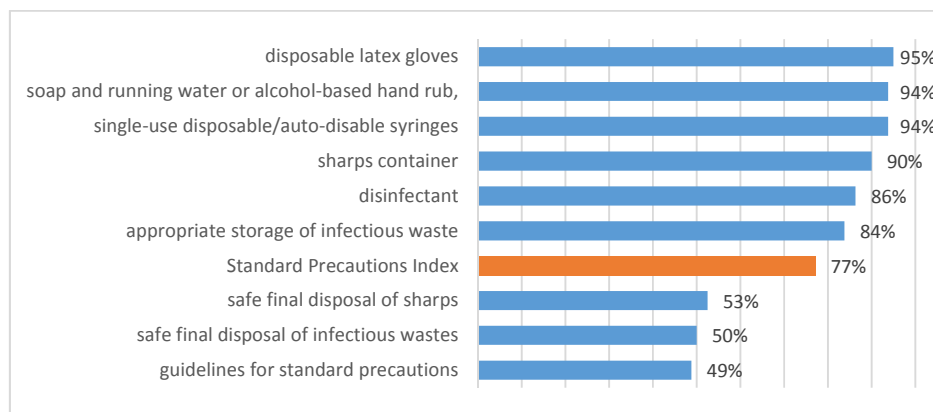
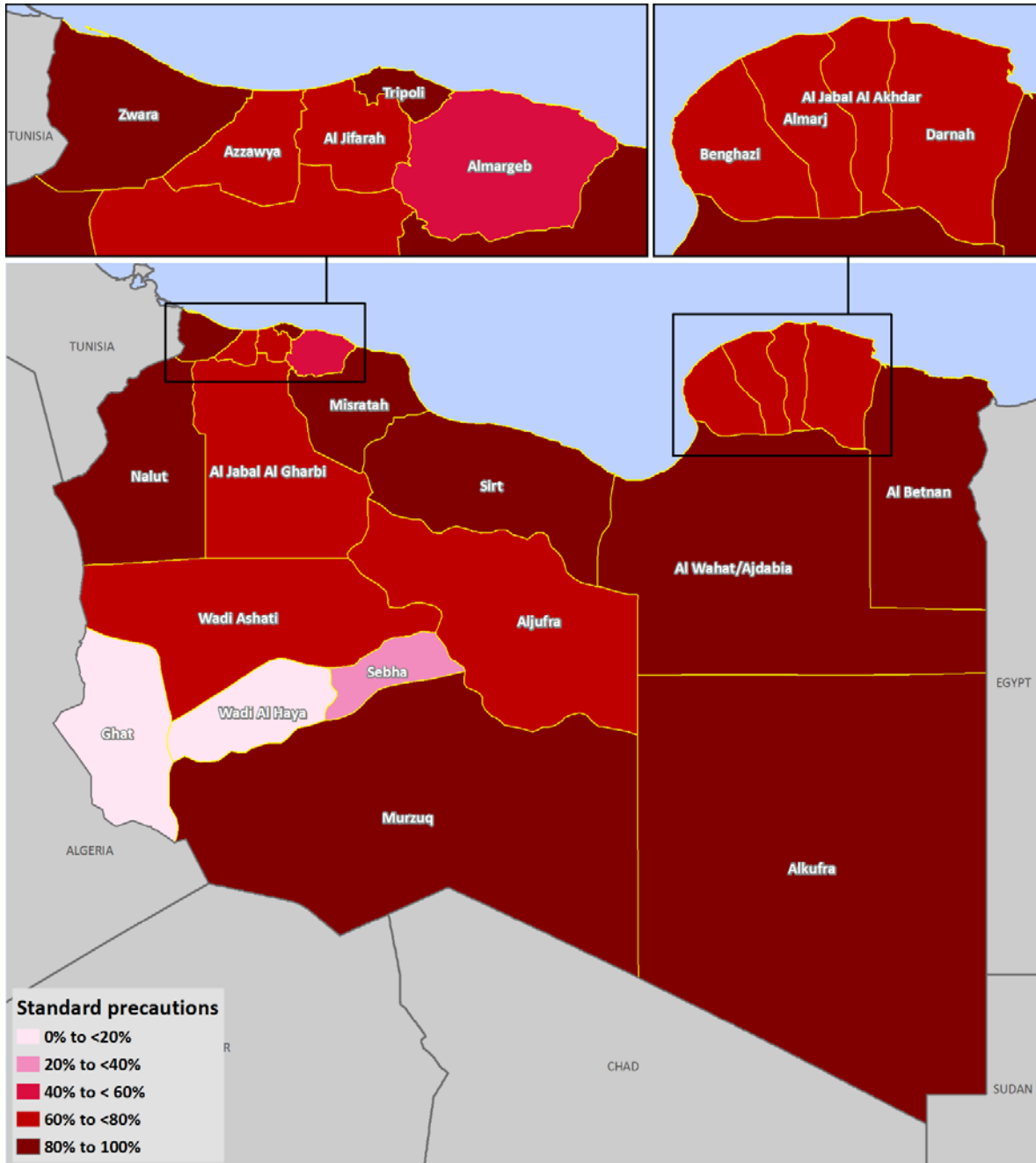




Figure 27: Map of standard precautions mean scores for hospitals, by district



### 3.3.4.6 Breakdown of readiness data by item and hospital

Table 21 provides a breakdown of the individual tracer elements included in the general services readiness indices for hospitals, with data presented by hospital facility.





### 3.3.5 Disaggregated readiness data for PHC facilities

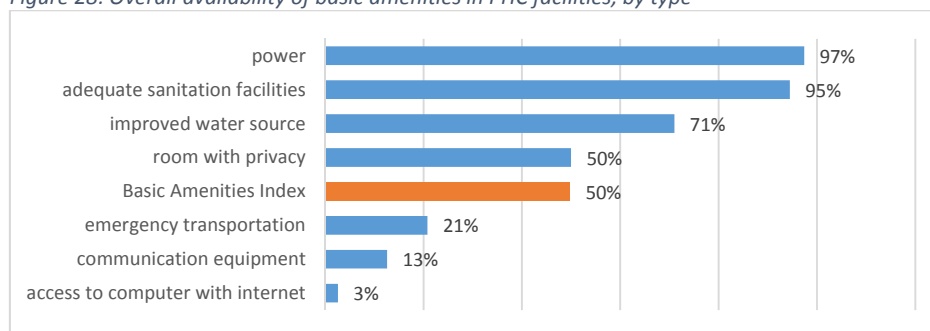
This section provides an overview of the five readiness domains for the PHC facilities, broken down by the individual domain elements. Results are presented as the proportion of the 1,082 functional PHC facilities included in the survey which provided data on the individual domain elements. The geographic distribution of the individual readiness indices at district-level is presented with maps. Data on the domains and domain elements for the PHC facilities were disaggregated at municipality level. This data is presented in Table 22 and Table 23.

#### 3.3.5.1 Basic amenities availability

The Basic Amenities index is calculated as the mean availability of seven domain elements that reflect the infrastructure needed to adequately perform routine work, including activities such as patient consultations (requiring a room with privacy), and ensuring hygiene (requiring a source of clean water). The score of 50% for the Basic Amenities Index for the PHCs indicates that most facilities only have half of the essential basic amenities available that would allow functional service delivery.

PHC facilities can boast of a near-universal availability of power (97%) and adequate sanitation facilities (95%), while there is a considerable lack of emergency transportation (21%), communication equipment (13%), and almost no access to a computer with internet (3%) for submitting reports and accessing up-to-date medical information.

Figure 28: Overall availability of basic amenities in PHC facilities, by type



#### 3.3.5.2 Basic equipment availability

The Basic Equipment Index is calculated as the mean availability of six domain elements that reflect the materials needed to adequately perform adequate patient physical examination, such as blood pressure (BP) equipment, stethoscopes, and thermometers. The score of 60% for the Basic Equipment Index, even though it is far from adequate, can be considered high in comparison to the other indices calculated for general services readiness in PHC facilities.

Equipment that is most commonly available includes stethoscopes (83% of facilities) and BP apparatus (81%), while there is a significant lack of child and infant weighing scales (48% and 40% respectively), which is concerning when one considers that growth monitoring of young children is a primary function of PHC facilities. The overall lack of a simple light source (35%) also indicates that proper diagnosis may also be a challenge for health workers in PHC facilities.

Figure 29: Map of basic amenities mean scores for PHC facilities, by district

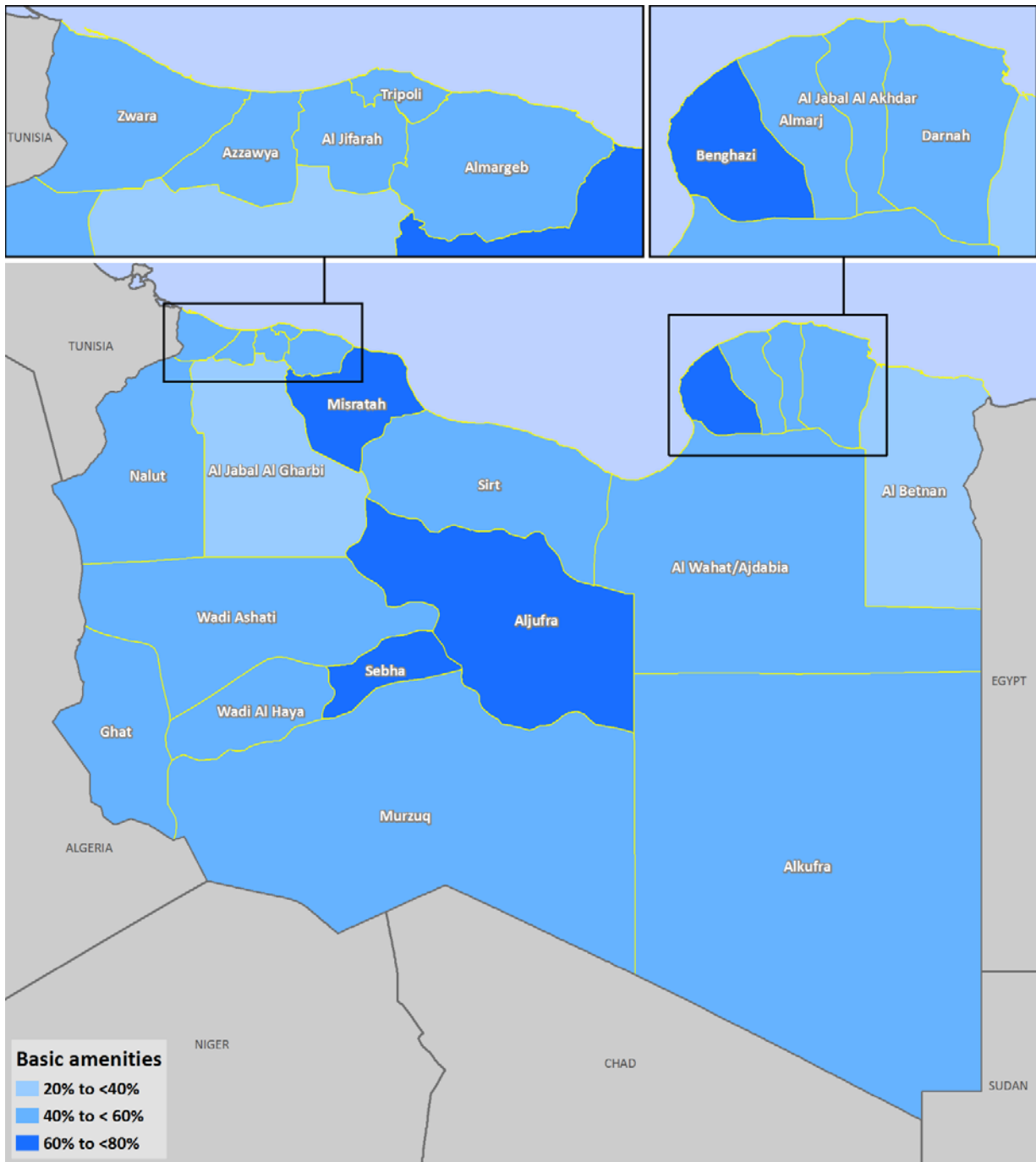


Figure 30: Overall availability of basic equipment in PHC facilities, by type

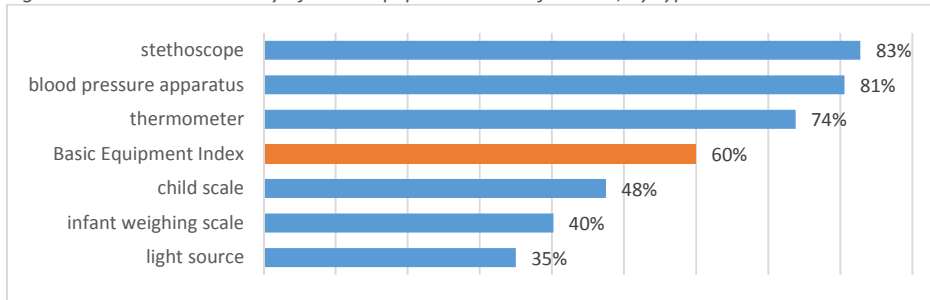
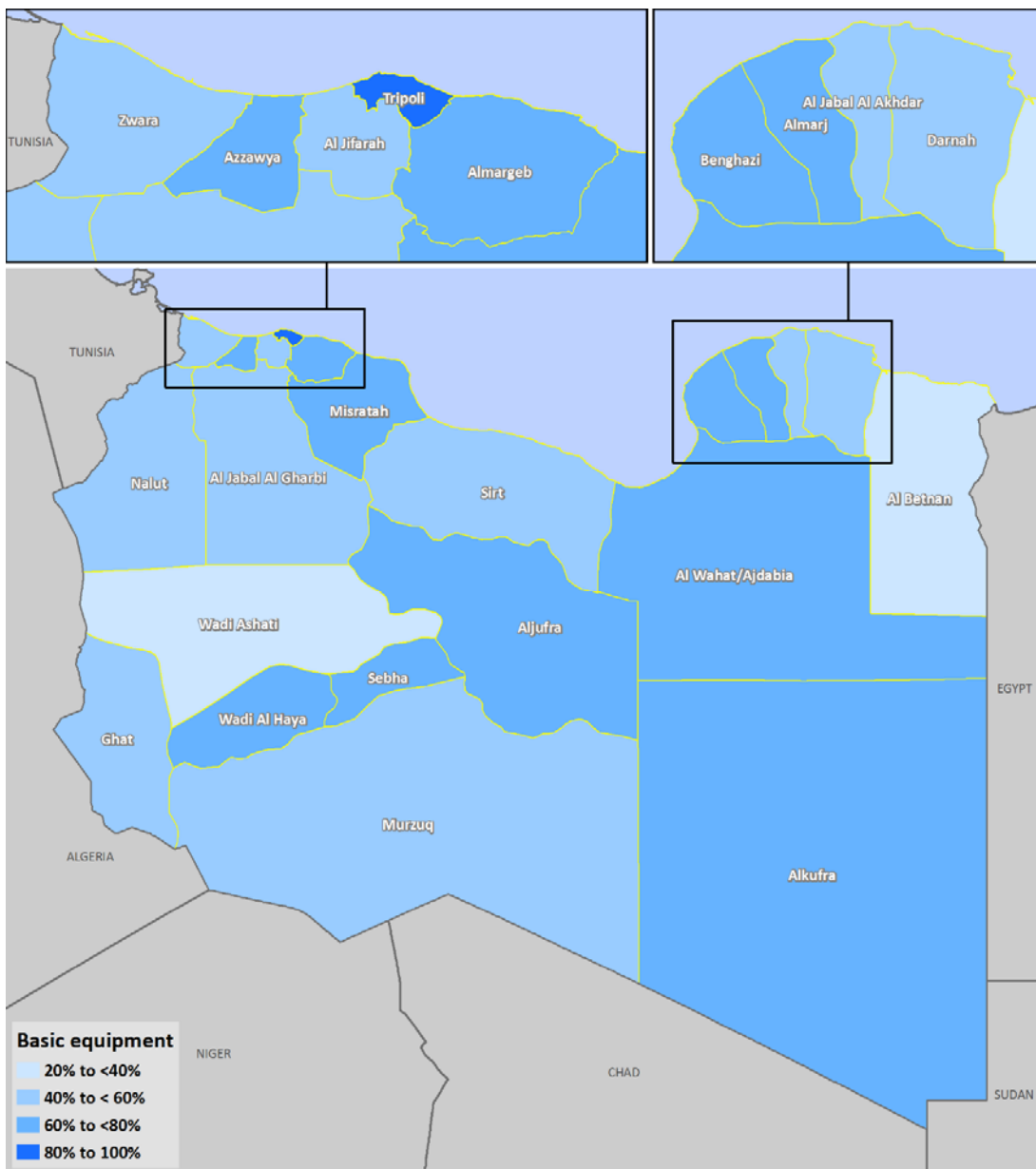


Figure 31: Map of basic equipment mean scores for PHC facilities, by district

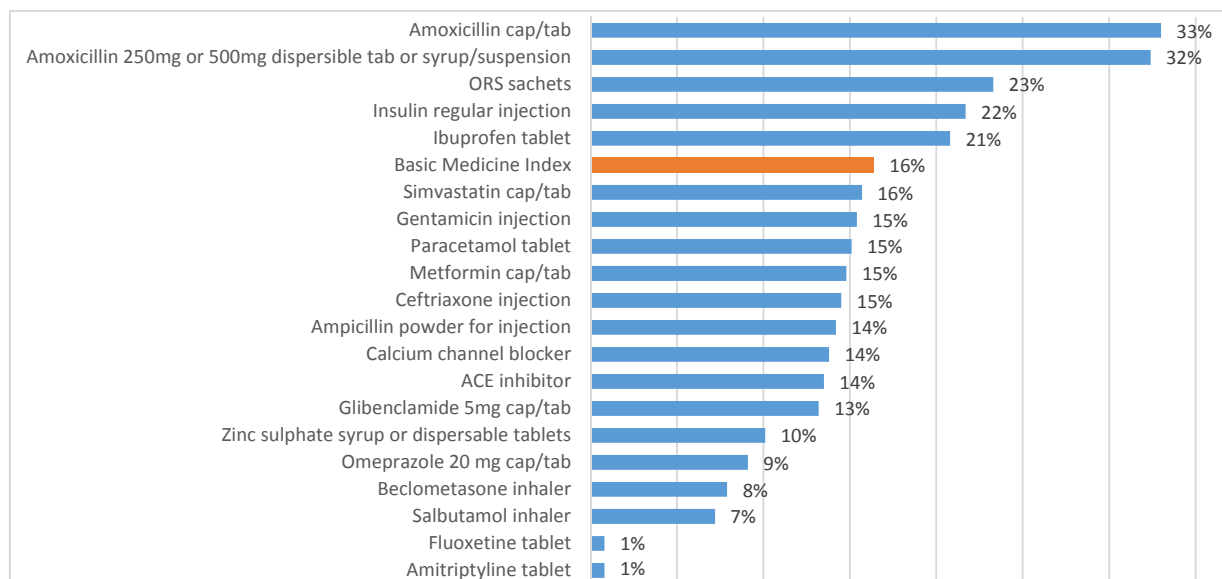


### 3.3.5.3 Basic medicines availability

The Basic Medicines Index for PHC facilities is calculated as the mean availability of twenty essential drugs<sup>2</sup> that reflect those needed to treat the most commonly seen health conditions, such as antibiotics for infections like pneumonia, and antihypertensive drugs to treat high blood pressure. The score of 16% for the Basic Medicines Index reveals that medicines are generally in short supply across all PHC facilities.

There is little variation in the availability of essential medicines in the PHC facilities, and all supplies are low. The range runs from a limited availability of antibiotics such as amoxicillin tablets (33%) and syrups (32%) for children, to a nearly non-existent availability of medicines for mental health conditions, such as amitriptyline (1%) and fluoxetine (1%).

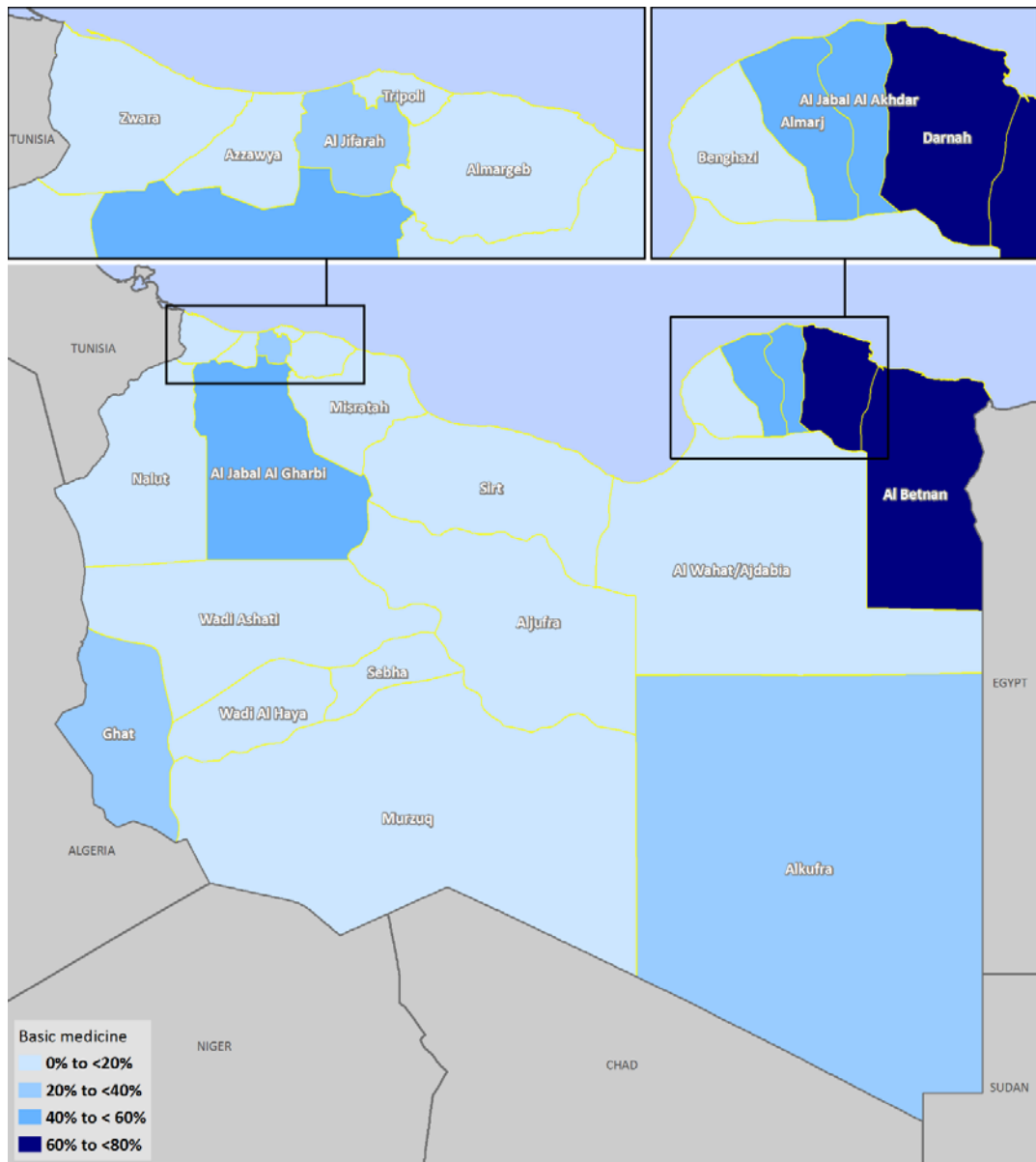
Figure 32: Overall availability of basic medicines in PHC facilities, by type



<sup>2</sup> Chapter 10 provides details on a larger subset of essential medicines available in PHC facilities.



Figure 33: Map of basic medicines mean scores for PHC facilities, by district



### 3.3.5.4 Diagnostics availability

The Diagnostics Index is calculated as the mean availability of seven simple diagnostic tests that can be used to diagnose important health conditions, such as for specific infections (dipsticks for urine protein, and syphilis and HIV rapid tests) and conditions such as pregnancy (urine pregnancy test). The score of 48% for the Diagnostics Index reveals that such simple yet essential diagnostic tests are generally in short supply across all PHC facilities. The nearly universal availability of blood glucose tests (90%) is surprising, given that less than half of the PHC facilities claim to offer diabetes testing and diagnosis. The limited availability of HIV rapid tests (20%) is less surprising, given the low HIV prevalence in Libya, but accompanied with the lack of syphilis rapid tests (9% availability), it reflects a shortage of what could be considered to be essential screening tools.

Figure 34: Overall availability of basic diagnostics in PHC facilities, by type

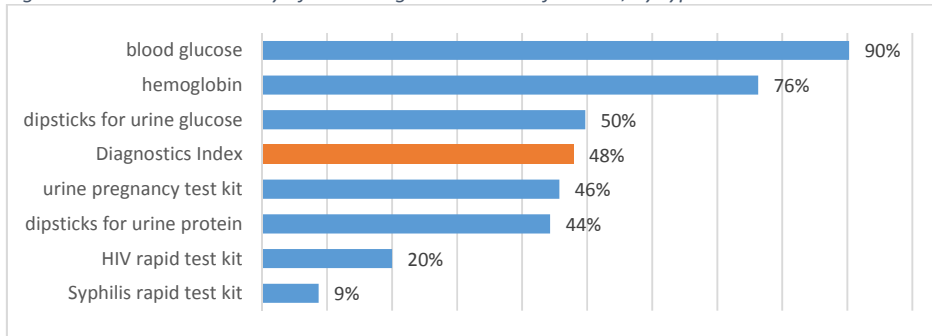
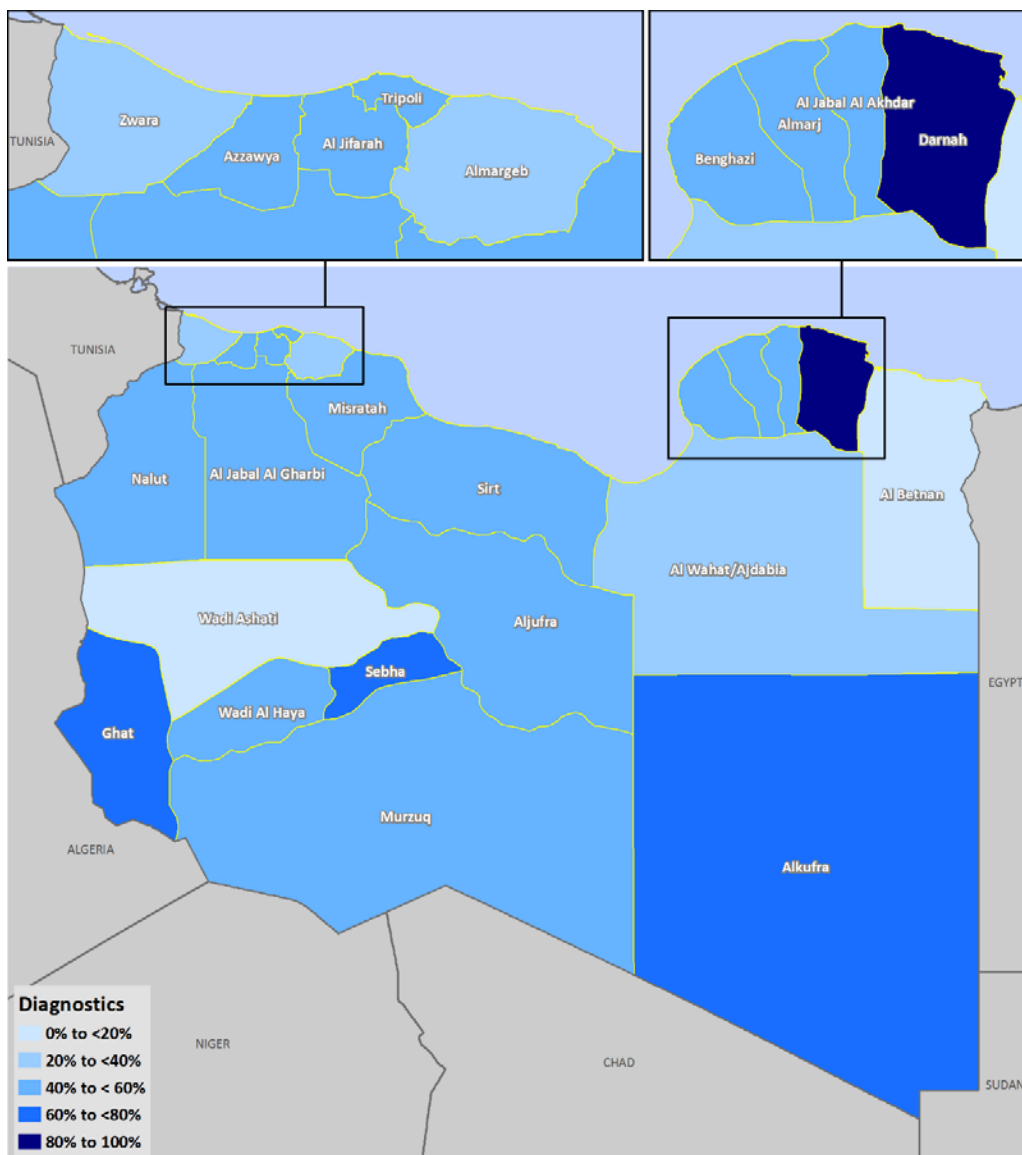


Figure 35: Map of basic diagnostics mean scores for PHC facilities, by district



### 3.3.5.5 Standard precautions availability

The Standard Precautions Index is calculated as the mean availability of nine pieces of equipment or materials that need to be used to limit the spread of infectious diseases or risk of injury for both patients and staff in any health facility. This includes hygiene materials such as disposable gloves and disinfectant, as well as means of minimizing needle-stick injuries, such as sharps containers and the means to dispose of these containers as well as other potentially infectious wastes in a safe manner.

The score of 49% for the Standard Precautions Index reveals that although standard precautions are in place, there is an enormous need for improvement in order to minimize risks. Handwashing soap to minimize the infection risks through hands is not available in a considerable proportion of facilities (68% availability), while single-use syringes are equally commonplace (68%). The safe final disposal of sharps and infectious wastes (42%) is available in less than half of all PHC facilities, while the availability of guidelines on standard precautions is limited to less than a quarter (24%) of PHC facilities surveyed.

Figure 36: Overall availability of standard precautions in PHC facilities, by type

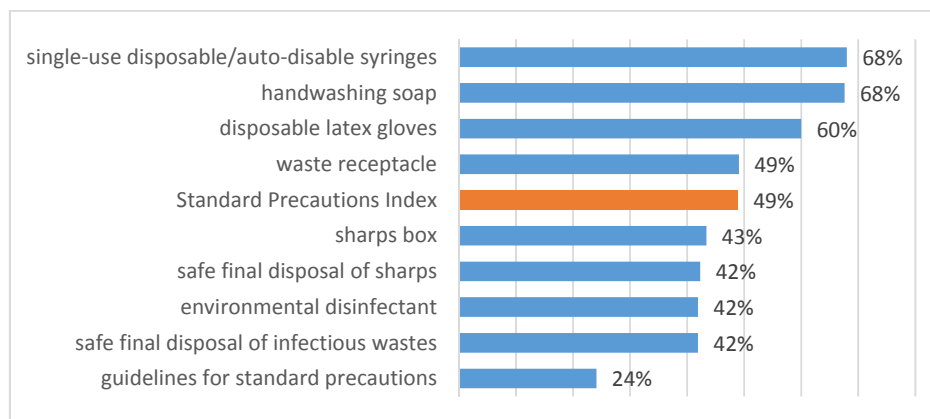
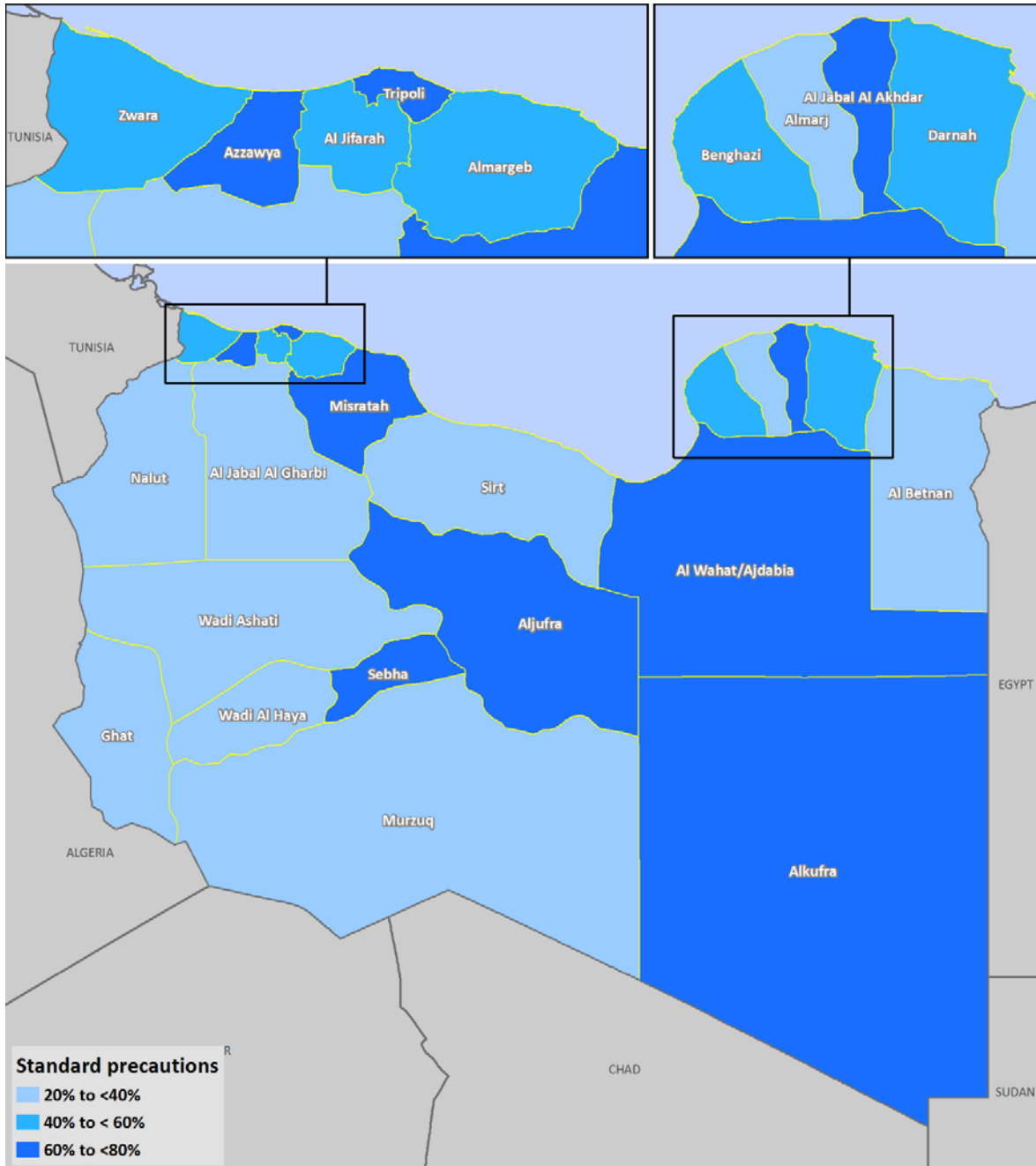


Figure 37: Map of standard precautions mean scores for PHC facilities, by district



### 3.3.6 Breakdown of readiness indices by tracer item and municipality

Table 22 and Table 23 provides a breakdown of the individual tracer elements included in the general services readiness indices for hospitals, with data presented by hospital facility.

Table 22: Breakdown of overall readiness indices for PHCs by tracer item and municipality (part 1)

	Beds		Standard precautions									Diagnostics									Basic amenities								
	Inpatient beds	Maternity beds	safe final disposal of sharps	safe final disposal of infectious wastes	Hand washing soap	Disposable latex gloves	Waste receptacle	Sharps box	Environmental disinfectant	single-use disposable/ auto-disable syringes	guidelines for standard precautions	standard precautions index	N of facilities offering diagnostics	Syphilis rapid test kit	HIV rapid test kit	Dipsticks for urine protein	Urine pregnancy test kit	Dipsticks for urine glucose	Hemoglobin	blood glucose	Diagnostics index	Power	room with privacy	improved water source	adequate sanitation facilities	communication equipment	access to computer with Internet	emergency transportation	basic amenities scores
Abu Qurayn	4	0	0%	0%	100%	20%	20%	20%	20%	20%	20%	24%	0									100%	100%	100%	100%	0%	0%	20%	60%
Abusliem	4	4	100%	100%	40%	100%	100%	100%	47%	100%	33%	80%	2	50%	50%	100%	100%	100%	100%	100%	86%	100%	93%	93%	100%	13%	0%	20%	60%
Ain Zara	0	0	100%	92%	75%	83%	50%	83%	83%	92%	8%	74%	11	0%	18%	36%	27%	36%	91%	73%	40%	100%	100%	100%	92%	0%	0%	8%	57%
Al Ajaylat	0	0	14%	10%	76%	62%	24%	24%	19%	71%	24%	36%	0									100%	0%	71%	71%	10%	0%	0%	36%
Al Aziziyah	0	0	29%	29%	86%	71%	64%	43%	14%	50%	36%	47%	1	0%	0%	0%	0%	0%	0%	100%	14%	100%	7%	21%	100%	29%	7%	0%	38%
Al Galaa	0	0	25%	25%	100%	0%	0%	0%	0%	0%	0%	17%	0									100%	0%	0%	100%	0%	0%	0%	29%
Al Jagbouh	0	0	0%	0%	100%	100%	0%	0%	100%	100%	100%	56%	0									100%	0%	100%	100%	0%	0%	0%	43%
Al Maya	0	0	17%	33%	67%	83%	17%	50%	33%	67%	50%	46%	0									100%	0%	0%	100%	33%	0%	0%	33%
Al Shate Al Garbe	0	0	10%	10%	5%	15%	0%	0%	5%	25%	5%	8%	0									90%	45%	90%	100%	0%	0%	10%	48%
Al Shate Al Sharqe	0	0	7%	7%	27%	40%	47%	0%	20%	53%	13%	24%	0									80%	67%	80%	93%	0%	0%	0%	46%
Al Swani	2	1	9%	0%	91%	55%	55%	55%	55%	82%	46%	50%	2	0%	0%	0%	50%	50%	100%	100%	43%	100%	18%	55%	100%	0%	0%	0%	39%
Alabyar	0	0	33%	33%	100%	42%	17%	8%	67%	75%	25%	44%	2	0%	0%	50%	50%	50%	0%	100%	36%	100%	0%	92%	100%	33%	0%	50%	54%
Alasabaa	0	0	0%	0%	100%	62%	39%	31%	15%	62%	8%	35%	1	0%	0%	0%	100%	100%	100%	100%	57%	100%	8%	39%	100%	0%	0%	0%	35%
Albawanees	10	0	50%	50%	75%	100%	75%	100%	50%	75%	25%	67%	0									100%	0%	100%	100%	100%	75%	100%	82%
Albayda	0	0	38%	29%	100%	100%	100%	100%	95%	95%	33%	77%	10	0%	50%	60%	10%	60%	30%	90%	43%	100%	91%	95%	100%	0%	0%	86%	67%
Albrayga	0	0	0%	0%	100%	60%	80%	80%	60%	100%	80%	62%	3	0%	0%	0%	0%	0%	100%	100%	29%	100%	80%	100%	100%	60%	0%	80%	74%
Algatroun	0	0	100%	100%	33%	33%	33%	33%	33%	33%	0%	44%	0									100%	100%	100%	100%	0%	0%	100%	71%
Algaygab	0	0	0%	0%	100%	100%	100%	100%	100%	33%	0%	59%	0									100%	33%	100%	100%	0%	0%	0%	48%
Alghrayfa	3	3	46%	46%	55%	73%	9%	27%	27%	55%	18%	39%	4	0%	50%	75%	100%	25%	75%	100%	61%	100%	0%	100%	100%	0%	0%	27%	47%
Algurdha Ashshati	0	0	11%	11%	0%	5%	11%	5%	0%	26%	0%	8%	0									79%	26%	74%	100%	0%	0%	0%	40%
Alharaba	0	0	0%	0%	67%	67%	67%	0%	33%	60%	0%	37%	0									60%	40%	60%	60%	0%	0%	0%	31%
Alhawamid	0	0	25%	25%	50%	50%	25%	75%	25%	75%	0%	39%	1	0%	0%	0%	0%	0%	100%	14%	14%	100%	75%	100%	100%	0%	0%	50%	61%
Aljmail	72	2	0%	0%	100%	94%	29%	41%	18%	59%	82%	47%	5	0%	0%	20%	20%	20%	60%	60%	26%	100%	82%	24%	94%	0%	0%	100%	57%
Aljufra	0	0	85%	85%	92%	92%	85%	15%	77%	46%	8%	65%	1	0%	0%	0%	100%	0%	100%	43%	43%	100%	100%	100%	100%	46%	0%	8%	65%
Alkhums	1	0	6%	13%	94%	44%	94%	50%	34%	72%	53%	51%	16	0%	13%	38%	50%	31%	50%	81%	38%	100%	97%	88%	97%	6%	0%	25%	59%
Alkufra	27	8	82%	88%	100%	94%	82%	59%	77%	88%	24%	77%	6	17%	33%	83%	83%	83%	100%	100%	71%	100%	18%	100%	100%	18%	12%	29%	54%
Almarj	0	0	0%	0%	63%	50%	25%	75%	63%	88%	13%	42%	2	0%	0%	100%	50%	100%	100%	64%	64%	100%	75%	50%	100%	0%	0%	0%	46%
Alqubba	0	0	0%	0%	100%	100%	33%	100%	83%	17%	0%	48%	0									100%	0%	100%	100%	0%	0%	0%	43%
Alsharguiya	0	0	100%	100%	46%	46%	64%	55%	46%	55%	0%	57%	1	0%	0%	0%	0%	0%	100%	100%	29%	91%	55%	100%	100%	9%	0%	18%	53%
Ararajan	0	0	0%	0%	100%	33%	33%	33%	33%	67%	0%	33%	2	0%	0%	50%	100%	100%	50%	100%	57%	100%	100%	67%	67%	0%	33%	67%	62%
Arrayayna	0	0	0%	0%	100%	50%	100%	50%	25%	50%	25%	44%	0									100%	50%	25%	100%	0%	0%	0%	39%
Arrhaibat	0	0	0%	0%	100%	80%	80%	20%	0%	100%	0%	42%	0									100%	0%	0%	100%	0%	0%	20%	31%
Ashshgega	0	0	0%	0%	67%	33%	0%	0%	0%	100%	0%	22%	0									100%	0%	0%	100%	0%	0%	0%	29%
Assahel	0	0	8%	8%	100%	100%	67%	44%	89%	67%	0%	57%	2	0%	0%	0%	100%	100%	100%	57%	57%	75%	75%	50%	75%	0%	0%	0%	39%
Aujala	8	4	100%	100%	100%	100%	100%	100%	100%	100%	25%	92%	1	0%	100%	0%	0%	100%	100%	100%	57%	100%	0%	88%	100%	25%	0%	75%	55%
Azzahra	12	4	13%	13%	94%	88%	94%	75%	75%	81%	67%	0										100%	6%	69%	100%	6%	6%	19%	44%
Azawya	4	0	91%	91%	91%	88%	21%	9%	88%	91%	63%	72%	21	0%	5%	43%	24%	48%	76%	86%	40%	97%	97%	77%	97%	6%	3%	6%	55%
Azzintan	60	0	9%	9%	73%	73%	55%	27%	18%	64%	18%	38%	5	0%	0%	20%	40%	40%	100%	100%	43%	100%	64%	55%	100%	36%	0%	27%	55%
Bani Waleed	0	0	100%	100%	100%	88%	94%	88%	100%	100%	24%	88%	7	0%	0%	43%	86%	57%	100%	100%	55%	100%	100%	100%	100%	24%	6%	29%	66%
Baten Aljabal	0	0	33%	50%	80%	80%	0%	40%	80%	67%	0%	51%	1	0%	0%	0%	0%	100%	0%	100%	29%	83%	83%	50%	83%	0%	0%	17%	45%
Benghazi	0	0	40%	36%	68%	72%	64%	72%	64%	100%	76%	66%	19	32%	11%	42%	63%	53%	84%	100%	55%	100%	88%	96%	100%	4%	0%	36%	61%
Bint Bayya	0	0	40%	40%	50%	60%	20%	0%	20%	40%	40%	34%	6	0%	17%	33%	100%	50%	83%	100%	55%	100%	0%	100%	100%	10%	0%	30%	49%
Bir Alashhab	0	0	50%	50%	100%	0%	0%	0%	0%	50%	44%	0										50%	50%	50%	50%	0%	0%	50%	36%
Daraj	0	0	13%	13%	25%	50%	25%	38%	25%	75%	38%	33%	2	0%	50%	0%	50%	50%	50%	100%	43%	100%	100%	63%	100%	0%	0%	88%	64%
Darnah	0	0	21%	21%	14%	7%	64%	100%	7%	79%	0%	35%	2	100%	100%	100%	100%	100%	100%	100%	100%	100%	64%	100%	100%	0%	0%	7%	53%
Ejdabia	0	0	17%	17%	58%	25%	42%	58%	17%	58%	17%	34%	4	25%	25%	50%	50%	50%	50%	50%	43%	100%	8%	58%	100%	8%	0%	8%	41%
Ejkherra	0	0	100%	100%	100%	100%	100%	100%	100%	100%	100%	94%	0									100%	0%	100%	100%	50%	0%	50%	57%
Emsaed	0	0	0%	0%	50%	50%	50%	50%	50%	33%	0%	33%	1	0%	0%	0%	100%	100%	100%	57%	57%	67%	67%	33%	67%	0%	0%	0%	33%
Espeaa	0	0	50%	100%	50%	25%	0%	0%	0%	50%	0%	31%	1	0%	100%	100%	100%	0%	100%	100%	71%	100%	0%	100%	75%	0%	0%	25%	43%
Garaboli	0	0	11%	11%	89%	67%	61%	61%	6%	72%	28%	45%	5	0%	0%	20%	20%	20%	40%	60%	23%	100%	83%	50%	89%	6%	0%	67%	56%
Gasr Akhyar	0	0	36%	46%	64%	55%	46%	73%	9%	82%	0%	46%	4	0%	0%	0%	0%	0%	75%	100%	25%	100%	91%	64%	100%	9%	0%	91%	65%

	Beds		Standard precautions										Diagnostics								Basic amenities								
	Inpatient beds	Maternity beds	safe final disposal of sharps	safe final disposal of infectious wastes	Hand washing soap	Disposable latex gloves	Waste receptacle	Sharps box	Environmental disinfectant	single-use disposable/ auto-disable syringes	guidelines for standard precautions	standard precautions index	N of facilities offering diagnostics	Syphilis rapid test kit	HIV rapid test kit	Dipsticks for urine protein	Urine pregnancy test kit	Dipsticks for urine glucose	Hemoglobin	blood glucose	Diagnostics index	Power	room with privacy	improved water source	adequate sanitation facilities	communication equipment	access to computer with internet	emergency transportation	Basic amenities scores
Gasr Bin Ghasheer	1	1	75%	75%	50%	25%	25%	25%	25%	50%	25%	42%	0									100%	0%	50%	100%	0%	0%	0%	36%
Gemienis	0	0	25%	25%	50%	25%	38%	25%	13%	50%	63%	35%	2	0%	0%	0%	50%	50%	50%	50%	29%	100%	100%	75%	88%	0%	0%	25%	55%
Ghadamis	0	0	0%	0%	100%	100%	100%	100%	100%	100%	100%	78%	1	0%	100%	0%	100%	0%	100%	100%	57%	100%	100%	100%	100%	100%	0%	100%	86%
Gharb Azzawya	7	1	100%	100%	100%	36%	27%	55%	46%	46%	60%	2	50%	100%	50%	100%	100%	100%	100%	86%	82%	100%	91%	64%	9%	0%	0%	49%	
Ghat	0	0	0%	0%	0%	67%	56%	11%	11%	78%	0%	25%	2	50%	50%	50%	50%	50%	100%	100%	64%	78%	78%	67%	78%	0%	0%	0%	43%
Ghiryan	0	0	0%	0%	67%	26%	16%	10%	0%	57%	2%	20%	1	100%	100%	100%	100%	100%	100%	100%	100%	98%	0%	16%	98%	2%	0%	2%	31%
Hai Alandalus	0	0	100%	100%	71%	77%	59%	53%	59%	100%	47%	74%	15	0%	27%	33%	33%	40%	100%	100%	48%	100%	82%	100%	100%	0%	0%	6%	56%
Hrawa	9	2	0%	0%	100%	50%	75%	25%	25%	100%	75%	50%	0									100%	38%	88%	100%	38%	0%	0%	52%
Jadu	0	0	0%	0%	100%	29%	29%	0%	0%	0%	0%	18%	0									100%	0%	86%	100%	0%	0%	0%	41%
Jalu	0	0	100%	100%	100%	100%	100%	100%	78%	22%	89%	0										100%	11%	100%	100%	22%	0%	11%	49%
Janzour	0	0	42%	42%	11%	68%	26%	5%	0%	63%	11%	30%	5	20%	0%	40%	0%	40%	60%	80%	34%	100%	32%	68%	26%	5%	5%	0%	34%
Jardas Alabeed	0	0	20%	0%	0%	100%	0%	20%	0%	0%	0%	16%	1	0%	0%	0%	100%	100%	100%	57%	100%	80%	100%	100%	0%	0%	0%	0%	54%
Kabaw	0	0	0%	20%	100%	100%	0%	20%	40%	100%	0%	42%	0									100%	40%	40%	100%	0%	0%	0%	40%
Kikkla	0	0	0%	0%	80%	60%	40%	0%	0%	80%	0%	29%	0									100%	0%	0%	100%	0%	0%	0%	29%
Labriq	0	0	0%	0%	100%	100%	50%	100%	100%	0%	0%	50%	0									100%	0%	100%	100%	0%	0%	0%	43%
Marada	0	0	100%	100%	100%	100%	100%	100%	100%	100%	0%	89%	1	0%	0%	0%	0%	0%	100%	100%	29%	100%	0%	100%	100%	100%	0%	100%	71%
Misrata	26	0	84%	84%	100%	96%	84%	100%	100%	92%	16%	84%	14	0%	36%	64%	71%	64%	71%	86%	56%	100%	96%	92%	96%	56%	4%	24%	67%
Mizda	0	0	0%	0%	100%	100%	100%	33%	0%	100%	0%	48%	0									100%	0%	0%	100%	0%	0%	100%	43%
Msallata	0	0	46%	46%	85%	62%	62%	8%	54%	0%	0%	40%	8	0%	0%	25%	50%	25%	88%	100%	41%	100%	23%	54%	100%	8%	0%	0%	41%
Murzuq	0	0	100%	100%	40%	50%	60%	60%	50%	70%	0%	59%	1	100%	100%	100%	100%	100%	100%	100%	100%	100%	60%	100%	100%	20%	10%	60%	64%
Nalut	0	0	0%	0%	100%	100%	33%	0%	67%	100%	67%	52%	0									100%	100%	33%	100%	0%	0%	33%	52%
Nesma	0	0	0%	0%	100%	80%	80%	60%	20%	80%	20%	49%	0									100%	20%	20%	100%	0%	0%	40%	40%
Rigdaleen	14	0	0%	0%	100%	50%	75%	25%	0%	40%	60%	42%	1	0%	0%	0%	0%	0%	100%	100%	29%	80%	80%	0%	80%	0%	0%	60%	43%
Sabratha	0	0	15%	20%	40%	60%	0%	40%	75%	80%	25%	39%	0									100%	90%	70%	100%	15%	0%	20%	56%
Sebha	45	15	72%	61%	94%	78%	56%	72%	44%	83%	22%	65%	6	17%	33%	100%	50%	100%	100%	100%	71%	100%	33%	100%	100%	72%	56%	17%	68%
Shahhat	0	0	100%	100%	12%	65%	58%	23%	96%	96%	8%	62%	3	67%	67%	67%	67%	67%	67%	100%	71%	100%	92%	54%	89%	8%	0%	8%	50%
Sidi Assayeh	0	0	100%	100%	50%	50%	0%	0%	0%	50%	0%	39%	0									100%	0%	100%	100%	0%	0%	0%	50%
Sirt	11	0	0%	0%	43%	43%	14%	14%	43%	43%	57%	29%	2	0%	50%	50%	0%	100%	0%	100%	43%	100%	100%	86%	100%	14%	14%	29%	63%
Sug Aljumaa	0	0	91%	91%	71%	62%	76%	52%	33%	100%	14%	66%	11	27%	27%	36%	46%	36%	100%	91%	52%	100%	38%	95%	100%	14%	0%	10%	51%
Sug Alkhamees	0	0	100%	100%	20%	0%	0%	0%	0%	80%	0%	33%	1	0%	0%	100%	100%	100%	100%	100%	71%	100%	0%	100%	100%	0%	0%	20%	46%
Suloug	0	0	40%	40%	80%	80%	40%	80%	60%	60%	20%	56%	1	0%	0%	100%	0%	100%	100%	100%	57%	100%	20%	100%	100%	40%	20%	80%	66%
Surman	0	0	71%	29%	100%	93%	29%	93%	93%	93%	79%	75%	12	0%	25%	75%	50%	83%	83%	100%	60%	100%	93%	93%	100%	36%	0%	14%	62%
Tajoura	0	0	100%	100%	100%	94%	83%	11%	89%	83%	6%	74%	4	100%	100%	100%	100%	100%	100%	100%	100%	100%	33%	100%	100%	6%	0%	6%	49%
Taraghin	0	0	100%	100%	55%	46%	64%	36%	36%	46%	0%	54%	0									100%	27%	100%	100%	0%	0%	18%	49%
Tarhuna	0	0	3%	3%	38%	15%	50%	50%	3%	53%	12%	25%	9	0%	11%	33%	33%	33%	67%	78%	37%	97%	0%	24%	100%	0%	3%	0%	32%
Tazirbu	0	0	100%	100%	100%	100%	0%	0%	0%	0%	0%	44%	1	0%	0%	100%	100%	100%	100%	100%	71%	100%	0%	100%	100%	100%	0%	100%	71%
Thaher Aljabal	0	0	0%	0%	80%	80%	80%	20%	80%	20%	49%	0										80%	0%	0%	100%	0%	0%	0%	26%
Tobruk	31	2	12%	8%	35%	27%	19%	15%	19%	15%	23%	19%	3	0%	0%	0%	33%	0%	0%	0%	5%	100%	4%	46%	81%	15%	4%	19%	39%
Toukra	0	0	0%	0%	100%	100%	0%	0%	100%	80%	0%	44%	0									80%	20%	80%	80%	0%	0%	0%	37%
Tripoli	0	0	100%	100%	69%	92%	8%	85%	23%	85%	15%	64%	11	0%	18%	27%	36%	18%	64%	91%	36%	100%	100%	100%	100%	0%	31%	76%	
Ubari	6	0	50%	75%	50%	75%	25%	25%	25%	25%	25%	42%	1	0%	100%	100%	100%	100%	100%	100%	86%	100%	0%	100%	100%	0%	0%	25%	46%
Umm arazam	0	0	0%	0%	88%	88%	88%	88%	50%	100%	75%	64%	1	0%	0%	100%	100%	100%	100%	100%	71%	100%	0%	63%	100%	13%	0%	63%	48%
Wadi Etba	0	0	100%	100%	39%	23%	31%	39%	15%	54%	0%	44%	3	0%	0%	0%	67%	0%	0%	100%	24%	100%	31%	100%	100%	8%	0%	0%	48%
Wazin	0	0	100%	100%	100%	0%	0%	0%	0%	100%	0%	44%	0									100%	100%	100%	100%	0%	0%	100%	71%
Yefren	0	0	0%	20%	80%	20%	40%	20%	0%	20%	0%	22%	0									100%	0%	0%	100%	0%	0%	0%	29%
Ziltun	18	3	0%	0%	100%	50%	50%	0%	0%	67%	67%	37%	2	0%	0%	0%	0%	0%	0%	50%	7%	100%	50%	0%	33%	0%	0%	100%	41%
Zliten	33	3	96%	92%	40%	32%	76%	52%	40%	56%	4%	54%	23	0%	4%	57%	13%	57%	91%	96%	45%	100%	84%	96%	100%	28%	0%	4%	59%
Zwara	0	0	83%	83%	33%	33%	67%	83%	67%	100%	17%	63%	1	0%	100%	100%	100%	100%	100%	100%	86%	100%	50%	67%	100%	0%	0%	17%	48%
Total	408	53	42%	42%	68%	60%	49%	43%	42%	68%	24%	49%	300	9%	20%	44%	46%	50%	76%	90%	48%	97%	50%	71%	95%	13%	3%	21%	50%





	Basic equipment							Basic medicines																					Mean availability	Mean readiness index									
	child scale	Infant weighing scale	thermometer	stethoscope	blood pressure apparatus	light source	Basic equipment scores	N facilities reporting	Amoxicillin cap/tab	Ceftriaxone injection	Metformin cap/tab	Insulin regular injection	ACE inhibitor	Calcium channel blocker	Bedometasone inhaler	Glibenclamide 5mg cap/tab	Ibuprofen tablet	Omeprazole 20 mg cap/tab	Paracetamol tablet	Salbutamol inhaler	Simvastatin cap/tab	Ampicillin powder for injection	Gentamicin injection	ORS sachets	Zinc sulphate syrup or dispersible	Amoxicillin 250mg or 500mg dispersible	Amiripryline tablet	Fluoxetine tablet											
Gasr Bin Ghasheer	25%	25%	50%	100%	100%	25%	54%	0																															44%
Gemienis	63%	50%	75%	100%	100%	0%	65%	0																														46%	
Ghadamis	100%	100%	100%	100%	100%	100%	100%	0																														80%	
Gharb Azzawya	82%	46%	46%	100%	100%	100%	79%	11	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	9%	0%	0%	1%	55%									
Ghat	44%	22%	56%	67%	67%	11%	44%	4	0%	0%	100%	100%	0%	0%	0%	100%	75%	0%	100%	0%	0%	0%	0%	0%	0%	100%	0%	0%	32%	42%									
Ghiryay	16%	20%	43%	65%	67%	6%	36%	0																												47%			
Hai Alandalus	71%	71%	94%	94%	94%	35%	77%	16	31%	0%	19%	31%	0%	0%	0%	13%	19%	0%	0%	0%	6%	13%	6%	13%	0%	31%	0%	0%	10%	53%									
Hrawa	63%	50%	75%	88%	63%	0%	56%	0																												53%			
Jadu	29%	29%	86%	86%	86%	14%	55%	0																												38%			
Jalu	44%	44%	89%	89%	89%	67%	70%	0																												70%			
Janzour	53%	42%	90%	95%	90%	0%	61%	4	50%	50%	0%	25%	0%	0%	0%	25%	25%	25%	0%	0%	0%	0%	0%	0%	25%	0%	0%	13%	34%										
Jardas Alabeed	60%	60%	80%	100%	100%	0%	67%	0																												48%			
Kabaw	60%	20%	80%	60%	60%	0%	47%	0																												43%			
Kikkla	0%	0%	40%	60%	60%	0%	27%	0																												28%			
Labria	0%	0%	50%	50%	50%	0%	25%	0																												39%			
Marada	100%	100%	100%	100%	100%	0%	83%	1	0%	100%	100%	100%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	100%	0%	100%	0%	0%	33%	61%										
Misrata	80%	84%	88%	92%	84%	100%	88%	7	14%	14%	14%	29%	14%	14%	14%	14%	14%	14%	14%	14%	14%	0%	0%	29%	29%	14%	0%	0%	15%	62%									
Mizda	100%	67%	100%	100%	100%	0%	78%	0																												56%			
Msallata	46%	15%	62%	77%	85%	15%	50%	1	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%				
Murzuq	40%	40%	90%	60%	60%	0%	48%	0																												68%			
Nalut	67%	33%	67%	100%	100%	67%	72%	1	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	100%	6%	46%										
Nesma	60%	20%	100%	100%	100%	20%	67%	1	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	0%	0%	100%	100%	100%	0%	0%	89%	61%									
Rigdaleen	20%	20%	0%	80%	60%	60%	40%	4	25%	0%	0%	0%	0%	0%	25%	0%	25%	0%	0%	0%	0%	25%	0%	25%	25%	0%	0%	8%	32%										
Sabratha	30%	30%	80%	90%	90%	25%	58%	8	13%	0%	25%	13%	0%	0%	13%	13%	0%	25%	0%	0%	0%	13%	0%	0%	38%	0%	0%	8%	40%										
Sebha	56%	50%	67%	89%	94%	72%	71%	3	0%	0%	0%	0%	33%	0%	0%	0%	0%	0%	0%	0%	33%	67%	0%	0%	33%	0%	0%	9%	57%										
Shahhat	12%	8%	85%	77%	77%	15%	46%	0																											57%				
Sidi Assayeh	50%	50%	50%	100%	100%	50%	67%	0																											52%				
Sirt	57%	29%	86%	100%	86%	57%	69%	0																											51%				
Sug Aljuma	91%	91%	95%	95%	95%	81%	91%	16	69%	13%	25%	38%	19%	19%	0%	6%	38%	0%	6%	0%	13%	13%	25%	6%	0%	19%	0%	0%	17%	55%									
Sug Alkhamees	40%	0%	20%	100%	100%	20%	47%	0																												49%			
Suloug	60%	60%	60%	60%	100%	100%	73%	4	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%				
Surman	0%	86%	100%	100%	93%	57%	73%	11	18%	0%	0%	9%	9%	0%	0%	0%	0%	9%	9%	9%	0%	0%	0%	0%	18%	0%	0%	5%	55%										
Tajoura	89%	89%	100%	100%	100%	33%	85%	0																												77%			
Taraghin	46%	46%	73%	100%	82%	0%	58%	0																												54%			
Tarhuna	44%	18%	44%	62%	68%	27%	44%	6	50%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	33%	17%	0%	0%	83%	0%	0%	10%	29%										
Tazirbu	0%	0%	100%	100%	100%	100%	67%	1	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%	100%	0%	0%	0%	0%	17%	54%										
Thaher Aljabal	40%	40%	60%	60%	60%	20%	47%	0																												40%			
Tabruk	39%	27%	35%	42%	31%	15%	31%	0																												23%			
Toukra	60%	20%	80%	80%	80%	40%	60%	4	100%	75%	25%	25%	25%	0%	0%	25%	75%	0%	50%	0%	25%	100%	75%	100%	100%	100%	0%	0%	50%	48%									
Tripoli	92%	77%	92%	100%	100%	69%	89%	12	25%	17%	25%	33%	0%	0%	0%	0%	0%	0%	0%	0%	8%	8%	0%	0%	0%	0%	0%	7%	54%										
Ubari	25%	0%	100%	75%	75%	0%	46%	0																												55%			
Umm arrazam	63%	50%	38%	63%	63%	25%	50%	0																												58%			
Wadi Etba	39%	31%	62%	69%	69%	0%	45%	2	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	32%				
Wazin	100%	0%	0%	100%	100%	0%	50%	0																													55%		
Yefren	0%	0%	20%	40%	40%	0%	17%	0																												23%			
Ziltun	50%	50%	33%	67%	67%	67%	56%	3	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	28%				
Zliten	72%	44%	100%	92%	92%	64%	77%	13	15%	15%	8%	8%	15%	23%	8%	8%	23%	15%	8%	8%	8%	8%	15%	15%	8%	15%	0%	0%	12%	50%									
Zwara	83%	83%	100%	100%	100%	67%	89%	0																												71%			
Total	48%	40%	74%	83%	81%	35%	60%	318	33%	15%	15%	22%	14%	14%	8%	13%	21%	9%	15%	7%	16%	14%	15%	23%	10%	32%	1%	1%	16%	45%									

## 4 Reproductive, maternal, newborn and child health

The "Continuum of Care" for reproductive, maternal, newborn and child health (RMNCH) includes integrated service delivery for mothers and children from pre-pregnancy to delivery, the immediate postnatal period, and childhood (16). Packages of RMNCH services generally include antenatal, delivery, postpartum and newborn care; family planning, including infertility services; safe abortion; sexually transmitted infections (STIs), including HIV, reproductive tract infections, cervical cancer; the promotion of sexual health; and finally, the restoration, improvement and maintenance of the health of children between zero and less than five years of age, with the inclusion of adolescent health services included in some countries. This chapter will focus on a number of RMNCH services, including antenatal, delivery, postpartum and newborn care, family planning, immunization services, and preventive and curative care for children under 5. Other RMNCH services, such as those addressing STIs, HIV, and cervical cancer, are addressed separately in the chapters on Infectious and on Non-Communicable Diseases.

### 4.1 Overview of available RMNCH services

RMNCH services in Libya are provided through both hospitals and PHC facilities (Table 24). Deliveries predominantly take place in the hospitals. Antenatal care (ANC) and immunization services are primarily delivered through PHC facilities. PHC facilities offer routine ANC and immunization services, while hospitals provide ANC care for high-risk pregnancies and zero-doses for immunization at birth. Family planning is offered by 18 PHC facilities while five specialized clinics offer infertility treatment. Prevention of mother to child transmission (PMTCT) for HIV/AIDS is offered through 4 hospitals. Adolescent health services are not part of the RMNCH package in Libya. The limited availability of some RMNCH services, coupled to readiness scores for specific services that often fall below 60%, indicates that there is a need to address gaps in the availability of staff, equipment, guidelines and medicines in order to ensure the improved delivery of RMNCH services.

Table 24: Availability and readiness of facilities providing individual RMNCH services

	General overview (% of 1142 total facilities)	Hospitals (% of all 80 hospitals)	Hospital Readiness score	PHC facilities (% of 1069 PHC facilities)	PHC Readiness score
Antenatal care (ANC)	222 (19%)	38 (48%)	43%	184 (17%)	40%
Delivery	68 (6%)	52 (65%)	54%	17 (2%)	20%
BEmONC	51 (4.4%)	51 (64%)	54%	1 (0.1%)	n/a
CEmONC	43 (3.7%)	43 (54%)	55%	0	n/a
Family Planning	18 (2%)	0	n/a	18 (2%)	8%
Infertility treatment	5*	0	n/a	0	n/a
Immunization	519 (45%)	52 (65%)	n/a	467 (44%)	69%
Preventive and curative care for children <5	386 (34%)	59 (74%)	n/a	327 (31%)	35%
Adolescent health	n/a	n/a	n/a	0	n/a
HIV: PMTCT	4	4 (5%)	37%	0	n/a

\*services provided only through earmarked infertility centers, not through hospitals and PHCs

### 4.2 Antenatal care services

The first point of contact for ANC for pregnant women in Libya are the PHC facilities. ANC coverage in 2014 was reported to be 99% for 1+ visit, with a coverage of 66% for 4+ visits (17). PHCs refer women at risk of complications in pregnancy to specialists in the hospitals for further follow-up. Hence the ANC coverage reported for hospital facilities in this section of the report refers primarily to care of pregnant women exhibiting one or more risk factors for complications of pregnancy.

As malaria is not endemic and overall vaccination levels have been consistently high during the preceding decades, intermittent preventive therapy during pregnancy (IPTp) and tetanus toxoid (TT) vaccination are not included as standard ANC services in Libya.

#### 4.2.1 Availability and readiness for ANC

A total of 222 facilities offer antenatal services across Libya, representing 19.3% of all public health facilities. This includes 184 PHC facilities (17% of all PHCs) and 38 hospitals (48% of all hospitals – see Table 25 for details). The availability of three main ANC services (iron supplementation, folic acid supplementation, and monitoring for hypertensive disorder of pregnancy) differs between PHC and hospital level services. At PHC level, a lack of essential medicines means that iron and folic acid supplementation is available on average 44% of the time, whilst the measurement of blood pressure takes place in 73% of PHC facilities. Nearly 80% of hospitals providing ANC can offer the three priority ANC services to their patients.

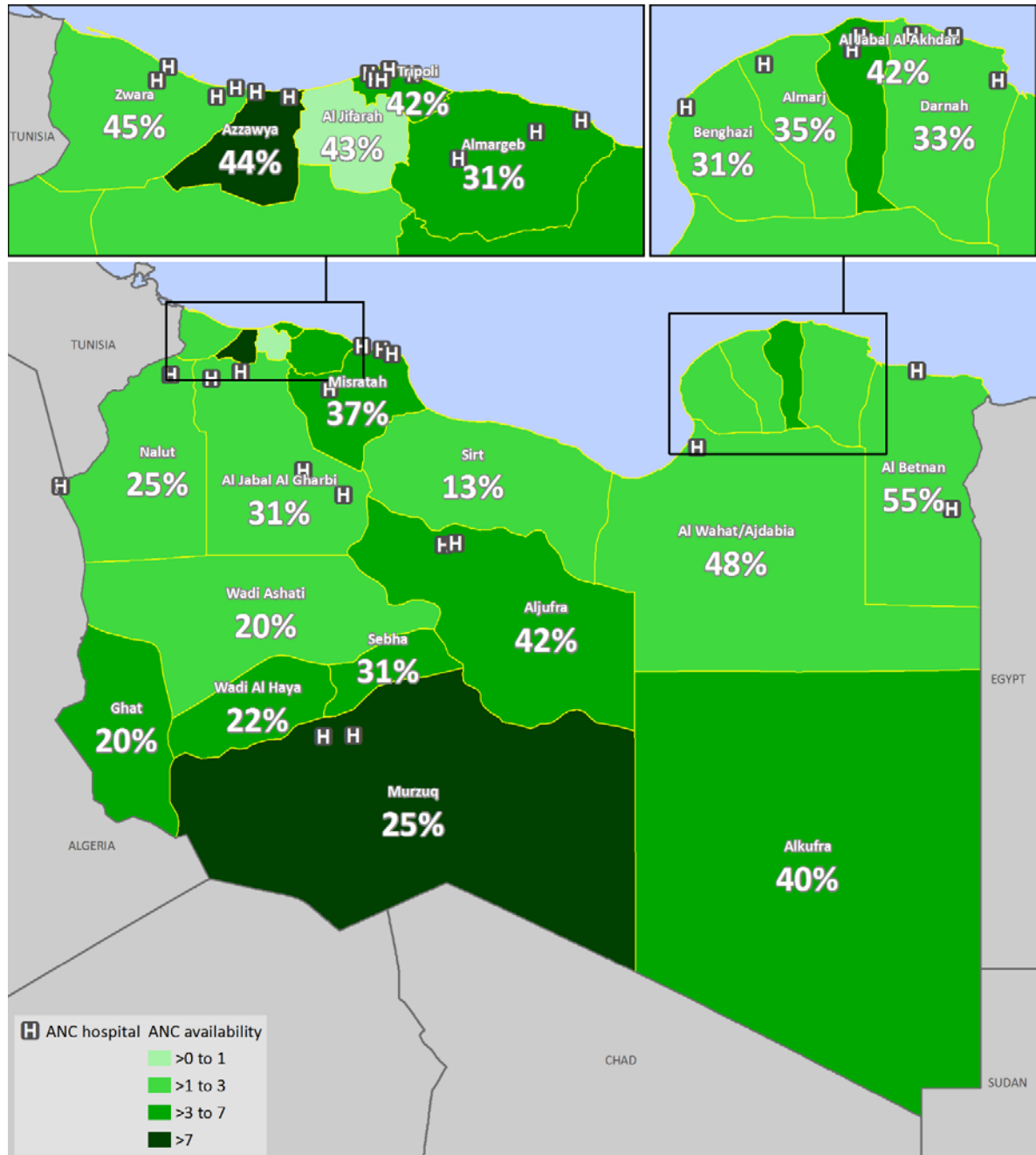
Table 25: Availability scores for individual antenatal care services by facility type and district

	PHC					Hospitals					Total N of facilities offering ANC (% of all facilities)
	Iron supplementation	Folic acid supplementation	Monitoring for hypertensive disorder of	Mean availability score for ANC	N of facilities offering ANC (% of all PHCs)	Iron supplementation	Folic acid supplementation	Monitoring for hypertensive disorder of	Mean availability score for ANC	N of facilities offering ANC (% of all hospitals)	
Al Wahat/Ajdabia	50%	50%	75%	58%	4 (11%)	100%	100%	100%	100%	1 (50%)	5 (13%)
Alkufra	100%	100%	100%	100%	2 (11%)					0	2 (10%)
Benghazi	55%	55%	73%	61%	11 (29%)	100%	100%	0%	67%	1 (17%)	12 (27%)
Al Betnan	100%	50%	50%	67%	2 (7%)	100%	100%	100%	100%	2 (67%)	4 (12%)
Al Jabal Al Akhdar	100%	100%	80%	93%	10 (16%)	100%	100%	100%	100%	2 (50%)	12 (19%)
Darnah	100%	100%	0%	67%	1 (4%)	33%	33%	67%	44%	3 (100%)	4 (13%)
Almarj	75%	25%	100%	67%	4 (14%)	100%	100%	100%	100%	1 (25%)	5 (15%)
Sirt	67%	67%	67%	67%	3 (15%)					0	3 (14%)
Aljufra	0%	0%	100%	33%	1 (8%)	100%	100%	100%	100%	2 (100%)	3 (20%)
Misratah	12%	18%	82%	37%	17 (25%)	100%	100%	100%	100%	4 (80%)	21 (29%)
Almargeb	5%	11%	63%	26%	19 (17%)	100%	100%	33%	78%	3 (50%)	22 (19%)
Al Jifarah	0%	0%	100%	33%	1 (2%)					0	1 (2%)
Tripoli	27%	31%	63%	40%	48 (42%)	60%	60%	100%	73%	5 (36%)	53 (41%)
Azzawya	71%	66%	80%	72%	35 (44%)	50%	50%	100%	67%	2 (100%)	37 (46%)
Zwara	60%	80%	80%	73%	5 (9%)	0%	0%	100%	33%	4 (80%)	9 (14%)
Al Jabal Al Gharbi	50%	50%	50%	50%	2 (2%)	100%	100%	75%	92%	4 (50%)	6 (5%)
Nalut	0%	0%	0%	0%	1 (3%)	100%	100%	50%	83%	2 (40%)	3 (8%)
Wadi Ashati	0%	0%	0%	0%	1 (7%)					0	1 (6%)
Sebha	88%	88%	88%	88%	8 (36%)					0	8 (33%)
Wadi Al Haya	0%	0%	100%	33%	3 (12%)					0	3 (12%)
Murzuq	0%	0%	80%	27%	5 (6%)	100%	100%	100%	100%	2 (100%)	7 (8%)
Ghat	0%	0%	100%	33%	1 (11%)					0	1 (11%)
<b>Total</b>	<b>44%</b>	<b>44%</b>	<b>73%</b>	<b>53%</b>	<b>184 (17%)</b>	<b>76%</b>	<b>76%</b>	<b>84%</b>	<b>79%</b>	<b>38 (48%)</b>	<b>222 (19%)</b>

Half of the 22 districts have availability scores for ANC care in PHCs equal to or below 50%. Although the districts of Wadi Ashati, Al Jifarah and Ghat each have one PHC facility offering ANC services, these facilities are unable to provide medicines and/or monitor for hypertension, meaning that essential ANC services are unavailable in these districts. About half (49%) of the municipalities do not have facilities providing ANC services, and among those who do, readiness scores indicate a low capacity to deliver services. There are 11 municipalities that have only one facility offering ANC, but where readiness scores fall at or below 40%. Al Shate al Garbe and Khalege Alsedra municipalities both have readiness scores of 0% for ANC, with scores for Zamzam and Al Shate Al Sharge at 20%, which essentially indicates that ANC

services are also unavailable in these municipalities. For more detailed information at municipality level see Section 4.8. Overall, the data suggests a limited availability of reliable ANC services across Libya.

Figure 38: Map of availability\* and readiness scores (in numbers) for ANC services by district, and ANC referral hospitals



Availability is defined as the ratio of facilities providing a selected service to 100,000 population; service-specific readiness is included in the map as a written percentage; only service-specific referral facilities are mapped

The readiness index for ANC is calculated using only data from the facilities that offer ANC services, and is based on availability of tracer items in five domains: (1) medicines, (2) guidelines, (3) trained staff, (4) functional equipment, and (5) diagnostics. The readiness indicators were calculated separately for hospital

and PHC facilities although the tracer items used were the same. The overall readiness index for ANC is 40% for PHCs and 43% for hospitals. These low scores can primarily be attributed to the low availability of medicines, guidelines and trained staff in both PHC and hospital facilities. The availability of diagnosis is relatively higher, and essential equipment is reported to be available in nearly all facilities offering ANC services (Table 26).

Table 26: ANC readiness scores by domain and facility type

	Medicine scores	Guidelines	Trained staff	Equipment scores	Diagnosis	Overall ANC readiness index	N of facilities offering ANC	Medicine	guidelines	trained staff	Equipment	Diagnosis	Overall readiness	N of facilities offering ANC
Al Wahat/Ajdabia	38%	25%	25%	50%	38%	<b>48%</b>	4	50%	50%	0%	100%	100%	<b>48%</b>	1
Alkufra	0%	50%	50%	100%	100%	<b>40%</b>	2							0
Benghazi	9%	27%	18%	100%	59%	<b>31%</b>	11	50%	0%	0%	100%	0%	<b>42%</b>	1
Al Betnan	0%	50%	50%	100%	25%	<b>55%</b>	2	75%	100%	100%	100%	75%	<b>80%</b>	2
Al Jabal Al Akhdar	45%	13%	0%	100%	45%	<b>42%</b>	10	75%	0%	0%	100%	50%	<b>44%</b>	2
Darnah	0%	0%	0%	100%	100%	<b>33%</b>	1	50%	33%	0%	100%	67%	<b>57%</b>	3
Almarj	25%	0%	0%	100%	25%	<b>35%</b>	4	0%	0%	0%	100%	50%	<b>25%</b>	1
Sirt	0%	0%	0%	67%	0%	<b>13%</b>	3							0
Aljufra	0%	33%	0%	100%	50%	<b>42%</b>	1	0%	0%	0%	100%	75%	<b>30%</b>	2
Misratah	9%	12%	6%	94%	62%	<b>37%</b>	17	38%	0%	25%	100%	63%	<b>45%</b>	4
Almargeb	0%	4%	5%	95%	37%	<b>31%</b>	19	67%	0%	0%	100%	50%	<b>41%</b>	3
Al Jifarah	50%	67%	0%	100%	0%	<b>43%</b>	1							0
Tripoli	2%	23%	27%	100%	44%	<b>42%</b>	48	30%	50%	20%	100%	60%	<b>49%</b>	5
Azzawya	7%	45%	26%	94%	43%	<b>44%</b>	35	50%	0%	50%	100%	50%	<b>49%</b>	2
Zwara	0%	40%	20%	100%	10%	<b>45%</b>	5	38%	25%	0%	100%	63%	<b>35%</b>	4
Al Jabal Al Gharbi	0%	17%	0%	100%	50%	<b>31%</b>	2	25%	0%	0%	100%	38%	<b>35%</b>	4
Nalut	0%	0%	0%	100%	0%	<b>25%</b>	1	25%	25%	0%	100%	25%	<b>30%</b>	2
Wadi Ashati	0%	0%	0%	100%	0%	<b>20%</b>	1							0
Sebha	0%	17%	38%	100%	63%	<b>31%</b>	8							0
Wadi Al Haya	0%	11%	0%	100%	67%	<b>22%</b>	3							0
Murzuq	0%	0%	20%	80%	20%	<b>25%</b>	5	25%	0%	0%	100%	25%	<b>29%</b>	2
Ghat	0%	0%	0%	100%	100%	<b>20%</b>	1							0
<b>Total</b>	<b>7%</b>	<b>23%</b>	<b>19%</b>	<b>96%</b>	<b>44%</b>	<b>40%</b>	<b>184</b>	<b>39%</b>	<b>20%</b>	<b>14%</b>	<b>100%</b>	<b>54%</b>	<b>43%</b>	<b>38</b>

#### 4.2.2 Breakdown of readiness indicators

No specific data on ANC services was collected at hospital level. Amongst PHC facilities offering routine ANC, national ANC guidelines were observed or reported to be present in 43 (23%) locations, with check lists and/or job aids available in 70 (38%) locations. Staff that received specific training in ANC during the past 2 years are present in 34 of the PHC facilities offering ANC services (18%).

##### Box 1: ANC services availability and readiness

Although antenatal care in Libya can boast of high coverage figures, both the availability and readiness of this service is limited at national level. Lack of essential medicines, guidelines, and trained staff contribute to a low readiness score of 40% in PHC facilities. This suggests that notwithstanding the high coverage, the overall quality and effectiveness of ANC services requires attention across the country.

The districts of Wadi Ashati, Al Jifarah and Ghat each have one facility providing ANC services, accompanied by low readiness scores, suggesting that ANC services are essentially unavailable here. The fact that nearly 50% of municipalities do not have a facility offering basic ANC is indicative of an inequitable distribution of services.

### 4.3 Obstetric and Newborn Care services

The Maternal Mortality Ratio (MMR) in Libya has been steadily decreasing since 1990, with an estimated 5.7% average annual decrease between 1990 and 2015 (8). Given that the causes of maternal deaths are largely preventable, the MMR is often seen as an indicator of the accessibility and responsiveness of a health system. The current MMR for Libya is estimated to be at the same level as countries such as the UK and New Zealand, indicating a good overall performance of the local health system in terms of emergency obstetric care. These figures are estimates, however, and the current levels of conflict and instability are likely to have a negative impact on service delivery, which could contribute to a rise in MMR over time.

In 2014, 99% of all deliveries in Libya took place in health facilities under the supervision of a skilled birth attendant (SBA) (17). At the time of the SARA survey this proportion was likely lower, given that a number of health facilities were closed or had lost key staff due to the prolonged conflict. PHC facilities essentially do not offer delivery services, the majority of deliveries take place in the hospitals. Women in labor travel directly to the nearest hospital, usually using their own means of transportation. Women don't have to be known or registered in a specific hospital in order to deliver there. They carry their own ANC records, and can share these with the attending SBA if required. All hospitals that offer delivery services technically have the capacity to do cesarean sections and administer blood transfusions, but this is not the case for the small number of PHC facilities that offer delivery services. These PHC facilities are primarily staffed by midwives who conduct only normal deliveries. Women experiencing complications during delivery at PHC facilities are referred to the nearest hospital.

The availability of general delivery services can be defined as the capacity to provide five specific interventions: (1) administration of oxytocin immediately postpartum for the prevention of postpartum hemorrhage (PPH); (2) use of a partograph during labor; (3) immediate and exclusive breastfeeding; (4) hygienic cord care; and (5) thermal protection of the infant. Emergency obstetric care, which is the provision of life-saving care when life-threatening obstetric complications occur, is defined as the capacity to provide 7 signal functions for Basic Emergency Obstetric and Neonatal care (BEmONC) and 2 additional signal functions for Comprehensive Emergency Obstetric and Neonatal Care (CEmONC). The 7 BEmONC functions include (1) parenteral (IV/IM) administration of antibiotics for mothers; (2) parenteral (IV/IM) administration of oxytocics for PPH; (3) parenteral (IV/IM) administration of magnesium sulphate for management of (pre-) eclampsia; (4) assisted vaginal delivery; (5) manual removal of placenta; (6) removal of retained products of conception; and (7) neonatal resuscitation with bag and mask. For CEmONC the 7 basic functions are complemented by the availability of (8) cesarean section and (9) blood transfusion. These definitions apply to both PHC and hospital facilities that provide delivery care. The analysis of delivery care focuses primarily on hospital facilities, with only a limited breakdown provided at PHC level. For a complete listing of hospitals offering delivery services, please see the table at the end of this chapter.

#### 4.3.1 Availability and readiness of delivery and EMOnc services

Delivery services are provided in 69 public health facilities in Libya. This includes 52 hospitals and 17 PHC facilities. Of the 52 hospitals offering delivery services, 51 (98%) are able to provide all seven signal functions for Basic Emergency Obstetric and Neonatal Care (BEmONC) and 43 (83%) offer the nine signal functions for Comprehensive Emergency Obstetric and Neonatal Care (CEmONC). Of the 17 PHC facilities offering delivery services, only one facility in Benghazi offers all seven BEmONC signal functions. CEmONC is not available in any PHC facilities.

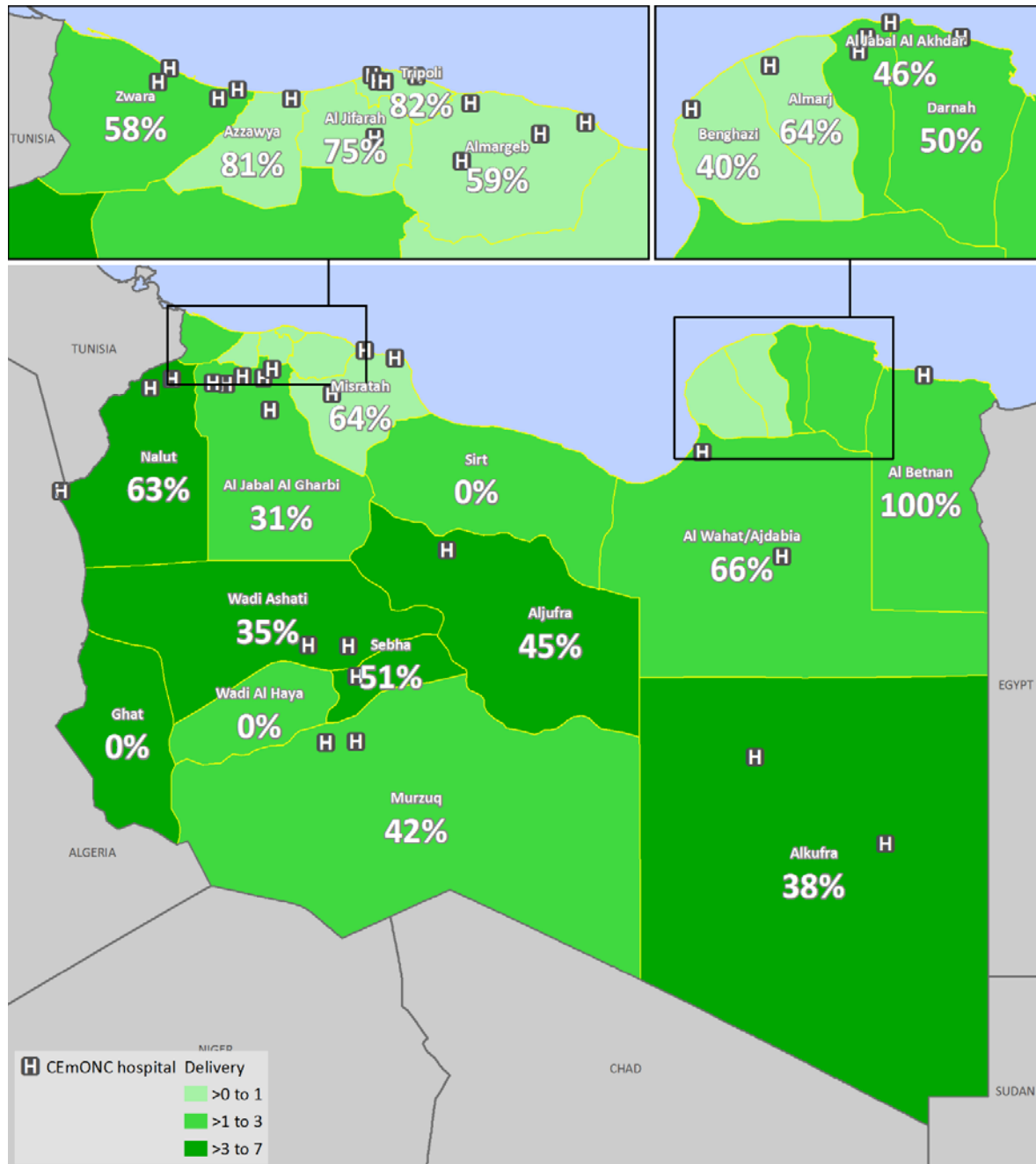
Table 27: Percentage and types of health facilities offering delivery services by district

District	Hospitals			PHC facilities			Total N (%) of all Hospitals and PHCs offering delivery
	N (%) of all facilities offering delivery	N (%) of facilities offering BEmONC	N (%) of facilities offering CEmONC	N (%) of all facilities offering delivery	N (%) of facilities offering BEmONC	N (%) of facilities offering CEmONC	
<i>Al Wahat/Ajdabia</i>	2 (100%)	2 (100%)	2 (100%)	3 (8%)	1 (33%)	0 (0%)	5 (13%)
<i>Alkufra</i>	2 (100%)	2 (100%)	2 (100%)				2 (10%)
<i>Benghazi</i>	3 (50%)	3 (100%)	1 (33%)				3 (7%)
<i>Al Betnan</i>	2 (66.7%)	2 (100%)	1 (50%)				2 (6%)
<i>Al Jabal Al Akhdar</i>	3 (75%)	3 (100%)	3 (100%)	2 (3%)	0 (0%)	0 (0%)	5 (8%)
<i>Darnah</i>	3 (100%)	3 (100%)	1 (33%)	1 (4%)	0 (0%)	0 (0%)	4 (13%)
<i>Almarj</i>	2 (50%)	2 (100%)	1 (50%)				2 (6%)
<i>Sirt</i>				2 (10%)	0 (0%)	0 (0%)	2 (10%)
<i>Aljufra</i>	2 (100%)	1 (50%)	1 (50%)				2 (13%)
<i>Misratah</i>	3 (60%)	3 (100%)	3 (100%)				3 (4%)
<i>Almargeb</i>	4 (66.7%)	4 (100%)	4 (100%)				4 (4%)
<i>Al Jifarah</i>	1 (100%)	1 (100%)	1 (100%)				1 (2%)
<i>Tripoli</i>	4 (28.6%)	4 (100%)	4 (100%)				4 (3%)
<i>Azzawya</i>	1 (50%)	1 (100%)	1 (100%)				1 (1%)
<i>Zwara</i>	4 (80%)	4 (100%)	4 (100%)				4 (6%)
<i>Al Jabal Al Gharbi</i>	7 (87.5%)	7 (100%)	6 (86%)				7 (6%)
<i>Nalut</i>	3 (60%)	3 (100%)	3 (100%)	1 (3%)	0 (0%)	0 (0%)	4 (11%)
<i>Wadi Ashati</i>	3 (100%)	3 (100%)	2 (67%)				3 (17%)
<i>Sebha</i>	1 (50%)	1 (100%)	1 (100%)	5 (23%)	0 (0%)	0 (0%)	6 (25%)
<i>Wadi Al Haya</i>				2 (8%)	0 (0%)	0 (0%)	2 (8%)
<i>Murzuq</i>	2 (100%)	2 (100%)	2 (100%)				2 (2%)
<i>Ghat</i>				1 (11%)	0 (0%)	0 (0%)	1 (11%)
<b>Total</b>	<b>52 (65%)</b>	<b>51 (98%)</b>	<b>43 (83%)</b>	<b>17 (2%)</b>	<b>1 (6%)</b>	<b>0 (0%)</b>	<b>69 (6%)</b>

The mean total availability of the five routine delivery practices in the 52 hospitals offering delivery care is 77%. Well over half of the hospitals use a partograph (58%), while immediate and exclusive breast feeding is reported to be practiced by 64% of hospitals. Among the 52 hospitals offering delivery services, 98% offered all 7 BEmONC functions at time of the survey, while 83% offered the 9 CEmONC functions. The overall availability of each of the five routine delivery practices and nine signal functions for EmONC in the 52 hospitals offering delivery care are summarized in Figure 41.



Figure 39: Map of availability\* and readiness scores (in numbers) for delivery services by district, with CEmONC referral hospitals



\* Availability is defined as the ratio of facilities providing a selected service to 100,000 population; service-specific readiness is included in the map as a written percentage; only service-specific referral facilities are mapped

Readiness indices, which indicate whether the theoretical availability of a service can be partially or fully translated into the actual delivery of this service by a health facility, are calculated using data indicating the presence of selected tracer items in four domains: (1) functional equipment, (2) medicines, (3) trained staff and (4) guidelines. The overall readiness for delivery services provided by PHC facilities was 20%, with a corresponding overall readiness index of 54% for hospitals (Table 28). The primary reason for these



relatively low scores can be attributed to the limited availability of guidelines (40% for hospitals) and trained staff (35% for hospitals). The availability of equipment for delivery is relatively good for hospitals (80%) and poor for the PHC facilities offering deliveries (46%). Hospitals and, to a far greater extent, the PHC facilities, suffer from a lack of essential medicines for delivery services, with domain-specific readiness scores of 62% and 4%, respectively.

Table 28: Readiness indices for delivery services by district

	N of facilities offering delivery	Equipment scores	Guidelines essential childbirth care	Trained staff	Medicine scores	Overall readiness scores	N of facilities offering delivery	Equipment scores	Guidelines essential childbirth care	Trained staff	Medicine scores	Overall readiness scores
Al Wahat/Ajdabia	2	94%	50%	50%	70%	66%	3	58%	33%	0%	13%	26%
Alkufra	2	94%	0%	0%	60%	38%						
Benghazi	3	46%	67%	0%	47%	40%						
Al Betnan	2	100%	100%	100%	100%	100%						
Al Jabal Al Akhdar	3	96%	0%	0%	87%	46%	2	0%	50%	0%	0%	13%
Darnah	3	58%	100%	0%	40%	50%	1	88%	0%	0%	0%	22%
Almarj	2	75%	50%	50%	80%	64%						
Sirt	0						2	38%	0%	0%	0%	9%
Aljufra	2	81%	0%	50%	50%	45%						
Misratah	3	96%	33%	67%	60%	64%						
Almargeb	4	66%	75%	25%	70%	59%						
Al Jifarah	1	100%	0%	100%	100%	75%						
Tripoli	4	84%	100%	75%	70%	82%						
Azzawya	1	63%	100%	100%	60%	81%						
Zwara	4	97%	0%	50%	85%	58%						
Al Jabal Al Gharbi	7	77%	0%	0%	49%	31%						
Nalut	3	92%	33%	67%	60%	63%	1	25%	0%	0%	0%	6%
Wadi Ashati	3	75%	33%	0%	33%	35%						
Sebha	1	63%	0%	100%	40%	51%	5	33%	0%	40%	0%	18%
Wadi Al Haya	0						2	94%	50%	0%	0%	36%
Murzuq	2	69%	50%	0%	50%	42%						
Ghat	0						1	75%	0%	0%	20%	24%
Total	52	80%	40%	35%	62%	54%	17	46%	18%	12%	4%	20%

Four out of 22 districts have readiness scores of 75% or above. Seven districts have readiness scores below 50%. These low scores are primarily attributable to a shortage of trained staff and essential guidelines in the health facilities. Of the 12 municipalities offering delivery services (see Table 38 for details), only Aujala has a readiness score of 60%. The other readiness scores are all below 40%, with three municipalities (Albawanees, Daraj and Marada) scoring as low as 6%, all well below the acceptable level of 80%.

*Box 2: Delivery and EmONC services availability and readiness*

All districts in Libya have one or more facilities that provide delivery services. However, delivery services in the districts of Sirt, Wadi Al Haya, and Ghat are provided only through PHC facilities, none of which provide all 7 signal functions of BEmONC. In addition to the unavailability of EmONC services in these three districts, the readiness indicators for delivery services through the PHC facilities in these three districts are unacceptably low at 9%, 36% and 24%, respectively.

#### 4.3.1.1 Hospital infrastructure for delivery and EmONC care

Of the 52 hospitals that offer delivery care, data on total maternity bed capacity is available for 48 hospitals. Most of the larger hospitals have an earmarked obstetric/maternity ward, with an average bed capacity of 33 beds, while the smaller hospitals tend to have a combined obstetrics and gynecology ward. Some large hospitals such as the Al Jalaa maternity hospital in Tripoli have maternity beds distributed over multiple wards, which is why the total number of hospitals in Table 29, below, is greater than 48. The total number of functional maternity beds is 1899, with an average of 30 beds per ward, and a range of 4 to 120 beds per ward.

Table 29: Availability of maternity beds by ward type

Type of ward	N of hospitals	N of beds	Average N of maternity beds in ward	Range
Obstetric/maternity ward	26	870	33	6-120
Combined obs/gynae ward	38	1029	27	4-120
<b>Total</b>	-	<b>1899</b>	<b>30</b>	<b>4-120</b>

#### 4.3.2 Breakdown of readiness indicators

The proportions reported in this section may not necessarily correspond to those reported for the readiness scores in the previous section. This is because the number of respondents are often different, given that the data used here may come from a different subset of health facilities or a different section of the survey, or may not reflect all the indicators used to calculate the index scores. The figures in this section can be used as a reference point to assess the validity of the readiness scores, and also provide insight into the individual items used for calculating the readiness indices.

The data summarized in this section has been taken from the 52 hospital facilities that offer delivery services, and does not refer to the PHC facilities. It represents a further disaggregation of the data used to calculate the readiness scores for delivery and Emergency Obstetric and Neonatal Care (EmONC) in hospital facilities.

##### 4.3.2.1 Working hours, staffing, and available services

Nearly all hospitals (98%) offer 24-hour coverage for delivery services. Of these, 43 (84%) have 24-hour onsite availability of a skilled birth attendant, with 8 (15%) having 24-hour on-call staff during evenings and weekends. One hospital (1.6%) did not offer 24-hour staff coverage. Most daytime deliveries in hospitals are conducted by specialist doctors in Obstetrics and Gynecology (OB/GYNs, 31%), with midwives responsible for the second highest proportion of daytime deliveries (27%).

Figure 40: Lowest level of provider conducting deliveries during the day

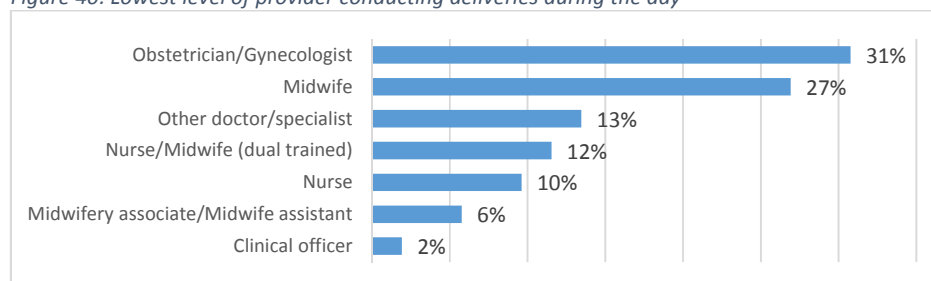
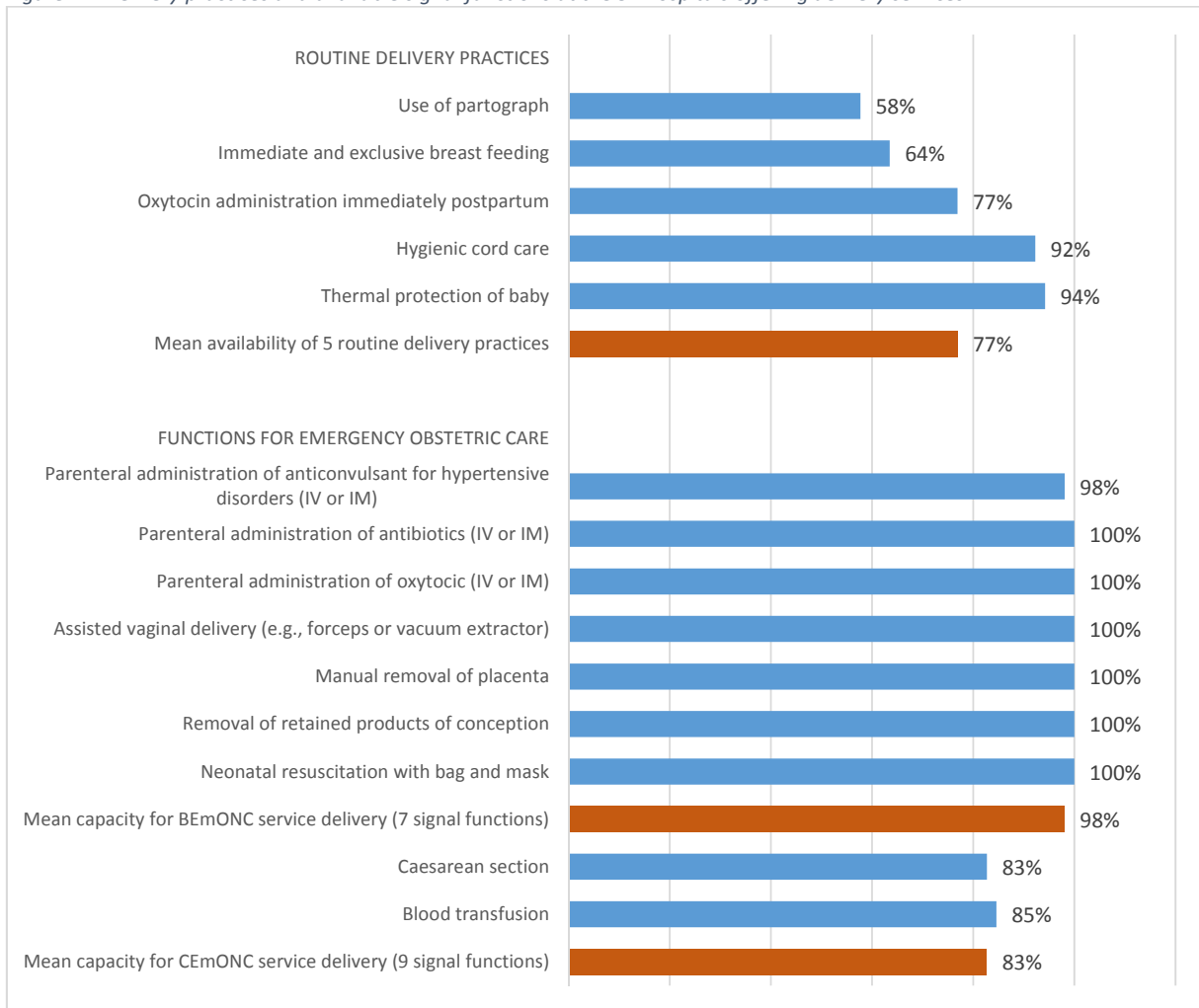


Figure 41: Delivery practices and available signal functions at the 52 hospitals offering delivery services

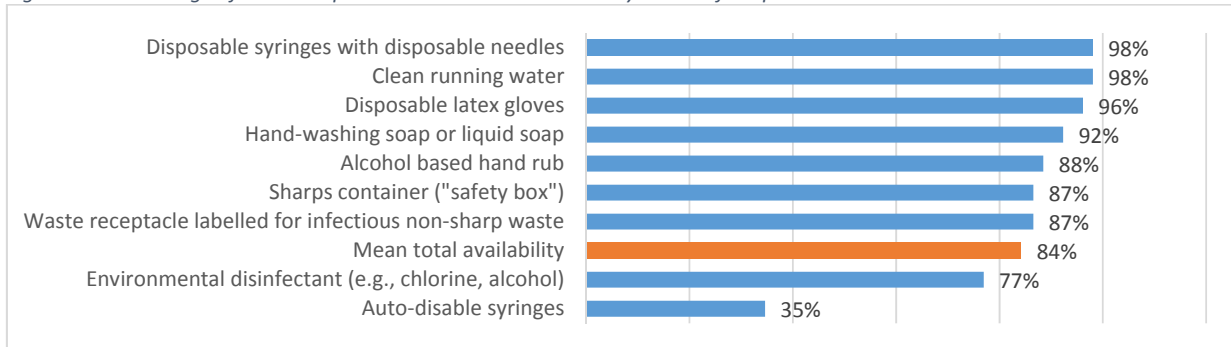


The availability of guidelines for BEmONC was reported (but not necessarily observed) for 40% of the 52 hospitals, while the presence of guidelines for CEmONC was reported by 32% of the 47 hospitals for which a response was provided. Check-lists and/or job-aids for essential childbirth care were reported to be available in 31% of 52 hospital facilities.

#### 4.3.2.2 Standard precautions

The majority of hospitals have standard precautions in place for infection prevention during deliveries (mean total availability of 84%), with shortages noted primarily in the availability of auto-disable syringes (35%) and environmental disinfectants (77%).

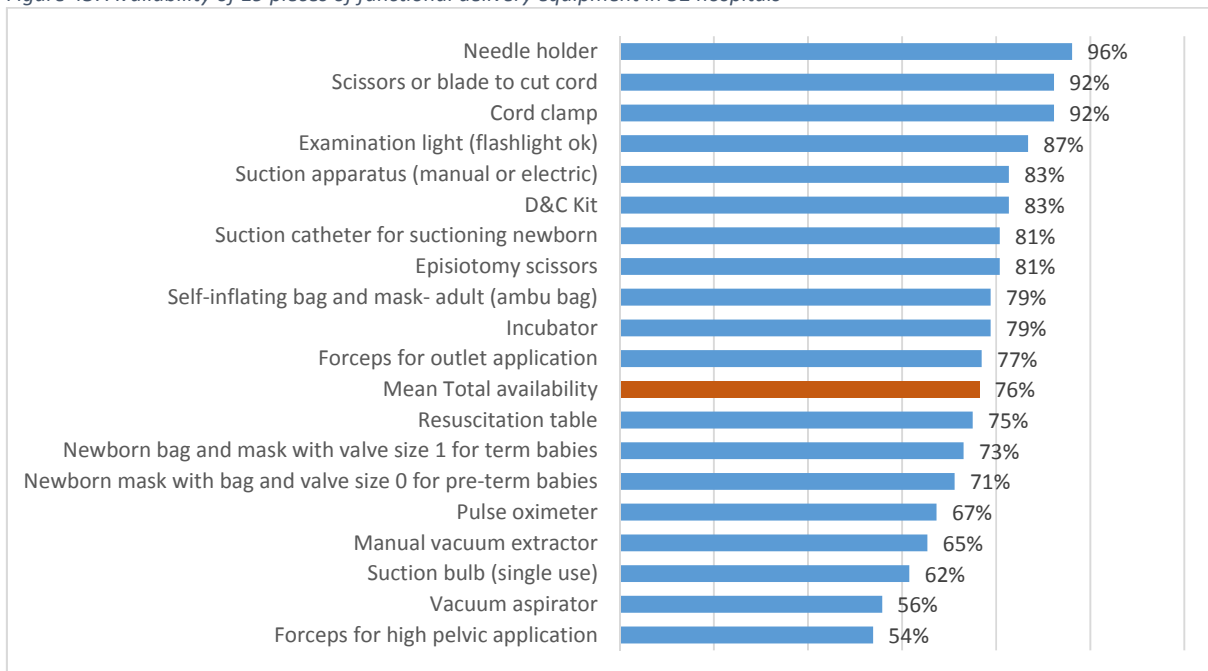
Figure 42: Percentage of standard precautions available in delivery wards of hospitals



#### 4.3.2.3 Equipment for delivery

The mean total availability and functionality of 19 pieces of basic equipment necessary for delivery was 76% in the 52 hospitals offering delivery services. Where equipment was present but not working, it was not counted. On average, approximately 10% of the available equipment was non-functional. The presence of functional forceps for high pelvic application and functional vacuum aspirators was least observed (54% and 56%, respectively), while functional scissors to cut the cord (92%), functional cord clamps (92%) and functional needle holders (96%) were found to be available in nearly all the hospitals.

Figure 43: Availability of 19 pieces of functional delivery equipment in 52 hospitals

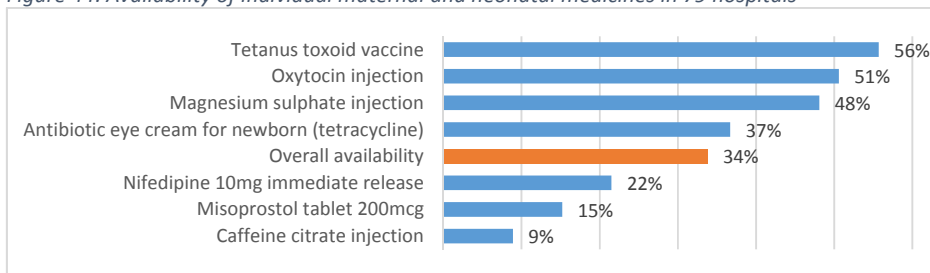


Oxygen was observed to have been available in 49 (94%) of all delivery rooms, administered through either a central oxygen supply (41%), oxygen tanks on the unit (37%), or both (20%). One hospital did not have a functional oxygen supply present in the delivery rooms at time of visit. Out of 48 delivery rooms visited, 14 (29%) reported that oxygen had been unavailable at least once during the 3 months preceding the visit.

#### 4.3.2.4 Essential medicines

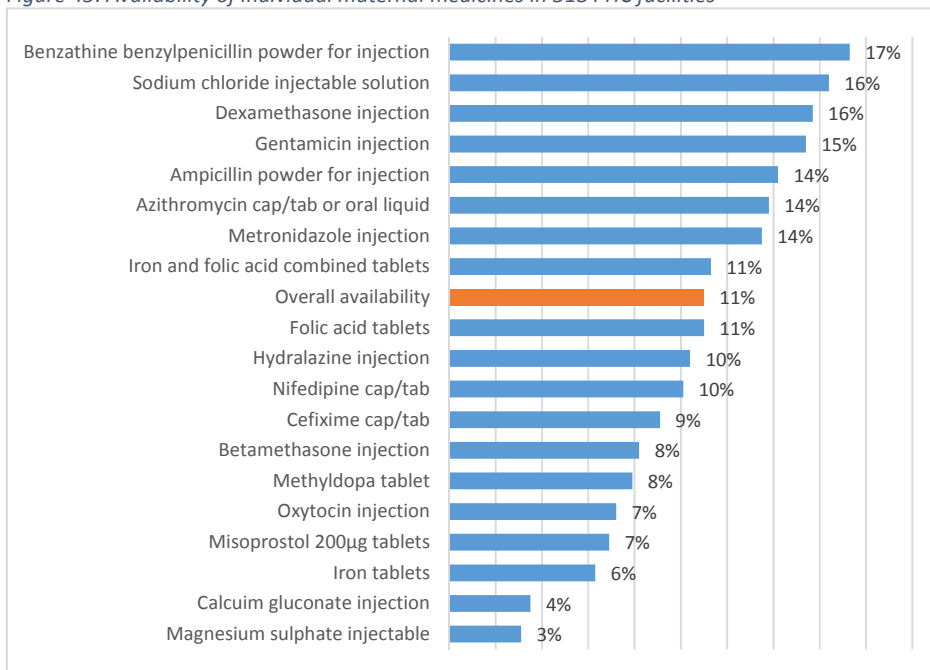
At hospital level, the SARA methodology also includes the assessment of a limited set of medicines used for maternal and neonatal health services. The overall availability of these medicines was 34% across all 79 hospitals (Figure 44), as opposed to the 52 hospitals offering delivery services which provided data for the previous figure. Tetanus toxoid vaccine was the most widely available, at 56% of hospitals, with misoprostol tablets available in only 15% of hospitals and caffeine citrate in 9%.

Figure 44: Availability of individual maternal and neonatal medicines in 79 hospitals



Data was also collected from 318 PHC facilities on the availability of essential medicines that could be used for maternal health services (Figure 45). The overall availability of these medicines is low, at 11% across all medicines, with the most commonly available medicines being injectable benzathine benzylpenicillin (17%) and sodium chloride (16%), and the least common being injections of calcium gluconate (4%) and magnesium sulphate (3%).

Figure 45: Availability of individual maternal medicines in 318 PHC facilities



### 4.3.3 Newborn care

The large majority of newborn deaths (80 per cent) are due to complications related to preterm birth, intrapartum events such as birth asphyxia, or infections such as sepsis or pneumonia. Thus, targeting the time around birth with proven high impact interventions and quality care for small and sick newborns may prevent up to 80 per cent of newborn deaths. With the decrease in infant and under 5 mortality rates worldwide, neonatal mortality is making up an increasing proportion of these deaths. The neonatal mortality rate (NMR) for Libya is 7 per 1000 live births. With an estimated under 5 mortality rate (U5MR) of 13 per 1000 live births, neonatal deaths in Libya account for over half of the deaths in children under 5 (Table 4). Although newborn care is technically part of EmONC, it is highlighted separately in this section in order to ensure that it receives adequate attention, as it is an area of RMNCH that is often overlooked.

#### 4.3.3.1 Breakdown of readiness indicators

In 28 of 52 hospitals (54%), there is always a staff member trained in newborn resuscitation on duty during the day. This percentage is similar for staff on night duty (51%). Staff in 14 (27%) of the hospitals offering deliveries have had training on newborn resuscitation using the newborn bag and mask in the last two years, while staff in 12 hospitals (23%) have been trained in other forms of newborn resuscitation during the last 2 years.

#### 4.3.3.2 Hospitalization facilities for newborns

In terms of newborn care, 33 hospitals report that they have newborn wards, and 7 have a Neonatal Intensive Care Unit (NICU). Bed capacity of these wards ranges from 4 to 25 beds, with an average of 12 in newborn wards and 9 in NICUs. The total number of beds in newborn wards available in Libyan hospitals is 408, with 66 NICU beds available.

Table 30: Summary of newborn and NICU bed capacity in hospitals

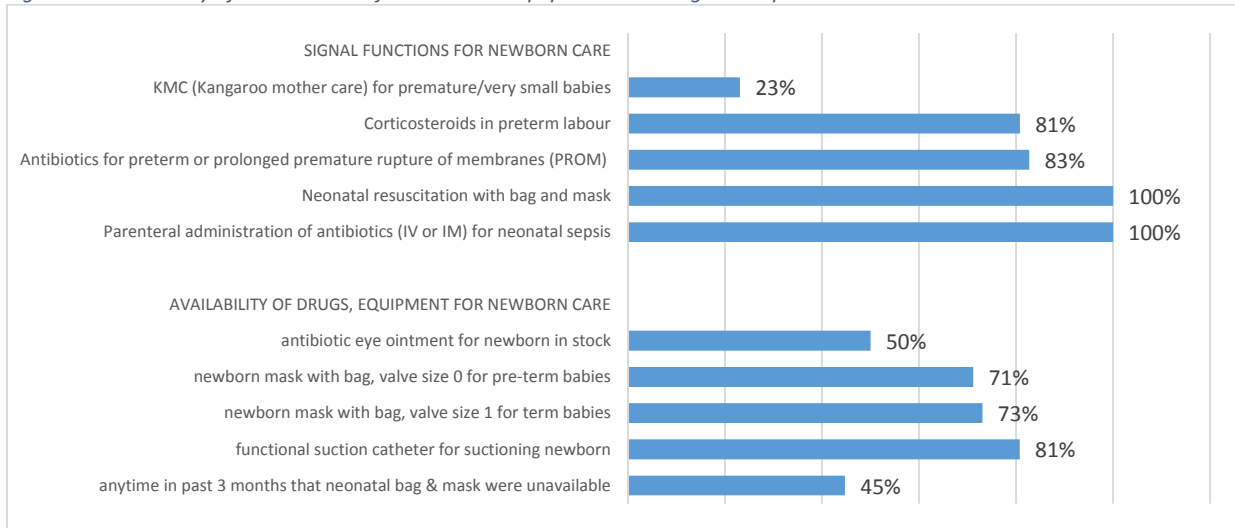
	No hospitals	Total beds	Average N of beds	Range
Newborn wards	33	408	12	4 - 25
Neonatal Intensive Care Unit	7	66	9	6 - 10

Three hospitals (Al Jameel Hospital, Tubrug Medical Center, and Zlitan Hospital) report that they routinely conduct neonatal death reviews, while 23 hospitals report never having had a neonatal death.

#### 4.3.3.3 Neonatal signal functions

A set of five key Neonatal services, or “signal functions,” are critical to emergency newborn care (the “N” in EmONC). The availability of these five signal functions in the 52 hospitals offering delivery services in Libya is summarized in Figure 46. In the case of preterm or prolonged premature rupture of membranes (PROM), 82.7% of the 52 hospitals providing delivery care report antibiotic use for infection prevention. Kangaroo mother care, which involves carrying an undressed premature/very small baby directly against the parent’s bare chest during the first weeks of life, is practiced in 23.1% facilities.

Figure 46: Availability of neonatal care functions and equipment and drugs in hospitals



All of the hospitals offering delivery services report that they provide neonatal resuscitation with bag and mask, while only 38 (73%) report that they actually have a neonatal mask and bag available. The number of masks available in the hospitals may also be insufficient, given that 45% of hospitals reported an unavailability of neonatal bags/masks at least once during the 3 months preceding the survey.

#### 4.3.4 Postpartum care

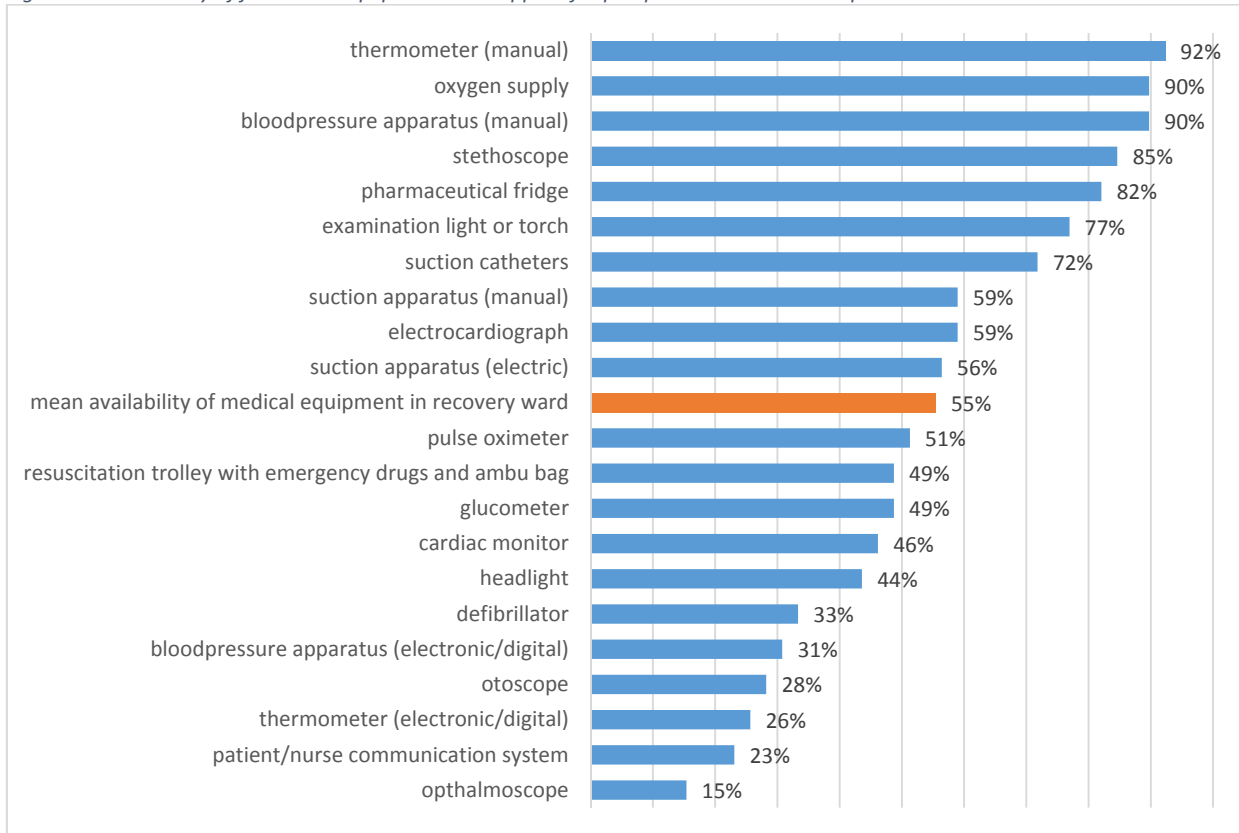
Of the 52 hospitals offering delivery care, 42 (81%) have beds available for postpartum care. Of these 42 hospitals, 20 (48%) have specific maternity wards, 13 (31%) have combined postpartum/gynecology wards, 6 hospitals (14%) provide postpartum care on the general female ward, and 3 (7%) offer care in a general ward. The capacity of these postpartum services range from 2 to 60 beds, depending on the facility.

##### 4.3.4.1 Breakdown of readiness indicators

Of the 39 hospitals for which responses were registered, 14 hospitals (36%) reported to have standard patient care guidelines for postpartum care available in the postpartum/delivery wards, while 9 (26% of 35 hospitals) reported to have standard patient care guidelines available in postpartum/delivery ward that were not specific for postpartum care.

Questionnaires on the availability of medical equipment in the postpartum wards were completed for 39 hospitals. The mean availability of 21 pieces of functional equipment (non-functional equipment was not included in the counts) was 55%. Where functional manual thermometers (92%), manual blood pressure apparatus (90%) and oxygen supply (90%) were available in nearly all surveyed postpartum wards, ophthalmoscopes (15%), patient-nurse communication systems (23%) and otoscopes (28%) were available in a limited number of locations (Figure 47).

Figure 47: Availability of functional equipment and supplies for postpartum care in 39 hospitals



In 10 of the 39 wards providing postpartum care (26%), oxygen had not been available for any reason during the 3 months preceding the survey.

#### 4.4 Family Planning services

The most recent official data on the unmet need for family planning in Libya dates from 2007. It indicates that, at the time of survey, 27% of espoused women of reproductive age (15-49 years) who did not want any more children or wanted to wait at least two years before having a baby, were not using contraception. The contraceptive prevalence rate in that same year was 42% (18). A more recent national household survey dating from 2014 reports rates of 40% for unmet need and 28% for the contraceptive prevalence rate (16% for modern methods only), although the reliability of these results is not universally endorsed. The survey also reported that 8% of women report using pills, and 4% report using IUDs, with 19% relying on government facilities and 49% on pharmacies for obtaining their contraceptives (15).

The use of contraception/Family Planning (FP) services in Libya is seen as a personal choice, based on a couple's own needs and preferences. Services are available through both the public sector (free of charge) and private facilities. In the public sector, a small number of PHC facilities provide FP; hospitals do not offer this service.

##### 4.4.1 Availability and readiness

The 18 PHC facilities that offer FP services are located in 11 out of the 22 districts. In 7 of 18 facilities (39%) women can receive instructions on the use of cycle beads (a natural method for family planning). Combined estrogen/progesterone and progestin-only contraceptive pills are available in 3 of the 18

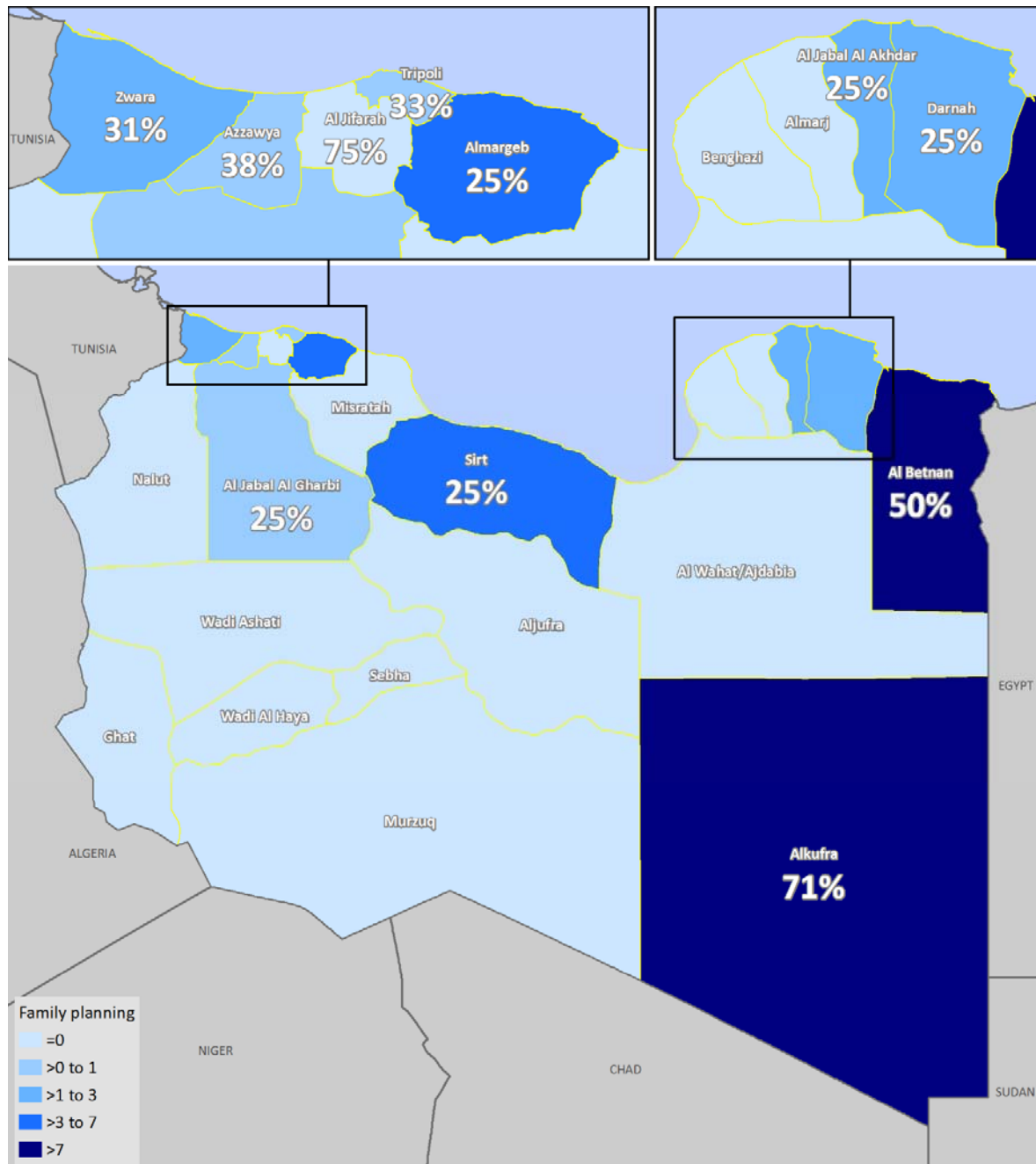


facilities (17%). Two facilities offer combined estrogen/progesterone injectables and IUCDs. Out of 12 available contraceptive methods, 5 are available in the PHC facilities.

Table 31: Number of PHC facilities offering FP and types of contraceptives available by district

	Combined estrogen progesterone oral contraceptive pills	Progestin-only contraceptive pills	Combined estrogen progesterone injectable	Progestin-only injectable contraceptives	Male condoms	Female condoms	IUCD	Implants	Cycle beads	Emergency contraceptive pill	Male sterilization	Female sterilization	N of facilities providing FP	Overall availability
<i>Al Wahat/Ajdabia</i>	0%	0%	0%				0%		0%				0	0%
<i>Alkufra</i>	100%	100%	100%				100%		100%				1	42%
<i>Benghazi</i>	0%	0%	0%				0%		0%				0	0%
<i>Al Betnan</i>	50%	50%	50%				50%		50%				2	21%
<i>Al Jabal Al Akhdar</i>	0%	0%	0%				0%		0%				1	0%
<i>Darnah</i>	0%	0%	0%				0%		0%				1	0%
<i>Almarj</i>	0%	0%	0%				0%		0%				0	0%
<i>Sirt</i>	0%	0%	0%				0%		100%				1	8%
<i>Aljufra</i>	0%	0%	0%				0%		0%				0	0%
<i>Misratah</i>	0%	0%	0%				0%		0%				0	0%
<i>Almargeb</i>	0%	0%	0%				0%		50%				4	4%
<i>Al Jifarah</i>	0%	0%	0%				0%		100%				1	8%
<i>Tripoli</i>	33%	33%	0%				0%		0%				3	6%
<i>Azzawya</i>	0%	0%	0%				0%		100%				1	8%
<i>Zwara</i>	0%	0%	0%				0%		0%				2	0%
<i>Al Jabal Al Gharbi</i>	0%	0%	0%				0%		0%				1	0%
<i>Nalut</i>	0%	0%	0%				0%		0%				0	0%
<i>Wadi Ashati</i>	0%	0%	0%				0%		0%				0	0%
<i>Sebha</i>	0%	0%	0%				0%		0%				0	0%
<i>Wadi Al Haya</i>	0%	0%	0%				0%		0%				0	0%
<i>Murzuq</i>	0%	0%	0%				0%		0%				0	0%
<i>Ghat</i>	0%	0%	0%				0%		0%				0	0%
<b>Total</b>	<b>17%</b>	<b>17%</b>	<b>11%</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>	<b>11%</b>	<b>0%</b>	<b>39%</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>	<b>18</b>	<b>8%</b>

Figure 48: Map of availability\* and readiness scores (in numbers) for family planning services by district



\* Availability is defined as the ratio of facilities providing a selected service to 100,000 population; service-specific readiness is included in the map as a written percentage; only service-specific referral facilities are mapped

The overall readiness index for FP is calculated based on the availability of tracer items in four domains: (1) functional equipment, (2) medicines, (3) trained staff and (4) guidelines. The overall readiness score for FP services in Libya was 36%. This low score reflects absence of medicines, trained staff and guidelines in the 18 PHC facilities offering FP services (Table 32). The facilities in Alkufra and Al Jifarah had relatively good readiness indices, whilst the remaining facilities all had readiness scores of 50% or below.

Table 32: Readiness index for family planning services by district

	N of PHCs providing FP	Equipment score	Medicine score	Trained staff score	Guidelines score	Overall readiness score
Al Wahat/Ajdabia	0					
Alkufra	1	100%	33%	50%	100%	71%
Benghazi	0					
Al Betnan	2	100%	0%	50%	50%	50%
Al Jabal Al Akhdar	1	100%	0%	0%	0%	25%
Darnah	1	100%	0%	0%	0%	25%
Almarj	0					
Sirt	1	100%	0%	0%	0%	25%
Aljufra	0					
Misratah	0					
Almargeb	4	100%	0%	0%	0%	25%
Al Jifarah	1	100%	0%	100%	100%	75%
Tripoli	3	100%	0%	17%	17%	33%
Azzawya	1	100%	0%	0%	50%	38%
Zwara	2	100%	0%	25%	0%	31%
Al Jabal Al Gharbi	1	100%	0%	0%	0%	25%
Nalut	0					
Wadi Ashati	0					
Sebha	0					
Wadi Al Haya	0					
Murzuq	0					
Ghat	0					
<b>Total</b>	<b>18</b>	<b>100%</b>	<b>2%</b>	<b>20%</b>	<b>22%</b>	<b>36%</b>

#### 4.4.2 Breakdown of readiness indicators

The proportions reported in this section may not necessarily correspond to those reported for the readiness scores in the previous section. This is because the number of respondents are often different, given that the data used here may come from a different subset of health facilities or a different section of the survey, or may not reflect all the indicators used to calculate the index scores. The figures in this section can be used as a reference point to assess the validity of the readiness scores, and also provide insight into the individual items used for calculating the readiness indices.

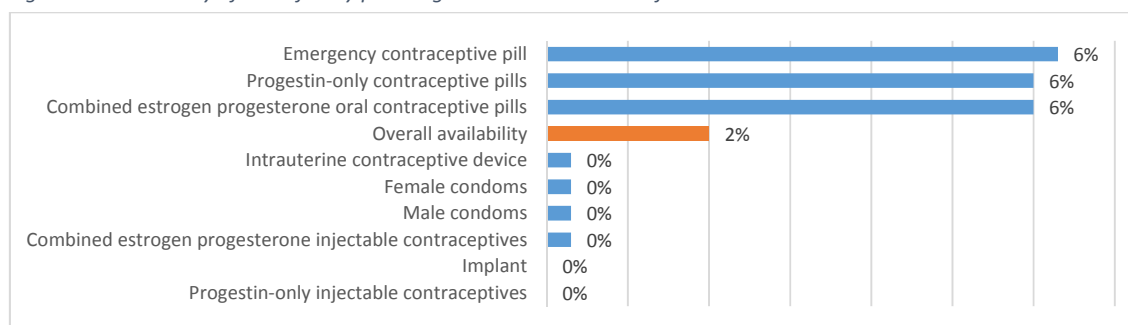
National FP guidelines were available in 5 of the 18 facilities (28%), with FP check-lists and job aids available in 3 facilities (17%). Staff trained in FP during the preceding 2 years were available in 5 facilities (28%), whilst staff in 2 facilities (11%) had received training in adolescent sexual and reproductive health during the past 2 years.

#### Box 3: FP availability and readiness

The small number of public facilities offering FP services (18 for the entire country), the limited number of contraceptive methods provided, and the low readiness score of 36% for the available services, suggest that reliable FP services through the public sector are virtually non-existent in Libya. Data from 2007 indicates that the unmet need for family planning is relatively low, whilst the level of contraceptive use is reasonably high, although later data seems to suggest that these rates are changing. The demand for FP services in Libya appears to be met primarily through the private sector.

Data was collected on the availability of medicines, including those used for FP, from 318 PHC facilities. The overall availability of these medicines for FP across these PHC facilities was 2%, with emergency, progestin-only and combined estrogen-progesterone contraceptive pills being available in 6% of PHC facilities. IUDs and male and female condoms were available in less than 1% of facilities.

Figure 49: Availability of basic family planning medicines in 318 PHC facilities



#### 4.5 Infertility treatment

Part of RMNC, infertility treatment in Libya is provided through both public and private facilities. In Libya, there are five active fertility treatment centers located in Albayda, Sebha, Misrata, Ain Zara and Azzintan. The facility in Benghazi was closed at time of survey. All of the facilities are staffed primarily with OB/GYN specialists and consultant urologists for male infertility, although the facility in Azzintan also employs six GPs. In addition to infertility treatment, the facilities in Sebha and Azzintan offer ANC services to their patients, and in Sebha, fully equipped facilities for normal vaginal deliveries are also available. All facilities have laboratories available.

#### 4.6 Immunization

Libya's immunization coverage rates have been consistently high, with coverage for all antigens estimated and measured to be 97% or higher. This is evidenced by Libya's success in the control of vaccine-preventable diseases, as the country has been declared polio-free since 1991, while no cases of tetanus have been recorded since 1993. Libya is currently in the early stage of measles eradication, although some transmission still occurs within the country, with 32 cases of measles reported in 2016 (19). Some reports dating from 2014 to 2016 indicate that the coverage rate for measles in children <5 lies around 70-75%, but the reliability of these data sources is unclear.

Mandatory vaccination for all antigens in the immunization schedule was implemented in Libya in 1972. The current immunization schedule for Libya is outlined in Box 4 (19). In 2014, new vaccines were introduced to the national vaccination program: human papillomavirus vaccine and injectable polio vaccine, which was added to the pentavalent vaccine previously in use (20).

The zero-dose vaccinations (BCG, OPV and HepB) are provided at birth in the hospital.

The remaining vaccines in the schedule are provided through PHC facilities.

*Box 4: Immunization schedule for Libya*

Antigen	Description	Schedule
BCG	Bacille Calmette-Guérin vaccine	birth;
DTaPHibHepIPV	Hexavalent diphtheria, tetanus toxoid with acellular pertussis, Hib, hepatitis B and IPV vaccine	2, 4, 6 months;
DTaPHibIPV	Diphtheria and tetanus toxoid with acellular pertussis, Hib and IPV vaccine	18 months;
HepB	Hepatitis B vaccine	birth;
HPV	Human Papillomavirus vaccine	15 years;
Influenza	Influenza vaccine	>50 years;
MenACWY-135 conj	Meningococcal ACWY-135 conjugate vaccine	9, 12 months; 2 years;
MMR	Measles mumps and rubella vaccine	12, 18 months;
OPV	Oral polio vaccine	birth; 9 months; 6,15 years;
Pneumo conj	Pneumococcal conjugate vaccine	2, 4, 12 months;
Rotavirus	Rotavirus vaccine	2, 4, 6 months;
Td	Tetanus and diphtheria toxoid for older children / adults	6, 15 years;

To ensure complete vaccination coverage, when children enter school at age 6, they must provide proof that they are fully immunized. At the age of 12, upon completion of primary school, a second check of

immunization status is done by the school health services. To ensure that all vaccines are of optimal quality upon administration, MoH closely monitors the cold chain, and no vaccination is allowed to take place in the private sector.

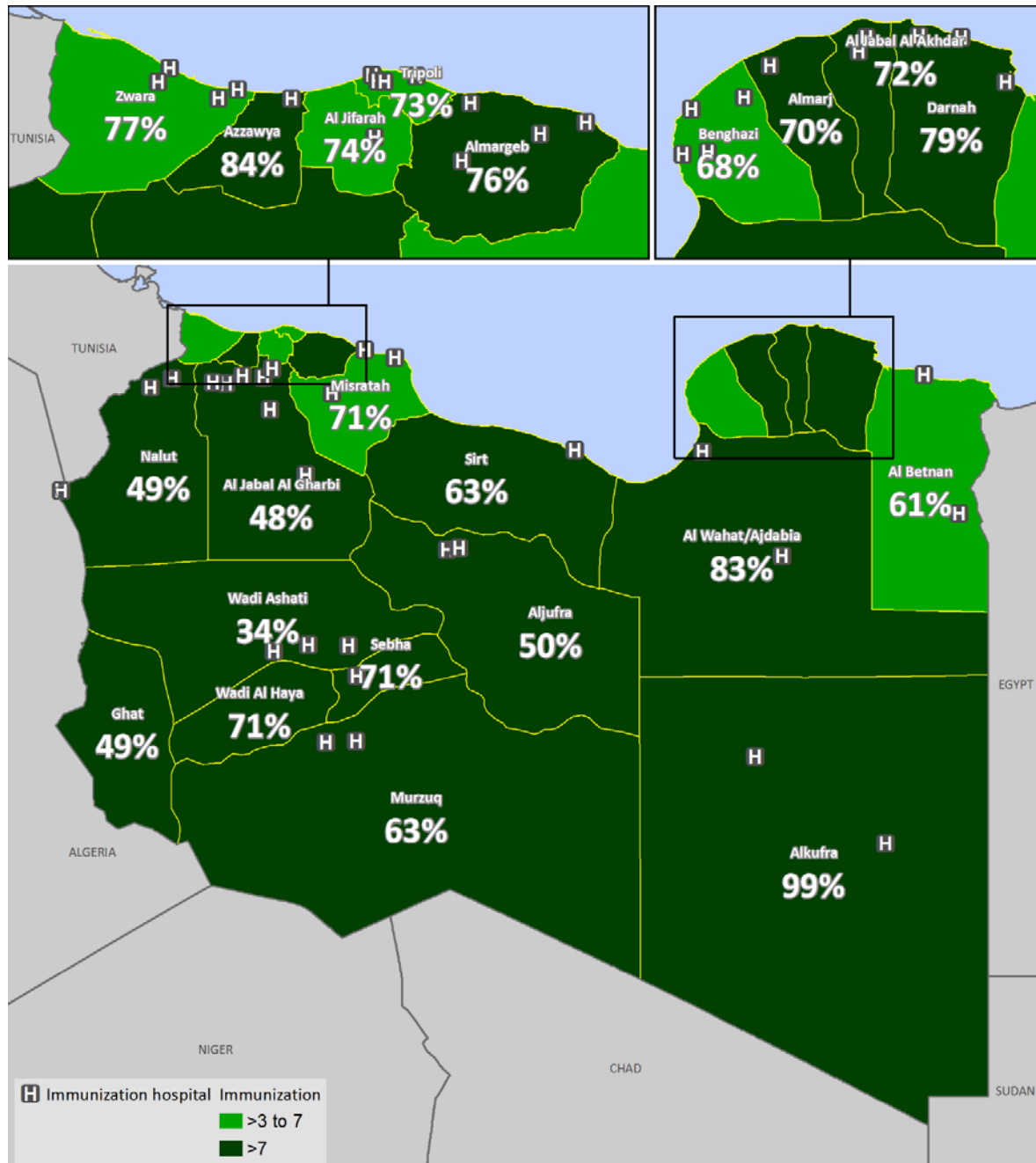
#### 4.6.1 Availability and readiness

A total of 519 (45.1%) health facilities in Libya report that they should be offering immunization services. This includes 467 PHC facilities and the 52 hospitals that offer delivery services. In the hospitals, only zero-dose vaccinations are administered at birth (BCG, OPV0, and HepB), while the remainder of the vaccination schedule outlined in Box 4 is provided through the PHC facilities. At time of survey, 443 PHC facilities (95% of facilities with the potential to provide services) reported that they had functioning immunization services.

Table 33: Availability of vaccines in PHC facilities offering immunization, by type and district

	N (%) of PHC facilities offering immunization	N (%) with measles vaccine in stock	N (%) with DPT-Hib-HepB vaccine in stock	N (%) with OPV vaccine in stock	N (%) with BCG vaccine in stock	N (%) with rotavirus vaccine in stock	N (%) with pneumococcal vaccine in stock
<i>Al Wahat/Ajdabia</i>	21 (57%)	15 (71%)	19 (90%)	19 (90%)	9 (43%)	17 (81%)	15 (71%)
<i>Alkufra</i>	6 (33%)	6 (100%)	6 (100%)	5 (83%)	6 (100%)	6 (100%)	6 (100%)
<i>Benghazi</i>	28 (74%)	18 (64%)	24 (86%)	25 (89%)	12 (43%)	26 (93%)	23 (82%)
<i>Al Betnan</i>	8 (27%)	4 (50%)	4 (50%)	8 (100%)	4 (50%)	4 (50%)	4 (50%)
<i>Al Jabal Al Akhdar</i>	24 (40%)	7 (33%)	16 (76%)	15 (71%)	5 (24%)	11 (52%)	13 (62%)
<i>Darnah</i>	11 (39%)	11 (100%)	11 (100%)	11 (100%)	10 (91%)	11 (100%)	11 (100%)
<i>Almarj</i>	19 (66%)	14 (74%)	14 (74%)	13 (68%)	7 (37%)	16 (84%)	16 (84%)
<i>Sirt</i>	15 (75%)	5 (33%)	5 (33%)	6 (40%)	3 (20%)	5 (33%)	5 (33%)
<i>Aljufra</i>	5 (38%)	4 (80%)	5 (100%)	5 (100%)	5 (100%)	5 (100%)	5 (100%)
<i>Misratah</i>	32 (48%)	19 (63%)	14 (47%)	24 (80%)	3 (10%)	23 (77%)	19 (63%)
<i>Almargeb</i>	46 (42%)	24 (52%)	43 (93%)	43 (93%)	8 (17%)	42 (91%)	40 (87%)
<i>Al Jifarah</i>	18 (29%)	9 (50%)	11 (61%)	14 (78%)	10 (56%)	12 (67%)	9 (50%)
<i>Tripoli</i>	55 (48%)	23 (42%)	36 (65%)	48 (87%)	8 (15%)	17 (31%)	40 (73%)
<i>Azzawya</i>	31 (39%)	23 (74%)	29 (94%)	30 (97%)	8 (26%)	27 (87%)	27 (87%)
<i>Zwara</i>	13 (22%)	9 (75%)	11 (92%)	11 (92%)	7 (58%)	11 (92%)	11 (92%)
<i>Al Jabal Al Gharbi</i>	41 (35%)	35 (85%)	37 (90%)	39 (95%)	21 (51%)	37 (90%)	35 (85%)
<i>Nalut</i>	20 (65%)	11 (55%)	14 (70%)	14 (70%)	11 (55%)	16 (80%)	16 (80%)
<i>Wadi Ashati</i>	6 (40%)	4 (80%)	5 (100%)	5 (100%)	4 (80%)	5 (100%)	5 (100%)
<i>Sebha</i>	13 (59%)	4 (31%)	13 (100%)	13 (100%)	2 (15%)	13 (100%)	13 (100%)
<i>Wadi Al Haya</i>	19 (76%)	14 (74%)	18 (95%)	19 (100%)	18 (95%)	18 (95%)	17 (89%)
<i>Murzuq</i>	30 (34%)	23 (77%)	26 (87%)	26 (87%)	20 (67%)	27 (90%)	27 (90%)
<i>Ghat</i>	6 (67%)	4 (80%)	4 (80%)	4 (80%)	3 (60%)	4 (80%)	4 (80%)
<b>Total</b>	<b>467 (44%)</b>	<b>286 (62%)</b>	<b>365 (80%)</b>	<b>397 (86%)</b>	<b>184 (40%)</b>	<b>353 (77%)</b>	<b>361 (79%)</b>

Figure 50: Map of availability\* and readiness (in numbers) by district, and hospitals offering immunizations



\* Availability is defined as the ratio of facilities providing a selected service to 100,000 population; service-specific readiness is included in the map as a written percentage; only service-specific referral facilities are mapped

All districts have at least 5 facilities offering immunization services, suggesting that accessibility to these services is good. Most centers are fixed sites, with outreach services for vaccination of infants offered in 57 facilities (12%) and for adolescents in 90 facilities (19%). Stocks of selected vaccines in PHC facilities offering immunization services are relatively good (Table 33). Low availability of the BCG vaccine in PHC facilities can be attributed to the fact that this vaccine is offered in the hospitals at time of birth and does

not require repeated doses, therefore the need for this vaccine is low at PHC level, with 240 facilities (51%) reporting that they did not offer BCG vaccination at all. Stocks of measles vaccine are relatively low at 62%. PHC facilities in the districts of Al Betnan and Sirt were low on stocks of 5 or more vaccines.

The overall readiness index for immunization services is calculated based on the availability of tracer items in 4 areas: (1) functional equipment, (2) vaccines, (3) guidelines and (4) trainings on immunization. The overall readiness of the PHC facilities for immunization was 69%, suggesting that there is a continued need for improvement of these services. The low availability of guidelines for immunization was a key contributing factor to the lower readiness score. Districts that have overall readiness scores below 50% include Aljufra, Al Jabal Al Gharbi, Nalut, Wadi Ashati, and Ghat. An area of concern is that the 5 facilities in Aljufra, 6 facilities in Wadi Ashati and 41 facilities in Al Jabal Al Gharbi reportedly offer immunization services, but have little to no staff trained in immunization available.

Breaking the data down at an even smaller geographical scale indicates that immunization is available in 97% of the municipalities, and readiness scores are reasonable, although there still remains a need for further improvement. No immunization is available in the municipalities of Espeaa, Rigdaleen and Sidi Assayeh. The municipality of Arrajban has only one facility offering immunization, with a worryingly low readiness score of 25%.

#### 4.6.2 Breakdown of readiness indicators

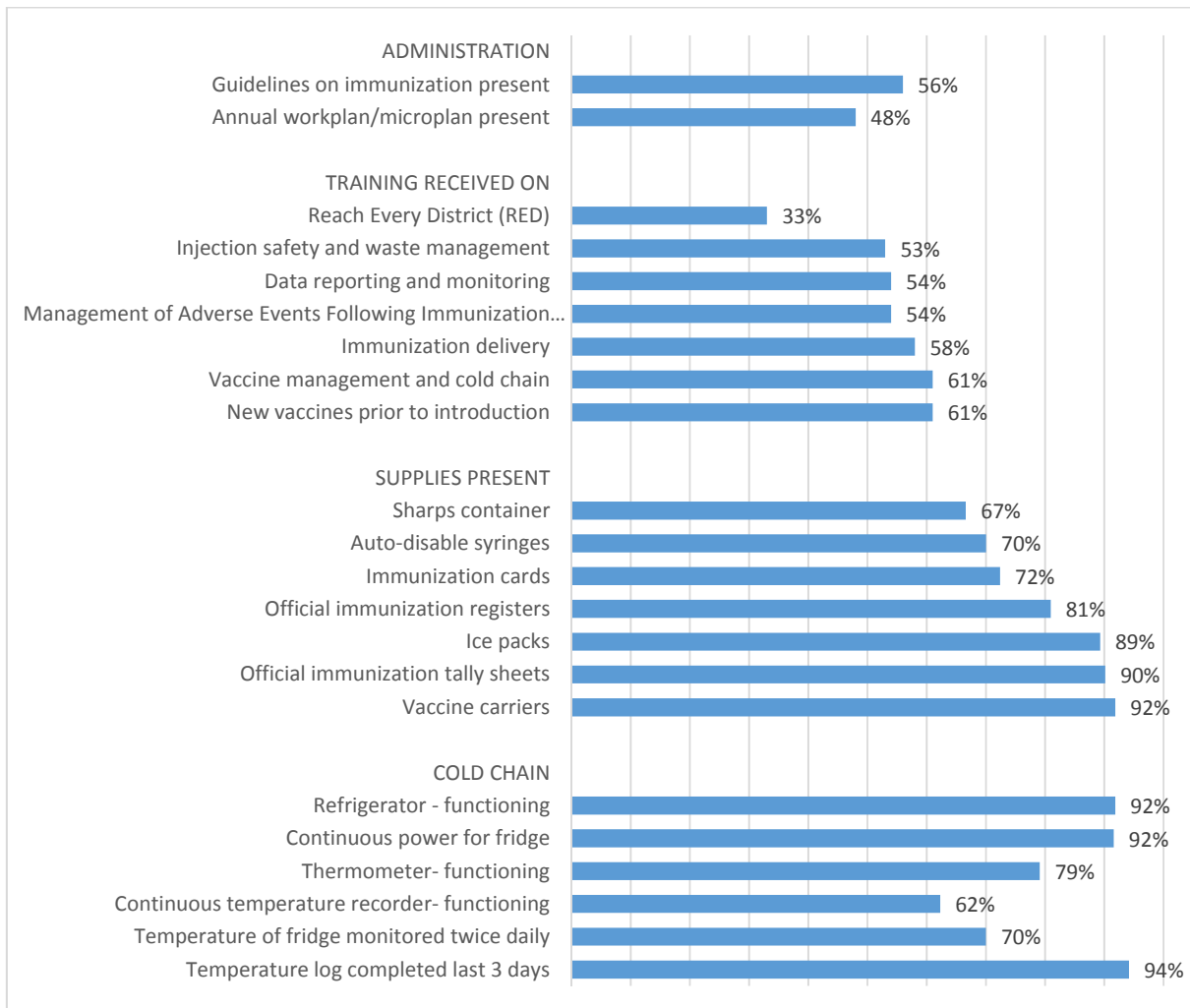
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Table 34: PHC facilities readiness indices for immunization services by district

	N of PHCs offering immunization	Guidelines child immunization	Trained staff in immunization	Equipment scores	Medicines and materials scores	Overall readiness
<i>Al Wahat/Ajdabia</i>	21	81%	91%	85%	75%	83%
<i>Alkufra</i>	6	100%	100%	100%	97%	99%
<i>Benghazi</i>	28	64%	50%	82%	76%	68%
<i>Al Betnan</i>	8	75%	50%	63%	58%	61%
<i>Al Jabal Al Akhdar</i>	24	71%	79%	84%	53%	72%
<i>Darnah</i>	11	64%	64%	89%	98%	79%
<i>Almarj</i>	19	58%	79%	74%	70%	70%
<i>Sirt</i>	15	67%	80%	73%	32%	63%
<i>Aljufra</i>	5	40%	0%	63%	97%	50%
<i>Misratah</i>	32	38%	94%	94%	57%	71%
<i>Almargeb</i>	46	74%	63%	95%	72%	76%
<i>Al Jifarah</i>	18	83%	67%	85%	60%	74%
<i>Tripoli</i>	55	51%	98%	93%	52%	73%
<i>Azzawya</i>	31	90%	74%	93%	77%	84%
<i>Zwara</i>	13	77%	69%	78%	83%	77%
<i>Al Jabal Al Gharbi</i>	41	29%	7%	73%	83%	48%
<i>Nalut</i>	20	20%	20%	88%	68%	49%
<i>Wadi Ashati</i>	6	0%	0%	43%	93%	34%
<i>Sebha</i>	13	54%	69%	89%	74%	71%
<i>Wadi Al Haya</i>	19	32%	95%	67%	91%	71%
<i>Murzuq</i>	30	33%	57%	78%	83%	63%
<i>Ghat</i>	6	0%	67%	52%	77%	49%
<b>Total</b>	<b>467</b>	<b>56%</b>	<b>66%</b>	<b>84%</b>	<b>71%</b>	<b>69%</b>

Around half of the facilities offering immunization have guidelines on immunization available onsite (56%) and have prepared an annual work plan/micro plan (48%). Staff in PHC facilities offering immunization have received a variety of formal and on-site trainings (through supportive supervision), ranging from “Reach Every District” planning (33%) to vaccine and cold chain management (61%). Significant needs in training remain, with 58% of the PHC facilities offering immunization reporting the presence of staff who received training in immunization delivery.

Figure 51: Immunization - overview of administration, training, supplies and cold chain availability





Essential supplies for vaccination present in the PHC facilities offering immunization range from a 92% availability of vaccine carriers to 67% reporting the availability of sharps containers. Official registers are generally available in 81% of facilities. In reference to the cold chain, 92% of facilities report having a functional electric fridge, although 2 facilities have solar powered fridges. Monitoring of the cold chain is not consistently done, with 70% of facilities following protocol and monitoring the temperature of vaccination fridges twice a day, yet 94% of temperature logs had at least one record entered in the preceding 3 days.

*Box 5: Immunization availability and readiness*

The availability of immunization services is good across the country, as reflected by the numbers of facilities offering services, and the high coverage rates reported. However, the continued presence of measles cases suggests that significant gaps in coverage do exist. There is clear room for improvement in quality of services, with facilities located in the districts of Aljufra, Al Jabal Al Gharbi, Nalut, Wadi Ashati, and Ghat requiring specific attention in terms of staff training and availability of guidelines on immunization. At the municipality level no immunization is available in Espeaa, Rigdaleen and Sidi Assayeh, and virtually non-existent in Arrajban.

#### 4.7 Child health services

Libya has been making good progress in improving child health, as evidenced by the estimated attainment of MDG4, which set out to reduce the under-five mortality rate by two-thirds between 1990 and 2015. The current U5MR in Libya is estimated to be 13 deaths per 1000 live births, with over half of these deaths occurring during the neonatal period (the first 28 days of life). Malnutrition, diarrhea, and pneumonia generally contribute to a major proportion of deaths in children under 5. The most recent formally accepted figures on the prevalence of these health conditions dates from 2007. A more recent report on a household survey done in 2014 has not received universal endorsement given that the summary of results is at times inconsistent with the results presented. Survey results indicate that levels of malnutrition measured were a 30% prevalence for stunting, 9% wasting, and approximately 25% of children under 5 were reportedly overweight (15). These figures are not dramatically different from UN estimates made for 2013, where prevalence of various forms of malnutrition in children under 5 years were reported as 21% stunting, 6.5% wasting, 3% severe wasting, and 22.4% overweight (13). The MoH reported a prevalence for low birth weight of 4% for 2013. Prevalence of diarrhea in children under 5 during the preceding 2 weeks was 14%, with similarly reported prevalence of 28% for cough, and 25% for fever. Of the 8% of children with suspected pneumonia (based on analysis of observed symptoms), 83% saw a doctor either in a public or a private health facility.

Child health services in Libya are provided through both PHC and hospital facilities, with General Practitioners (GPs) in the PHC facilities providing both preventive and curative care, and hospital facilities providing treatment by pediatric specialists for more complex health issues. At PHC level, preventive and curative services for children under 5 years old can include 8 key services: (1) growth monitoring and (2) the diagnosis and treatment of child malnutrition, (3) vitamin A and (4) iron supplementation, the provision of (5) ORS and (6) zinc to children with diarrhea, (7) the treatment of pneumonia, and (8) administration of amoxicillin. Preventive services also include immunization, but this is described in detail in Section 4.5.

The primary point of contact for child health services are the PHC facilities and hospitals, while hospitals also provide services to children requiring specialist care. As a result, data in this section primarily focuses on the availability and readiness of preventive and curative care services for children under 5 years of age (child health care) in PHC facilities, as detailed information for these services at hospital level was not collected. A summary of the availability of hospitalization facilities for children <5 is provided at the end of this section to give some insight into the referral capacity for this target group.

#### 4.7.1 Availability and readiness

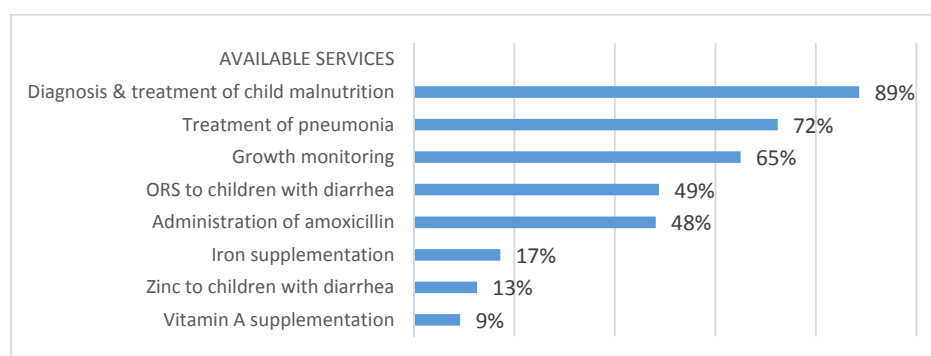
Of the 386 facilities that offer child health services, 327 (85%) are PHCs and 59 (15%) are hospitals. The district of Ghat does not have any child health services available (Table 35), with the districts of Sirt, Wadi al Haya, and Ghat lacking a referral hospital for complicated cases. At municipality level (Table 40), 32 municipalities have no PHC facilities providing child health care. When service availability for child health is defined as the availability of at least one of the 8 key services outlined above, analysis indicates that only 64 municipalities have child health services available, with an average availability of 3 out of the 8 services. With 36 municipalities not offering any of the 8 key services, this results in an inequitable distribution of child health care. At the other end of the scale, the full package of 8 key services is available at PHC facilities in 13 municipalities.

Table 35: Availability of child health services by facility type and district

District	PHC		Hospitals		Total		
	N	%	N	%	N	%	Total facilities
Al Wahat/Ajdabia	19	51%	2	100%	21	54%	39
Alkufra	1	6%	2	100%	3	15%	20
Benghazi	18	47%	4	67%	22	50%	44
Al Betnan	7	23%	2	67%	9	27%	33
Al Jabal Al Akhdar	19	32%	3	75%	22	34%	64
Darnah	13	46%	2	67%	15	48%	31
Almarj	14	48%	3	75%	17	52%	33
Sirt	4	20%	0	0%	4	19%	21
Aljufra	1	8%	2	100%	3	20%	15
Misratah	23	34%	3	60%	26	36%	72
Almargeb	31	28%	5	83%	36	31%	115
Al Jifarah	6	10%	1	100%	7	11%	63
Tripoli	76	66%	5	36%	81	63%	129
Azzawya	51	65%	2	100%	53	65%	81
Zwara	12	20%	4	80%	16	25%	64
Al Jabal Al Gharbi	13	11%	8	100%	21	17%	125
Nalut	1	3%	5	100%	6	17%	36
Wadi Ashati	1	7%	3	100%	4	22%	18
Sebha	12	55%	1	50%	13	54%	24
Wadi Al Haya	2	8%	0	0%	2	8%	25
Murzuq	3	3%	2	100%	5	6%	89
Ghat	0	0%	0	0%	0	0%	9
<b>Total</b>	<b>327</b>	<b>31%</b>	<b>59</b>	<b>74%</b>	<b>386</b>	<b>34%</b>	<b>1150</b>

In the 326 PHCs for which data was available, diagnosis & treatment of child malnutrition was the most common service provided, at 89% of facilities (Figure 52). This was followed by treatment of pneumonia (72%) and growth monitoring (65%). Vitamin A and iron supplementation, as well as the provision of zinc to children with diarrhea (9%, 17%, and 13% respectively) were unavailable in the vast majority of PHC facilities.

Figure 52: Availability of specific services for preventive and curative care for children <5

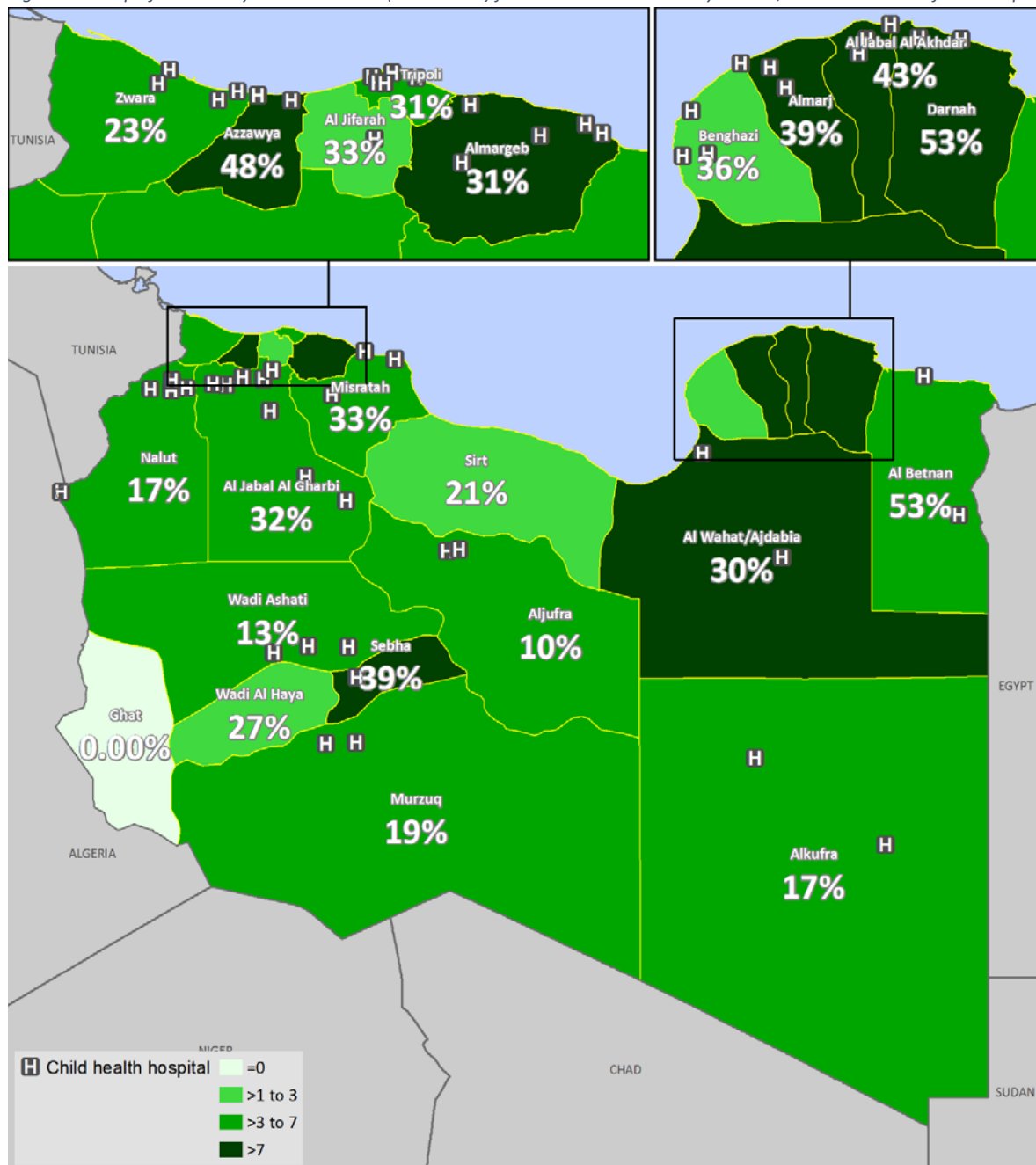


The overall readiness index for immunization services is calculated based on the availability of tracer items in five domains: (1) functional equipment, (2) medicines, (3) diagnostics, (4) guidelines, and (5) staff having received specific training in health care for children <5. The overall readiness score for child preventive and curative services was calculated only for the PHC facilities, as they serve as the first point of contact. The overall readiness score for facilities that provide child health services is 35%, with only two districts (Al Betnan and Darnah) scoring above 53% and only 8 municipalities with a readiness score higher than 40%. The major weakness lies in the lack of staff who have received training in IMCI and growth monitoring (only 6% overall) followed by the low availability of guidelines (14%) and the shortage of essential medicines, with an overall availability of only 17%.

Table 36: PHC readiness scores for child health services by domain and district

District	N of PHCs offering service	Trained staff scores	Guidelines scores	Equipment scores	Diagnosis scores	Medicines scores	Overall readiness scores
Al Wahat/Ajdabia	19	0%	3%	46%	75%	24%	30%
Alkufra	1	0%	0%	83%	0%	0%	17%
Benghazi	18	0%	3%	66%	78%	33%	36%
Al Betnan	7	21%	57%	55%	33%	100%	53%
Al Jabal Al Akhdar	19	5%	8%	67%	59%	74%	43%
Darnah	13	0%	8%	58%	100%	100%	53%
Almarj	14	0%	0%	58%	67%	71%	39%
Sirt	4	0%	13%	67%	25%	0%	21%
Aljufra	1	0%	0%	50%	0%	0%	10%
Misratah	23	2%	7%	65%	76%	17%	33%
Almargeb	31	5%	8%	76%	65%	2%	31%
Al Jifarah	6	0%	33%	56%	50%	24%	33%
Tripoli	76	4%	4%	68%	72%	8%	31%
Azzawya	51	21%	55%	72%	85%	10%	48%
Zwara	12	0%	13%	63%	38%	3%	23%
Al Jabal Al Gharbi	13	0%	0%	50%	75%	33%	32%
Nalut	1	0%	0%	83%	0%	0%	17%
Wadi Ashati	1	0%	0%	67%	0%	0%	13%
Sebha	12	13%	4%	63%	100%	14%	39%
Wadi Al Haya	2	0%	0%	58%	75%	0%	27%
Murzuq	3	0%	0%	72%	25%	0%	19%
Ghat	0						
<b>Total</b>	<b>327</b>	<b>6%</b>	<b>14%</b>	<b>65%</b>	<b>73%</b>	<b>17%</b>	<b>35%</b>

Figure 53: Map of availability\* and readiness (in numbers) for child health services by district, and associated referral hospitals



\* Availability is defined as the ratio of facilities providing a selected service to 100,000 population; service-specific readiness is included in the map as a written percentage; only service-specific referral facilities are mapped

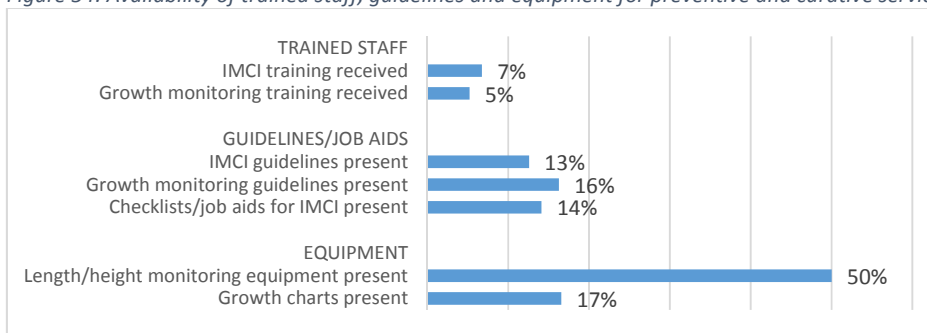
#### 4.7.2 Breakdown of readiness indicators

The proportions reported in this section may not necessarily correspond to those reported for the readiness scores in the previous section. This is because the number of respondents are often different, given that the data used here may come from a different subset of health facilities or a different section of the survey, or may not reflect all the indicators used to calculate the index scores. The figures in this

section can be used as a reference point to assess the validity of the readiness scores, and also provide insight into the individual items used for calculating the readiness indices.

The data summarized in Figure 54 indicates that the proportion of health facilities providing child health services that have staff trained in the Integrated Management of Childhood Illnesses (IMCI) is only 7%, while a meagre 5% of facilities have staff who received training in growth monitoring. IMCI and growth monitoring guidelines were reportedly present in 13% and 16% of facilities, respectively, while only 14% had checklists/job aids for IMCI available. Notwithstanding the fact that 65% of the facilities report providing growth monitoring services, only 50% have suitable equipment available, coupled to only 17% having growth charts present. This suggests that the overall provision of growth monitoring services requires further support and improvement.

Figure 54: Availability of trained staff, guidelines and equipment for preventive and curative services for children <5

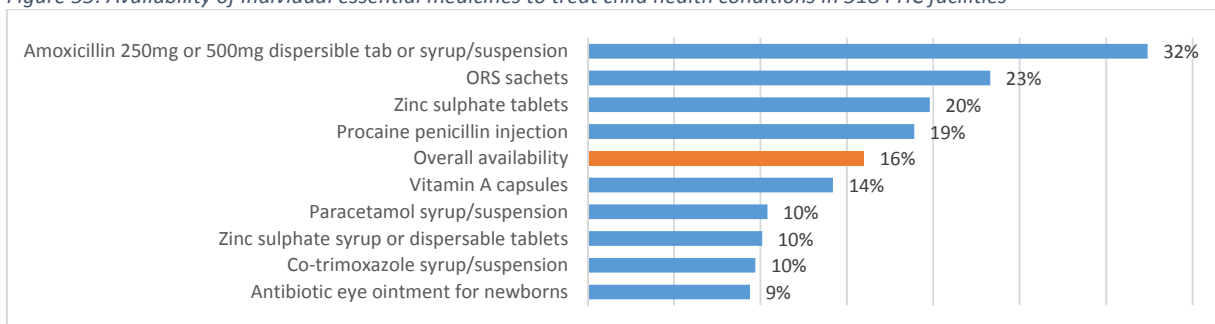


**Box 6: Preventive and curative services for children under 5 in PHCs: availability and readiness**

The availability of preventive and curative services for children <5 in Libya is limited. Over one-third of municipalities cannot provide child health care to their constituents. Where PHC facilities do offer them, the service package is generally limited, focusing primarily on diagnosis and treatment of malnutrition, and treatment of pneumonia. Few staff have been trained on growth monitoring and IMCI, and the availability of tools such as functional equipment to measure height and weight, and growth monitoring charts is limited.

Data on the availability of essential medicines was collected from 318 PHC facilities. The overall availability of medicines to treat common childhood conditions was 16%, with amoxicillin dispersible tabs/suspension being the most commonly available at 32%, whereas co-trimoxazole syrup was available in only 10% of facilities, and antibiotic eye ointment for newborns in a mere 9% of clinics.

Figure 55: Availability of individual essential medicines to treat child health conditions in 318 PHC facilities



### 4.7.3 Availability of hospitalization facilities for young children

For children requiring hospitalization, there are two pediatric specialist hospitals available, one in Tripoli and the other in Benghazi. A total of 7 hospitals reported having triage protocols specifically for children <5 in place in the emergency wards. The 46 hospitals that report having pediatric wards are good for 1421 pediatric beds. There is a general indication that most hospitals have combined pediatric wards for children both over and under 5 years of age, while the remaining pediatric units tend to be medical pediatric units.

Dedicated pediatric ICU facilities are available in 7 hospitals, while 19 hospitals provide ICU care to children and adults together in a single ward.

Table 37: Summary of pediatric and pediatric ICU bed capacity in hospitals

	<i>N hospitals</i>	<i>Total beds</i>	<i>Average N of beds</i>	<i>Range</i>
<b>GENERAL PEDIATRIC WARDS</b>				
<i>Combined Pediatric Ward Including Children &gt; 5 Years Of Age</i>	22	422	19	6-41
<i>Medical pediatric unit</i>	17	360	23	4-50
<i>Surgical or combined medical/surgical pediatric unit</i>	3	68	23	15-34
<i>Unknown/other pediatric wards in same hospitals</i>	4+	571	-	-
<b>TOTAL</b>	<b>42</b>	<b>1421</b>	<b>31</b>	<b>4-226</b>
<b>PEDIATRIC ICU WARDS</b>				
<i>Pediatric Intensive Care Unit</i>	7	-	-	-
<i>Combined adult/child ICU</i>	19	-	-	-

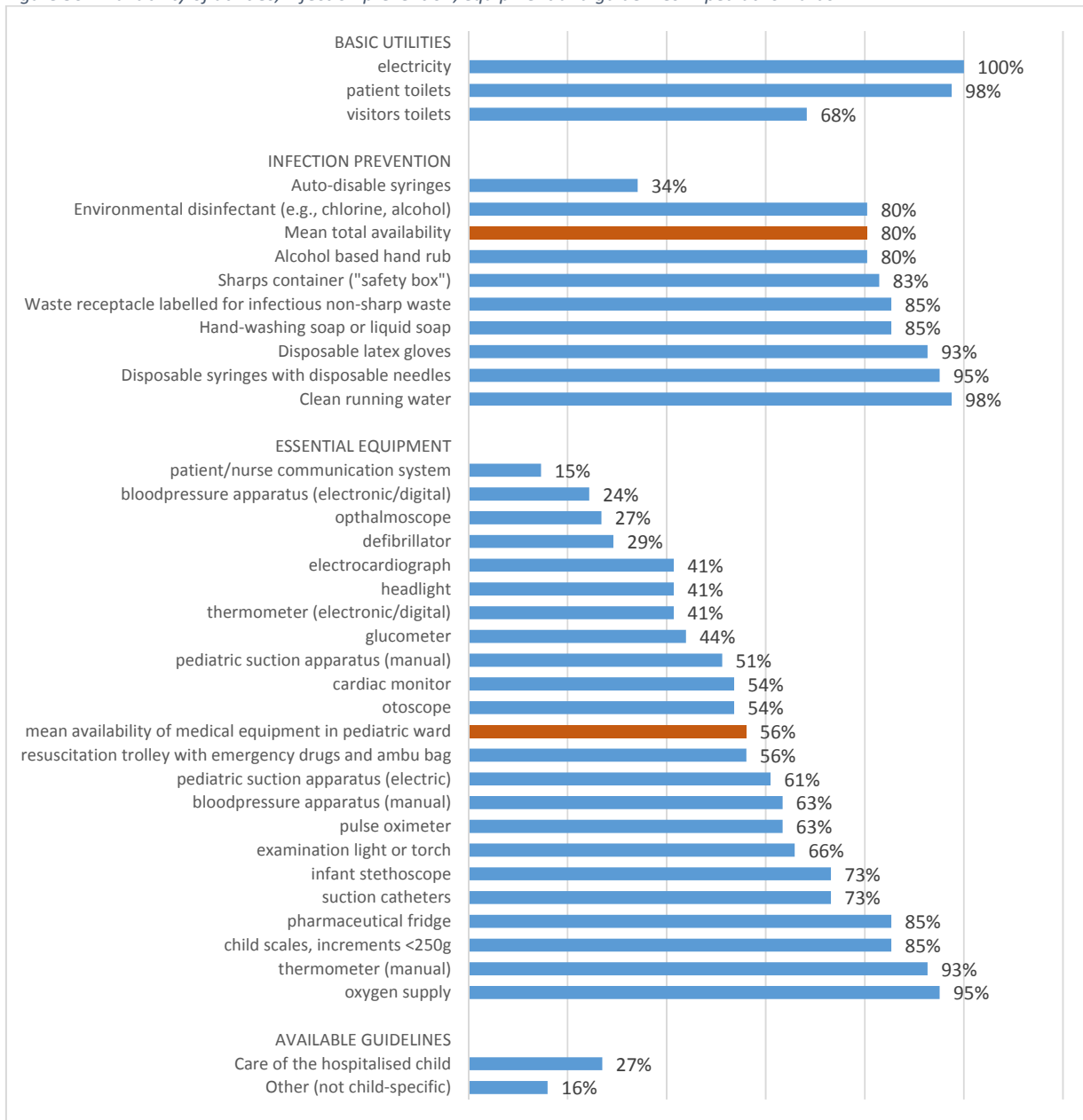
#### 4.7.3.1 Breakdown of readiness indicators for pediatric wards

All 41 pediatric wards surveyed had electricity at time of visit, while 98% had patient toilets, and 68% had visitors' toilets. The mean availability of infection prevention materials was 80%, with clean running water, and disposable needles and syringes nearly universally available, while auto-disable syringes were commonly used in only 34% of the wards.

The mean availability of essential equipment in a pediatric ward was 56%, suggesting that a review of materials may be beneficial. Equipment in short supply included patient/nurse communication systems (15%), electric blood pressure cuffs (24%), and ophthalmoscopes (27%) and defibrillators (29%). At the other end of the spectrum, manual thermometers (98%) and oxygen (95%) were available in nearly all wards.

One quality indicator for pediatric hospital services is the availability of guidelines, and 27% of the hospitals reported having standard patient care guidelines for care of the sick child available in the pediatric wards, while 16% of the hospitals had other standard patient care guidelines (not specific to the sick child) available in the pediatric wards. It is worth highlighting that 17 hospitals report that they regularly conduct death reviews that include pediatric patients.

Figure 56: Availability of utilities, infection prevention, equipment and guidelines in pediatric wards



#### 4.8 Overview of RMNCH services in PHC facilities, by municipality

A breakdown of relevant availability and readiness data for PHC-level RMNCH services at the level of municipalities can assist local decision-makers in identifying needs and planning for the improved availability and quality of key services. This section provides detailed data for all municipalities except Alshweirf, as this municipality did not have an active PHC facility at the time of survey. The remaining 100 municipalities each have at least one active PHC facility.

#### 4.8.1 Availability and readiness of RMNCH services

Table 38 summarizes the availability and readiness of five key RMNCH services that could be provided through PHC facilities. Cells are marked pink when no facility providing a specific service is available at municipality level. Readiness scores are color-coded, with red shades indicating underperformance, yellow shades considered “of concern”, and greener shades indicating higher readiness scores.

About half (49%) of the municipalities do not have facilities providing ANC services, and among those who do, readiness scores indicate a low capacity to deliver effective services. There are 11 municipalities with only one facility offering ANC, and with readiness scores at or below 40%. Of these, Al Shate al Garbe and Khalege Alsedra municipalities both have readiness scores of 0% for ANC, with scores for Zamzam and Al Shate Al Sharge at 20%. This essentially indicates that ANC services are unavailable in these municipalities.

Of the 12 municipalities offering delivery services, only Aujala has a readiness score of 60%. The other readiness scores all fall below 40%, with three municipalities (Albawanees, Daraj and Marada) scoring as low as 6%, thus well below the acceptable level of 80%. Immunization is available in 97% of the municipalities, and readiness scores are generally reasonable, although the municipality of Arrajban has only one facility offering immunization with a worryingly low readiness score of 25%. Child Health services are unavailable in the PHCs of 32% of the municipalities. In the 68 municipalities where these services are available, only 8 have a readiness score higher than 40%, suggesting that the availability of preventive and curative services for children <5 in Libya requires immediate attention. This is for a large part due to the unavailability of suitably trained staff in most municipalities.

The low availability of delivery services in PHC facilities is expected, as most deliveries happen in hospitals, but the low availability of FP services in both PHC and hospital facilities represents a significant gap in the availability of these services at both a local and national level. Three municipalities, Sidi Assayeh, Rigidaleen and Espeaa do not provide any of the five RMNCH services through their PHC facilities.

Table 38: Availability and readiness of essential RMNCH services in PHC facilities by municipality

Municipality	Total No of PHC facilities	ANC		Delivery		Family Planning		Immunization		Child Health		N of the 5 RMNCH services unavailable
		N (%) of facilities offering services	Readiness score	N (%) of facilities offering services	Readiness score	N (%) of facilities offering services	Readiness score	N (%) of facilities offering services	Readiness score	N (%) of facilities offering services	Readiness score	
Abustiem	15	8 (53%)	39%	0 (0%)		0 (0%)		9 (60%)	71%	13 (87%)	39%	2
Ain Zara	12	9 (75%)	44%	0 (0%)		1 (8%)	25%	7 (58%)	80%	11 (92%)	36%	1
Al Ajaylat	21	1 (5%)	40%	0 (0%)		2 (10%)	31%	2 (10%)	98%	3 (14%)	20%	1
Al Aziyia	14	0 (0%)		0 (0%)		0 (0%)		5 (36%)	74%	1 (7%)	17%	3
Al Galaa	4	0 (0%)		0 (0%)		0 (0%)		1 (25%)	67%	0 (0%)		4
Al Jagboub	1	0 (0%)		0 (0%)		0 (0%)		1 (100%)	100%	0 (0%)		4
Al Maya	6	0 (0%)		0 (0%)		0 (0%)		1 (17%)	94%	0 (0%)		4
Al Shate Al Garbe	20	1 (5%)	0%	0 (0%)		0 (0%)		9 (45%)	29%	0 (0%)		3
Al Shate Al Sharge	15	1 (7%)	20%	0 (0%)		0 (0%)		6 (40%)	34%	1 (7%)	13%	2
Al Swani	11	0 (0%)		0 (0%)		0 (0%)		3 (27%)	74%	1 (9%)	17%	3
Alabyar	12	0 (0%)		0 (0%)		0 (0%)		6 (50%)	71%	3 (25%)	11%	3
Alasabaa	13	0 (0%)		0 (0%)		0 (0%)		3 (23%)	39%	1 (8%)	7%	3
Albawanees	4	0 (0%)		1 (25%)	6%	0 (0%)		3 (75%)	82%	1 (25%)	17%	2
Albayda	21	10 (48%)	41%	2 (10%)	13%	0 (0%)		10 (48%)	90%	12 (57%)	41%	1
Albrayga	5	2 (40%)	20%	0 (0%)		0 (0%)		4 (80%)	79%	5 (100%)	24%	2
Aldawoon	1	0 (0%)		0 (0%)		0 (0%)		1 (100%)	42%	0 (0%)		4
Algatroun	3	0 (0%)		0 (0%)		0 (0%)		3 (100%)	92%	0 (0%)		4
Algaygab	3	0 (0%)		0 (0%)		0 (0%)		1 (33%)	72%	0 (0%)		4
Alghrayfa	11	2 (18%)	33%	2 (18%)	36%	0 (0%)		9 (82%)	68%	1 (9%)	30%	1
Algurdha Ashshati	19	0 (0%)		0 (0%)		0 (0%)		5 (26%)	42%	0 (0%)		4
Alharaba	5	0 (0%)		0 (0%)		0 (0%)		2 (67%)	40%	0 (0%)		4
Alhawamid	3	0 (0%)		0 (0%)		0 (0%)		3 (100%)	39%	0 (0%)		4
Aljmail	17	2 (12%)	35%	0 (0%)		0 (0%)		4 (24%)	64%	4 (24%)	26%	2
Aljufra	13	1 (8%)	37%	0 (0%)		0 (0%)		5 (38%)	50%	1 (8%)	10%	2
Alkhums	32	9 (28%)	28%	0 (0%)		1 (3%)	25%	16 (50%)	93%	19 (59%)	30%	1
Alkufra	17	2 (12%)	60%	0 (0%)		1 (6%)	71%	5 (29%)	99%	1 (6%)	17%	1
Almarj	8	3 (38%)	27%	0 (0%)		0 (0%)		4 (50%)	38%	6 (75%)	23%	2
Alqubba	6	0 (0%)		0 (0%)		0 (0%)		1 (17%)	72%	0 (0%)		4
Alsharguiya	11	0 (0%)		0 (0%)		0 (0%)		6 (55%)	91%	1 (9%)	20%	3
Arrajban	3	0 (0%)		0 (0%)		0 (0%)		1 (33%)	25%	1 (33%)	13%	3
Arrayayna	4	0 (0%)		0 (0%)		0 (0%)		1 (25%)	72%	0 (0%)		4



Municipality	Total No of PHC facilities	ANC		Delivery		Family Planning		Immunization		Child Health		N (%) of RMNCH services unavailable
		N (%) of facilities offering services	Readiness score	N (%) of facilities offering services	Readiness score	N (%) of facilities offering services	Readiness score	N (%) of facilities offering services	Readiness score	N (%) of facilities offering services	Readiness score	
Arrhaibat	5	0 (0%)		0 (0%)		0 (0%)		1 (20%)	47%	0 (0%)		4
Ashshgega	3	0 (0%)		0 (0%)		0 (0%)		1 (33%)	38%	0 (0%)		4
Assahel	12	0 (0%)		0 (0%)		0 (0%)		6 (75%)	54%	2 (29%)	39%	3
Aujala	8	1 (13%)	53%	1 (13%)	60%	0 (0%)		3 (38%)	96%	2 (25%)	44%	1
Azzahra	16	1 (6%)	43%	0 (0%)		1 (6%)	75%	4 (25%)	91%	2 (13%)	27%	1
Azzawya	35	15 (44%)	49%	0 (0%)		1 (3%)	38%	14 (41%)	92%	24 (71%)	59%	1
Azzintan	11	0 (0%)		0 (0%)		1 (9%)	25%	7 (64%)	53%	3 (27%)	18%	2
Bani Waleed	17	4 (24%)	36%	0 (0%)		0 (0%)		5 (29%)	66%	5 (29%)	44%	2
Baten Aljabal	6	1 (20%)	27%	0 (0%)		0 (0%)		3 (60%)	86%	2 (40%)	20%	2
Benghazi	25	9 (36%)	46%	0 (0%)		0 (0%)		21 (84%)	70%	17 (68%)	38%	2
Bint Bayya	10	1 (10%)	40%	0 (0%)		0 (0%)		7 (70%)	74%	1 (10%)	23%	2
Bir Alashhab	2	0 (0%)		0 (0%)		0 (0%)		1 (100%)	81%	0 (0%)		4
Daraj	8	1 (13%)	20%	1 (13%)	6%	0 (0%)		3 (38%)	81%	0 (0%)		2
Darnah	14	0 (0%)		1 (7%)	22%	0 (0%)		5 (36%)	66%	9 (64%)	53%	2
Ejdabia	12	0 (0%)		0 (0%)		0 (0%)		8 (67%)	67%	9 (75%)	28%	3
Ejkherra	2	1 (50%)	47%	1 (50%)	13%	0 (0%)		1 (50%)	100%	1 (50%)	25%	1
Emsaed	3	1 (50%)	30%	0 (0%)		1 (50%)	25%	1 (50%)	72%	1 (50%)	77%	1
Espeaa	4	0 (0%)		0 (0%)		0 (0%)		0 (0%)		0 (0%)		5
Garaboli	18	4 (22%)	23%	0 (0%)		2 (11%)	25%	6 (33%)	93%	4 (22%)	37%	1
Gasr Akhyar	11	2 (18%)	40%	0 (0%)		1 (9%)	25%	4 (36%)	92%	4 (36%)	39%	1
Gasr Bin Ghasheer	4	0 (0%)		0 (0%)		0 (0%)		2 (50%)	81%	2 (50%)	22%	3
Gemienis	8	0 (0%)		0 (0%)		0 (0%)		5 (63%)	57%	1 (13%)	7%	3
Ghadamis	1	0 (0%)		0 (0%)		0 (0%)		1 (100%)	100%	0 (0%)		4
Gharb Azzawya	11	5 (45%)	36%	0 (0%)		0 (0%)		6 (55%)	74%	9 (82%)	33%	2
Ghat	9	1 (11%)	40%	1 (11%)	24%	0 (0%)		6 (67%)	49%	0 (0%)		2
Ghiryan	51	2 (4%)	33%	0 (0%)		0 (0%)		14 (27%)	43%	4 (8%)	30%	2
Hai Alandalus	17	11 (65%)	40%	0 (0%)		0 (0%)		9 (53%)	84%	16 (94%)	31%	2
Jadu	7	0 (0%)		0 (0%)		0 (0%)		2 (29%)	45%	0 (0%)		4
Jalu	9	0 (0%)		0 (0%)		0 (0%)		4 (44%)	97%	1 (11%)	13%	3
Janzour	19	7 (37%)	34%	0 (0%)		2 (11%)	38%	9 (47%)	82%	7 (37%)	25%	1
Jardas Alabeed	5	0 (0%)		0 (0%)		0 (0%)		5 (100%)	80%	4 (80%)	32%	3
Kabaw	5	0 (0%)		0 (0%)		0 (0%)		5 (100%)	34%	0 (0%)		4
Khalege Alsedra	8	1 (13%)	0%	1 (13%)	9%	0 (0%)		4 (50%)	80%	0 (0%)		2
Kikka	5	0 (0%)		0 (0%)		0 (0%)		2 (40%)	43%	0 (0%)		4
Labriq	2	0 (0%)		0 (0%)		0 (0%)		1 (50%)	72%	0 (0%)		4
Marada	1	0 (0%)		1 (100%)	6%	0 (0%)		1 (100%)	100%	1 (100%)	38%	2
Misrata	25	3 (12%)	29%	0 (0%)		0 (0%)		13 (52%)	68%	8 (32%)	24%	2
Mizda	3	0 (0%)		0 (0%)		0 (0%)		3 (100%)	49%	1 (33%)	13%	3
Msallata	13	2 (15%)	25%	0 (0%)		0 (0%)		2 (15%)	41%	1 (8%)	20%	2
Murzuq	10	1 (10%)	40%	0 (0%)		0 (0%)		2 (20%)	74%	0 (0%)		3
Nalut	3	0 (0%)		0 (0%)		0 (0%)		3 (100%)	41%	1 (33%)	17%	3
Nesma	5	0 (0%)		0 (0%)		0 (0%)		3 (60%)	53%	1 (20%)	33%	3
Rigdaleen	5	0 (0%)		0 (0%)		0 (0%)		0 (0%)		0 (0%)		5
Sabratha	20	7 (35%)	20%	0 (0%)		0 (0%)		3 (15%)	51%	6 (30%)	11%	2
Sebha	18	8 (44%)	43%	4 (22%)	21%	0 (0%)		10 (56%)	68%	11 (61%)	39%	1
Shahhat	26	0 (0%)		0 (0%)		1 (4%)	25%	6 (23%)	54%	5 (19%)	33%	2
Sidi Assayeh	2	0 (0%)		0 (0%)		0 (0%)		0 (0%)		0 (0%)		5
Sirt	7	1 (14%)	20%	0 (0%)		1 (14%)	25%	7 (100%)	66%	3 (43%)	23%	1
Sug Aljuma	21	8 (38%)	40%	0 (0%)		0 (0%)		8 (38%)	69%	11 (52%)	32%	2
Sug Alkhamees	5	0 (0%)		0 (0%)		0 (0%)		3 (60%)	38%	0 (0%)		4
Suloug	5	2 (40%)	30%	0 (0%)		0 (0%)		2 (40%)	68%	0 (0%)		3
Summan	14	8 (57%)	57%	0 (0%)		0 (0%)		8 (57%)	90%	12 (86%)	49%	2
Tajoura	18	2 (11%)	27%	0 (0%)		0 (0%)		5 (28%)	61%	7 (39%)	34%	2
Taraghin	11	1 (9%)	40%	0 (0%)		0 (0%)		2 (18%)	88%	1 (9%)	17%	2
Tarhuna	34	2 (6%)	32%	0 (0%)		0 (0%)		17 (50%)	57%	3 (9%)	24%	2
Tazirbu	1	0 (0%)		0 (0%)		0 (0%)		1 (100%)	97%	0 (0%)		4
Thaher Aljabal	5	0 (0%)		0 (0%)		0 (0%)		3 (60%)	59%	1 (20%)	13%	3
Tobruk	26	1 (4%)	60%	0 (0%)		1 (4%)	75%	5 (19%)	48%	6 (23%)	25%	1
Toukra	5	1 (25%)	40%	0 (0%)		0 (0%)		4 (100%)	87%	1 (25%)	24%	2
Tripoli	13	3 (23%)	40%	0 (0%)		0 (0%)		8 (62%)	62%	11 (85%)	27%	2
Ubari	4	0 (0%)		0 (0%)		0 (0%)		3 (75%)	71%	0 (0%)		4
Umm arrazam	8	1 (13%)	40%	0 (0%)		1 (13%)	25%	5 (63%)	92%	4 (50%)	33%	1
Wadi Etba	13	2 (15%)	20%	0 (0%)		0 (0%)		3 (23%)	80%	1 (8%)	17%	2
Wazin	1	0 (0%)		0 (0%)		0 (0%)		1 (100%)	57%	0 (0%)		4
Yefren	5	0 (0%)		0 (0%)		0 (0%)		1 (20%)	44%	1 (20%)	7%	3
Zamzam	5	1 (20%)	20%	1 (20%)	9%	0 (0%)		4 (80%)	42%	1 (20%)	10%	1
Ziltun	6	0 (0%)		0 (0%)		0 (0%)		2 (33%)	63%	1 (17%)	10%	3
Zliten	25	10 (40%)	39%	0 (0%)		0 (0%)		14 (56%)	75%	10 (40%)	34%	2
Zwara	6	1 (17%)	33%	0 (0%)		0 (0%)		2 (33%)	85%	2 (33%)	25%	2
<b>Total</b>	<b>1,082</b>	<b>184 (17%)</b>	<b>38%</b>	<b>17 (2%)</b>	<b>20%</b>	<b>18 (2%)</b>	<b>40%</b>	<b>467 (44%)</b>	<b>69%</b>	<b>327 (31%)</b>	<b>35%</b>	

#### 4.8.2 Breakdown of readiness indicators

Table 38 indicates that delivery and family planning services are not generally provided by PHC facilities, therefore they are excluded from a more detailed analysis. Table 40 indicates that immunization (97 municipalities), and the diagnosis and treatment of malnutrition (60 municipalities) are the services that are the most universally available. Further breakdown of the readiness indicators for the three main

RMNCH services provided through the PHC facilities (ANC, immunization and child health services) reveals that the overall availability of equipment is good for ANC and immunization services, and these scores were not further disaggregated. For most services, the main constraints lie in the availability of trained staff (Table 39) and guidelines. The availability and readiness of ANC and many of the individual child health services are low across all municipalities, with specific municipalities consistently underperforming.

Table 39: Overview of PHC facilities with staff trained in RMNCH topics in the past 2 years

<i>Training course</i>	<b>N of PHCs reporting</b>	<b>% of these PHCs with staff trained in this service</b>
<i>Family planning (FP)</i>	18	28%
<i>Adolescent sexual health</i>	18	11%
<i>Antenatal Care (ANC)</i>	184	18%
<i>Intermittent preventive therapy (for malaria) in pregnancy (IPTp)</i>	184	1%
<i>Newborn resuscitation</i>	17	12%
<i>Essential childbirth care</i>	17	6%
<i>Comprehensive Emergency Obstetric Care (CEmOC)</i>	1	0%
<i>Immunization service delivery</i>	467	58%
<i>Vaccine management and cold chain</i>	467	61%
<i>Data reporting and monitoring of immunization service delivery</i>	467	54%
<i>Vaccine-preventable disease surveillance and reporting</i>	467	50%
<i>Vaccine injection safety and waste management</i>	467	53%
<i>Reach Every District (Immunization program planning)</i>	467	33%
<i>New vaccine prior to introduction</i>	467	61%
<i>Management of adverse events following immunization (AEFI)</i>	467	55%
<i>Integrated Management of Childhood Illnesses (IMCI)</i>	326	7%
<i>Growth monitoring</i>	326	5%
<i>Prevention of Mother and Child Transmission (PMTCT) for HIV</i>	0	
<i>Infant and young child feeding (IYCF)</i>	0	

Table 40: Availability of RMNCH trained staff, guidelines, medicines, equipment and specific child health services by municipality

Municipality	ANC					Immunization				Child health services														
	N facilities offering ANC	ANC guidelines available	Staff trained in ANC	Diagnostic capacity	ANC medicines available	N facilities offering immunization	Immunization guidelines available	Trained staff available	Vaccines and commodities available	N of PHCs offering child health	Guidelines	Trained staff	Equipment	Diagnosis	Medicines	N of 8 key preventive/curative services	Diagnose/treat child malnutrition N (%)	Vitamin A supplementation N (%)	Iron supplementation N (%)	ORS to children with diarrhea N (%)	Zinc to children with diarrhea N (%)	Growth monitoring N (%)	Treatment of pneumonia N (%)	Administration of amoxicillin N (%)
Abusliem	8	21%	63%	13%	0%	9	44%	100%	52%	13	0%	4%	67%	100%	23%	6	13 (100%)	0 (0%)	1 (8%)	2 (15%)	0 (0%)	10 (77%)	12 (92%)	1 (8%)
Ain Zara	9	7%	33%	72%	6%	7	71%	100%	52%	11	9%	14%	76%	70%	10%	8	11 (100%)	2 (18%)	2 (18%)	6 (55%)	5 (45%)	10 (91%)	8 (73%)	1 (9%)
Al Ajaylat	1	100%	0%	0%	0%	2	100%	100%	92%	3	33%	0%	67%	0%	0%	5	3 (100%)	0 (0%)	0 (0%)	2 (67%)	0 (0%)	3 (100%)	2 (67%)	2 (67%)
Al Aziziya	0					5	100%	100%	3%	1	0%	0%	83%	0%	0%	0	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Al Galaa	0					1	100%	0%	100%	0	0	0	0	0	0	0	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Al Jagboub	0					1	100%	100%	100%	0	0	0	0	0	0	0	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Al Maya	0					1	100%	100%	100%	0	0	0	0	0	0	0	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Al Shate Al Garbe	1	0%	0%	0%	0%	9	0%	11%	67%	0	0	0	0	0	0	0	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Al Shate Al Sharge	1	0%	0%	0%	0%	6	0%	0%	93%	1	0%	0%	67%	0%	0%	5	1 (100%)	0 (0%)	0 (0%)	1 (100%)	0 (0%)	1 (100%)	1 (100%)	1 (100%)
Al Swani	3	100%	33%	78%	0%	3	100%	33%	78%	1	0%	0%	33%	50%	0%	5	1 (100%)	0 (0%)	0 (0%)	1 (100%)	0 (0%)	1 (100%)	1 (100%)	1 (100%)
Alabyar	0					6	50%	83%	67%	3	0%	0%	56%	0%	0%	5	3 (100%)	0 (0%)	0 (0%)	2 (67%)	0 (0%)	2 (67%)	2 (67%)	2 (67%)
Alasabaa	0					3	0%	0%	83%	1	0%	0%	33%	0%	0%	5	1 (100%)	0 (0%)	0 (0%)	1 (100%)	0 (0%)	1 (100%)	1 (100%)	1 (100%)
Albawanees	0					3	100%	67%	72%	1	0%	0%	83%	0%	0%	1	0 (0%)	0 (0%)	0 (0%)	1 (100%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Albayda	10	13%	0%	45%	45%	10	100%	100%	60%	12	0%	8%	71%	50%	74%	8	10 (83%)	9 (75%)	8 (67%)	9 (75%)	7 (58%)	9 (75%)	10 (83%)	3 (25%)
Albrayga	2	0%	0%	50%	0%	4	100%	100%	67%	5	0%	0%	20%	100%	0%	2	5 (100%)	0 (0%)	0 (0%)	1 (20%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Aldawoon	0					1	0%	0%	67%	0	0	0	0	0	0	0	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Algatroun	0					3	67%	100%	100%	0	0	0	0	0	0	0	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Algaygab	0					1	100%	0%	100%	0	0	0	0	0	0	0	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Alghrayfa	2	17%	0%	50%	0%	9	33%	89%	87%	1	0%	0%	50%	100%	0%	5	1 (100%)	0 (0%)	0 (0%)	1 (100%)	0 (0%)	1 (100%)	1 (100%)	1 (100%)
Algurdha Ashshati	0					5	20%	0%	83%	0	0	0	0	0	0	0	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Alharaba	0					2	0%	0%	67%	0	0	0	0	0	0	0	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Alhawamid	0					3	0%	0%	72%	0	0	0	0	0	0	0	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Aljmail	2	0%	50%	25%	0%	4	100%	25%	58%	4	13%	0%	63%	50%	4%	8	4 (100%)	1 (25%)	1 (25%)	2 (50%)	1 (25%)	3 (75%)	4 (100%)	3 (75%)
Aljufra	1	33%	0%	50%	0%	5	40%	0%	97%	1	0%	0%	50%	0%	0%	5	1 (100%)	0 (0%)	0 (0%)	1 (100%)	0 (0%)	1 (100%)	1 (100%)	1 (100%)
Alkhums	9	0%	0%	39%	0%	16	100%	100%	75%	19	5%	0%	82%	65%	0%	3	19 (100%)	0 (0%)	0 (0%)	1 (82%)	0 (0%)	13 (68%)	18 (95%)	0 (0%)
Alkufra	2	50%	50%	100%	0%	5	100%	100%	97%	1	0%	0%	83%	0%	0%	2	1 (100%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	1 (100%)	0 (0%)	0 (0%)
Almarj	3	0%	0%	33%	0%	4	0%	25%	42%	6	0%	0%	64%	50%	0%	8	5 (83%)	1 (17%)	1 (17%)	5 (83%)	3 (50%)	1 (17%)	6 (100%)	2 (33%)
Alqubba	0					1	100%	0%	100%	0	0	0	0	0	0	0	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Alsharguiya	0					6	67%	100%	97%	1	0%	0%	50%	50%	0%	1	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	1 (100%)	0 (0%)	0 (0%)
Arrajban	0					1	0%	0%	33%	1	0%	0%	67%	0%	0%	1	1 (100%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Arrayayna	0					1	100%	0%	100%	0	0	0	0	0	0	0	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Arrhaibat	0					1	0%	0%	100%	0	0	0	0	0	0	0	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Ashshgega	0					1	0%	0%	83%	0	0	0	0	0	0	0	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Assahel	0					6	33%	67%	47%	2	50%	0%	75%	0%	71%	7	2 (100%)	1 (50%)	2 (100%)	2 (100%)	1 (50%)	2 (100%)	2 (100%)	0 (0%)
Aujala	1	67%	100%	50%	50%	3	100%	100%	89%	2	0%	0%	75%	100%	43%	8	2 (100%)	1 (50%)	1 (50%)	2 (100%)	1 (50%)	2 (100%)	2 (100%)	2 (100%)
Azzahra	1	67%	0%	0%	50%	4	100%	100%	71%	2	50%	0%	50%	0%	36%	8	2 (100%)	1 (50%)	1 (50%)	1 (50%)	1 (50%)	1 (50%)	1 (50%)	1 (50%)
Azzawya	15	53%	27%	53%	17%	14	100%	86%	87%	24	73%	40%	76%	88%	18%	8	24 (100%)	4 (17%)	11 (46%)	21 (88%)	3 (13%)	22 (92%)	24 (100%)	23 (96%)
Azzintan	0					7	29%	29%	95%	3	0%	0%	39%	50%	0%	2	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	2 (67%)	2 (67%)
Bani Waleed	4	17%	0%	50%	13%	5	20%	100%	56%	5	10%	10%	70%	100%	29%	4	5 (100%)	0 (0%)	1 (20%)	5 (100%)	0 (0%)	5 (100%)	0 (0%)	0 (0%)
Baten Aljabal	1	33%	0%	0%	0%	3	67%	100%	94%	2	0%	0%	50%	50%	0%	5	2 (100%)	0 (0%)	1 (50%)	2 (100%)	0 (0%)	0 (0%)	2 (100%)	2 (100%)
Benghazi	9	33%	22%	61%	11%	21	67%	57%	75%	17	3%	0%	69%	83%	33%	8	15 (88%)	1 (6%)	1 (6%)	9 (53%)	1 (6%)	10 (59%)	12 (71%)	8 (47%)
Bint Bayya	1	0%	0%	100%	0%	7	29%	100%	95%	1	0%	0%	67%	50%	0%	5	1 (100%)	0 (0%)	0 (0%)	1 (100%)	0 (0%)	1 (100%)	1 (100%)	1 (100%)
Bir Alashhab	0					1	100%	100%	67%	0	0	0	0	0	0	0	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Daraj	1	0%	0%	0%	0%	3	33%	100%	89%	0	0	0	0	0	0	0	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Darnah	0					5	40%	40%	100%	9	11%	0%	56%	100%	100%	6	8 (89%)	0 (0%)	1 (11%)	7 (78%)	0 (0%)	7 (78%)	8 (89%)	6 (67%)
Ejabdia	0					8	50%	75%	60%	9	6%	0%	48%	50%	36%	6	9 (100%)	0 (0%)	0 (0%)	7 (78%)	1 (11%)	7 (78%)	8 (89%)	6 (67%)
Ejkherra	1	33%	0%	0%	100%	1	100%	100%	100%	1	0%	0%	67%	0%	57%	5	1 (100%)	0 (0%)	0 (0%)	1 (100%)	0 (0%)	1 (100%)	1 (100%)	1 (100%)
Emsaed	1	0%	0%	50%	0%	1	100%	0%	100%	1	100%	0%	83%	100%	100%	5	1 (100%)	0 (0%)	1 (100%)	1 (100%)	0 (0%)	1 (100%)	1 (100%)	0 (0%)
Espeaa	0					0				0						0	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Garaballi	4	0%	0%	13%	0%	6	100%	100%	78%	4	13%	0%	71%	100%	0%	8	4 (100%)	1 (25%)	1 (25%)	1 (25%)	1 (25%)	1 (25%)	3 (75%)	1 (25%)
Gasr Akhyar	2	0%	50%	50%	0%	4	100%	100%	67%	4	25%	38%	75%	50%	7%	7	4 (100%)	1 (25%)	1 (25%)	1 (25%)	1 (25%)	4 (100%)	3 (75%)	0 (0%)
Gasr Bin Ghasheer	0					2	100%	50%	92%	2	50%	0%	58%	0%	0%	8	2 (100%)	1 (50%)	1 (50%)	2 (100%)	1 (50%)	1 (50%)	1 (50%)	1 (50%)
Gemiemis	0					5	40%	40%	73%	1	0%	0%	33%	0%	0%	5	1 (100%)	0 (0%)	0 (0%)	1 (100%)	0 (0%)	1 (100%)	1 (100%)	1 (100%)
Ghadamis	0					1	100%	100%	100%	0	0	0	0	0	0	0	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Gharb Azzawya	5	20%	40%	20%	0%	6	83%	50%	67%	9	28%	0%	59%	75%	2%	4	6 (67%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	7 (78%)	3 (33%)	5 (56%)
Ghat	1	0%	0%	100%	0%	6	0%	67%	77%	0	0	0	0	0	0	0	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Ghريان	2	17%	0%	50%	0%	14	14%	7%	74%	4	0%	0%	50%	100%	0%	5	3 (75%)	0 (0%)	0 (0%)	2 (50%)	0 (0%)	2 (50%)	2 (50%)	2 (50%)
Hai Alandalus	11	36%	0%	64%	0%	9	89%	100%	48%	16	9%	0%	67%	68%	9%	5	16 (100%)	0 (0%)	0 (0%)	0 (0%)	1 (6%)	8 (50%)	2 (13%)	14 (88%)

Municipality	ANC					Immunization				Child health services														
	N facilities offering ANC	ANC guidelines available	Staff trained in ANC	Diagnostic capacity	ANC medicines available	N facilities offering immunization	Immunization guidelines available	Trained staff available	Vaccines and commodities available	N of PHCs offering child health	Guidelines	Trained staff	Equipment	Diagnosis	Medicines	N of 8 key preventive/curative services	Diagnose/treat child malnutrition N (%)	Vitamin A supplementation N (%)	Iron supplementation N (%)	ORS to children with diarrhea N (%)	Zinc to children with diarrhea N (%)	Growth monitoring N (%)	Treatment of pneumonia N (%)	Administration of amoxicillin N (%)
Jadu	0					2	0%	0%	92%	0						0	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Jalu	0					4	100%	100%	88%	1	0%	0%				5	1 (100%)	0 (0%)	0 (0%)	1 (100%)	0 (0%)	1 (100%)	1 (100%)	1 (100%)
Janzur	7	29%	14%	29%	0%	9	67%	100%	72%	7	7%	0%	67%	50%	0%	6	3 (43%)	1 (14%)	2 (29%)	2 (29%)	0 (0%)	0 (0%)	4 (57%)	4 (57%)
Jardas Alabeed	0					5	80%	100%	93%	4	0%	0%	58%	100%	0%	5	4 (100%)	0 (0%)	0 (0%)	4 (100%)	0 (0%)	4 (100%)	4 (100%)	4 (100%)
Kabaw	0					5	0%	0%	53%	0						0	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Khaleg Alsedra	1	0%	0%	0%	0%	4	100%	100%	42%	0						0	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Kikkla	0					2	50%	0%	50%	0						0	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Labriq	0					1	100%	0%	100%	0						0	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Marada	0					1	100%	100%	100%	1	0%	0%	67%	50%	71%	5	1 (100%)	0 (0%)	0 (0%)	1 (100%)	0 (0%)	1 (100%)	1 (100%)	1 (100%)
Misrata	3	44%	0%	33%	0%	13	38%	85%	49%	8	0%	0%	58%	63%	0%	5	8 (100%)	0 (0%)	0 (0%)	4 (50%)	0 (0%)	5 (63%)	6 (75%)	4 (50%)
Mizda	0					3	33%	0%	100%	1	0%	0%	67%	0%	0%	5	1 (100%)	0 (0%)	0 (0%)	1 (100%)	0 (0%)	1 (100%)	1 (100%)	1 (100%)
Msallata	2	0%	0%	25%	0%	2	0%	50%	42%	1	0%	0%	50%	50%	0%	5	1 (100%)	0 (0%)	0 (0%)	1 (100%)	0 (0%)	1 (100%)	1 (100%)	1 (100%)
Murzuq	1	0%	0%	100%	0%	2	0%	100%	100%	0						0	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Nalut	0					3	33%	0%	50%	1	0%	0%	83%	0%	0%	1	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	1 (100%)	0 (0%)	0 (0%)
Nesma	0					3	33%	0%	100%	1	0%	0%	67%	0%	100%	0	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Rigdaleen	0					0				0						0	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Sabratha	7	0%	0%	0%	0%	3	33%	0%	78%	6	0%	0%	53%	0%	4%	4	5 (83%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	2 (33%)	4 (67%)	4 (67%)
Sebha	8	17%	38%	63%	0%	10	40%	70%	75%	11	5%	14%	61%	100%	14%	7	8 (73%)	0 (0%)	1 (9%)	6 (55%)	3 (27%)	6 (55%)	9 (82%)	8 (73%)
Shahhat	0					6	50%	83%	11%	5	10%	0%	53%	100%	0%	6	1 (20%)	0 (0%)	0 (0%)	2 (40%)	1 (20%)	2 (40%)	1 (20%)	2 (40%)
Sidi Assayeh	0					0	0%	0%	0%	0						0	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Sirt	1	0%	0%	0%	0%	7	86%	57%	45%	3	17%	0%	72%	25%	0%	8	3 (100%)	1 (33%)	1 (33%)	3 (100%)	2 (67%)	3 (100%)	3 (100%)	3 (100%)
Sug Aljumaa	8	13%	38%	44%	6%	8	25%	100%	58%	11	0%	9%	68%	75%	7%	6	11 (100%)	0 (0%)	1 (9%)	2 (18%)	0 (0%)	4 (36%)	9 (82%)	1 (9%)
Sug Alkhamees	0					3	0%	0%	89%	0						0	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Suloug	2	0%	0%	50%	0%	2	100%	0%	100%	0						0	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Surman	8	83%	38%	75%	0%	8	100%	100%	69%	12	67%	8%	82%	83%	7%	8	12 (100%)	1 (8%)	11 (92%)	12 (100%)	1 (8%)	12 (100%)	12 (100%)	11 (92%)
Tajoura	2	33%	0%	0%	0%	5	60%	80%	20%	7	0%	0%	71%	100%	0%	6	6 (86%)	0 (0%)	0 (0%)	3 (43%)	1 (14%)	2 (29%)	6 (86%)	2 (29%)
Taraghin	1	0%	100%	0%	0%	2	50%	100%	100%	1	0%	0%	83%	0%	0%	1	1 (100%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Tarhuna	2	33%	0%	75%	0%	17	47%	12%	74%	3	0%	0%	61%	50%	7%	5	3 (100%)	0 (0%)	0 (0%)	2 (67%)	0 (0%)	2 (67%)	2 (67%)	2 (67%)
Tazirbu	0					1	100%	100%	100%	0						0	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Thaher Aljabal	3	100%	0%	78%		3	100%	0%	78%	1	0%	0%	67%	0%	0%	5	1 (100%)	0 (0%)	0 (0%)	1 (100%)	0 (0%)	1 (100%)	1 (100%)	1 (100%)
Tabruk	1	100%	100%	0%	0%	5	60%	40%	40%	6	50%	25%	50%	0%	0%	8	5 (83%)	2 (33%)	2 (33%)	2 (33%)	3 (50%)	4 (67%)	2 (33%)	2 (33%)
Toukra	1	0%	0%	0%	100%	4	100%	100%	75%	1	0%	0%	50%	0%	71%	5	1 (100%)	1 (100%)	1 (100%)	1 (100%)	1 (100%)	0 (0%)	0 (0%)	0 (0%)
Tripoli	3	33%	33%	33%	0%	8	0%	100%	48%	11	0%	0%	62%	70%	3%	5	11 (100%)	0 (0%)	0 (0%)	5 (45%)	0 (0%)	5 (45%)	11 (100%)	5 (45%)
Ubari	0					3	33%	100%	94%	0						0	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Umm arrazam	1	0%	0%	100%	0%	5	80%	100%	97%	4	0%	0%	63%	100%	0%	6	1 (25%)	0 (0%)	0 (0%)	2 (50%)	1 (25%)	1 (25%)	2 (50%)	3 (75%)
Wadi Etba	2	0%	0%	0%	0%	3	67%	100%	61%	1	0%	0%	83%	0%	0%	0	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Wazin	0					1	100%	0%	50%	0						0	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Yefren	0					1	0%	0%	100%	1	0%	0%	33%	0%	0%	5	1 (100%)	0 (0%)	0 (0%)	1 (100%)	0 (0%)	1 (100%)	1 (100%)	1 (100%)
Zamzam	1	0%	0%	0%	0%	4	0%	100%	0%	1	0%	0%	50%	0%	0%	0	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Ziltun	0					2	50%	50%	100%	1	0%	0%	50%	0%	0%	5	1 (100%)	0 (0%)	0 (0%)	1 (100%)	0 (0%)	1 (100%)	1 (100%)	1 (100%)
Zliten	10	0%	10%	75%	10%	14	43%	100%	64%	10	10%	0%	68%	72%	19%	5	9 (90%)	0 (0%)	1 (10%)	1 (10%)	0 (0%)	10 (100%)	7 (70%)	0 (0%)
Zwara	1	67%	0%	0%	0%	2	50%	100%	100%	2	0%	0%	75%	50%	0%	3	2 (100%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	1 (50%)	1 (50%)	0 (0%)
<b>Total</b>	<b>184</b>	<b>23%</b>	<b>18%</b>	<b>44%</b>	<b>7%</b>	<b>467</b>	<b>56%</b>	<b>66%</b>	<b>71%</b>	<b>327</b>	<b>14%</b>	<b>6%</b>	<b>65%</b>	<b>73%</b>	<b>17%</b>	<b>3</b>	<b>289 (89%)</b>	<b>30 (9%)</b>	<b>56 (17%)</b>	<b>159 (49%)</b>	<b>41 (13%)</b>	<b>212 (65%)</b>	<b>236 (72%)</b>	<b>157 (48%)</b>
<b>Number of municipalities with (one or more) services available:</b>																								
	51					97				68						64	60	17	25	53	22	56	55	49

## 4.9 Overview of RMNCH services by hospital facility

In terms of RMNC, hospitals primarily serve as the first point of contact for both delivery and EmONC services, and child immunization at birth. For ANC and preventive and curative care for children under 5, they provide specialist services when PHC services cannot meet a patient’s needs. With the exception of family planning services, which are not available anywhere, there are 52 hospitals which technically have the capacity to provide delivery, EmONC and earmarked neonatal services, while 59 hospitals provide essential pediatric care through both outpatient and inpatient services. Table 42 provides an overview of the individual RMNCH services available in hospitals, along with readiness scores for ANC and delivery services. Hospitals that do not provide RMNCH services have been excluded from this list.

There are a considerable number of hospitals that provide RMNCH services where corresponding readiness scores indicate that the true availability of services is equal to or below 50%. This includes 25 of the hospitals offering ANC services, 31 hospitals offering delivery services, and 20 hospitals offering CEmONC, indicating that there is considerable room for improvement in terms of service readiness for RMNCH.

### 4.9.1 Breakdown of readiness indicators

The overall proportion of hospitals that have staff who have received specific training on RMNCH topics during the preceding 2 years is low. The highest proportion of hospitals with trained staff is on the topic of newborn resuscitation (35%) while no staff have received training on essential childbirth care or family planning. Even training on the provision of essential services such as ANC (14%) and CEmONC (17%) is not commonly available and/or followed.

Table 41: Proportion of Hospitals with staff having received service-specific training in the past 2 years

<i>Training course</i>	<b>N of Hospitals offering services</b>	<b>% of these hospitals with trained staff</b>
<i>Newborn resuscitation</i>	52	35%
<i>Essential childbirth care</i>	52	0%
<i>Comprehensive Emergency Obstetric Care (CEmOC)</i>	47	17%
<i>Family planning (FP)</i>	0	0%
<i>Adolescent sexual health</i>	0	0%
<i>Antenatal Care (ANC)</i>	37	14%
<i>Prevention of Mother and Child Transmission (PMTCT) for HIV</i>	4	0%
<i>Infant and young child feeding (IYCF)</i>	4	25%

The mean total availability of 20 basic essential medicines for obstetric care in the 52 hospitals offering delivery services was 58% (

Figure 57) , suggesting significant shortages across all hospitals. Caffeine citrate injection was the least available drug reported (but not necessarily observed) to be present, at 21% of facilities. This was followed by Cefixime (33%), and Azithromycin (35%). Dexamethasone and Vitamin K injections were most commonly available, both present in 81% of hospital facilities. Of concern is that 9% of available oxytocin was NOT being stored in a refrigerator.

Figure 57: Availability of 20 essential medicines for obstetric care in hospitals providing delivery services

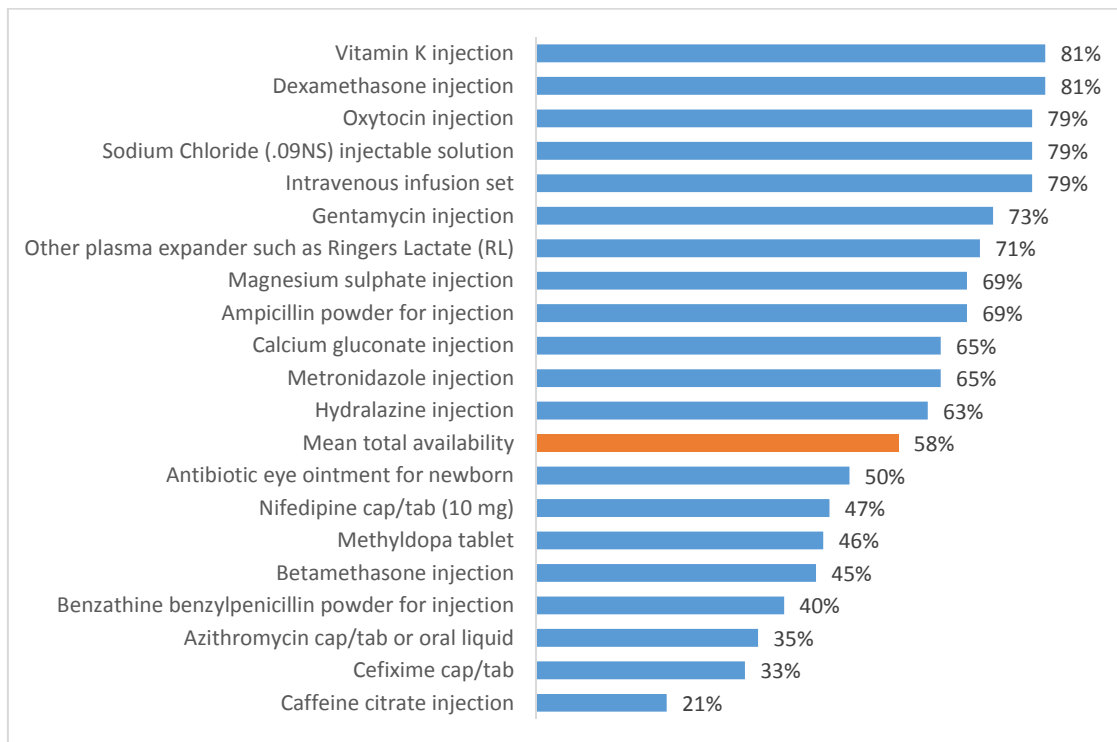


Table 42: RMNCH services available and readiness scores, by hospital

	Antenatal Care					OB		Emergency Obstetric and Neonatal Care functions														Children <5				
	Iron supplementation	Folic acid supplementation	Monitoring for hypertensive disorder of pregnancy	ANC for high-risk pregnancies	ANC Readiness Score	Delivery services	Delivery services Readiness Score	Parenteral administration of antibiotics (IV or IM)	Parenteral administration of oxytocic (IV or IM)	Parenteral administration of anticonvulsant for hypertensive disorders of pregnancy (IV or IM)	Assisted vaginal delivery (e.g., forceps or vacuum extractor)	Manual removal of placenta	Removal of retained products of conception	Neonatal resuscitation with bag and mask	Basic EMONC (first 7 functions)	Caesarean section	Blood transfusion	Comprehensive EMONC (first 9 functions)	EMONC readiness score	Antibiotics for preterm or prolonged PROM (premature rupture of membranes)	Corticosteroids in preterm labor	KMC (Kangaroo mother care) for premature/very small babies	Parenteral administration of antibiotics (IV or IM) for neonatal sepsis	% of 5 Emergency Newborn Care services	Child immunization	Preventative and curative care service offered
Atiya Al Kaseh- Al Kuffra hospital						X	42%	X	X	X	X	X	X	X	X	X	X	X	43%	X	X	X	X	100%	X	X
Tripali pediatric hospital																										X
Zwara Albahree Hospital			X	X	40%	X	50%	X	X	X	X	X	X	X	X	X	X	X	70%	X	X		X	80%	X	X
Adri hospital						X	38%	X	X	X	X	X	X	X	X	X	X	X			X		X	60%	X	X
Al –Zawia Hospital	X	X	X	X	80%	X	81%	X	X	X	X	X	X	X	X	X	X	X	98%	X	X	X	X	100%	X	X
Al Hospital						X	39%	X	X	X	X	X	X	X	X	X	X	X				X	X	60%	X	
Al Afia hospital - Houn	X	X	X	X	50%	X	65%	X	X	X	X	X	X	X	X	X	X	X	30%	X	X		X	80%	X	X
Al Asaabaa hospital						X	25%	X	X	X	X	X	X	X	X	X	X	X	26%	X	X		X	80%	X	X
Al Aujilat Hospital			X	X	30%	X	47%	X	X	X	X	X	X	X	X	X	X	X	55%	X	X		X	80%	X	X
Al Jaghub hospital	X	X	X	X	100%	X	100%	X	X	X	X	X	X	X	X	X	X	X			X	X	X	100%	X	X
Al Jalaaynecology hospital - Tripoli	X	X	X	X	80%	X	100%	X	X	X	X	X	X	X	X	X	X	X	78%	X	X		X	80%	X	
Al Jameel Hospital			X	X	30%	X	60%	X	X	X	X	X	X	X	X	X	X	X	54%	X	X		X	80%	X	X
Al Khadra hospital			X	X	60%	X	74%	X	X	X	X	X	X	X	X	X	X	X	87%	X	X	X	X	100%	X	X
Al khums hospital	X	X	X	X	40%	X	74%	X	X	X	X	X	X	X	X	X	X	X	41%	X	X		X	80%	X	X
Al Kuriaat hospital	X	X		X	50%	X	36%	X	X	X	X	X	X	X	X	X	X	X					X	40%	X	X
Almarj Hospital	X	X	X	X	60%	X	89%	X	X	X	X	X	X	X	X	X	X	X	62%	X	X		X	80%	X	X
Al Qarabouli hospital						X	50%	X	X	X	X	X	X	X	X	X	X	X	21%	X	X		X	80%	X	X
Al Quba Hospital			X	X	20%	X	48%	X	X	X	X	X	X	X	X	X	X	X			X	X	X	80%	X	X
Al Temimi Hospital	X	X	X	X	70%	X	70%	X	X	X	X	X	X	X	X	X	X	X			X		X	60%	X	
Al Wehda Hospital				X	30%	X	31%	X	X	X	X	X	X	X	X	X	X	X	61%	X	X		X	80%	X	X
Al Zintan hospital						X	19%	X	X	X	X	X	X	X	X	X	X	X	61%	X	X		X	80%	X	X
Ali Omar Askar hospital-Sbeia						X	75%	X	X	X	X	X	X	X	X	X	X	X	80%	X	X		X	80%	X	X
Bani waleed hospital	X	X	X	X	60%	X	100%	X	X	X	X	X	X	X	X	X	X	X	93%	X		X	X	80%	X	X
Benghazi hospital for pediatrics & surgery																										X
Benghazi medical center	X	X		X	50%	X	44%	X	X	X	X	X	X	X	X	X	X	X	60%	X	X		X	80%	X	X
Bergan hospital						X	19%	X	X	X	X	X	X	X	X	X	X	X	26%	X			X	60%	X	X
Brak hospital						X	50%	X	X	X	X	X	X	X	X	X	X	X	18%	X	X		X	80%	X	X
Chest diseases hospital, Misratah	X	X	X	X	50%																					
Ghadames hospital	X	X	X	X	60%	X	67%	X	X	X	X	X	X	X	X	X	X	X	77%	X			X	60%	X	X
Gharyan hospital						X	39%	X	X	X	X	X	X	X	X	X	X	X	32%		X		X	60%	X	X
Gmenis hospital						X	39%	X	X	X	X	X	X	X	X	X	X	X					X	40%	X	X
Jado Hospital	X	X	X	X	40%	X	31%	X	X	X	X	X	X	X	X	X	X	X	36%	X	X		X	80%	X	X
Jalou hospital						X	62%	X	X	X	X	X	X	X	X	X	X	X	32%				X	40%	X	X

	Antenatal Care					OB		Emergency Obstetric and Neonatal Care functions															Children <5				
	Iron supplementation	Folic acid supplementation	Monitoring for hypertensive disorder of pregnancy	ANC for high-risk pregnancies	ANC Readiness Score	Delivery services	Delivery services Readiness Score	Parenteral administration of antibiotics (IV or IM)	Parenteral administration of oxytocic (IV or IM)	Parenteral administration of anticonvulsant for hypertensive disorders of pregnancy (IV or IM)	Assisted vaginal delivery (e.g., forceps or vacuum extractor)	Manual removal of placenta	Removal of retained products of conception	Neonatal resuscitation with bag and mask	Basic EMONC (first 7 functions)	Caesarean section	Blood transfusion	Comprehensive EMONC (first 9 functions)	CEmONC readiness score	Antibiotics for preterm or prolonged PROM (premature rupture of membranes)	Corticosteroids in preterm labor	KMC (Kangaroo mother care) for premature/very small babies	Parenteral administration of antibiotics (IV or IM) for neonatal sepsis	% of 5 Emergency Newborn Care services	Child immunization	Preventative and curative care service offered	
Jardas Al Abeed Hospital																											X
Kabaw hospital																											X
Misslata hospital	X	X		X	50%	X	49%	X	X	X	X	X	X	X	X	X	X	X	67%	X	X		X	80%	X	X	
Mitiga hospital			X	X	30%																					X	
Mizda hospital						X	50%	X	X	X	X	X	X	X	X	X	X	X	50%	X	X		X	80%	X	X	
Murziq hospital	X	X	X	X	40%	X	23%	X	X	X	X	X	X	X	X	X	X	X	15%	X	X		X	80%	X	X	
Nalout hospital						X	97%	X	X	X	X	X	X	X	X	X	X	X	79%	X	X		X	80%	X	X	
Omar Al Mokhtar	X	X	X	X	50%	X	45%	X	X	X	X	X	X	X	X	X	X	X	27%	X	X		X	80%	X	X	
Sebha Medical Center						X	51%	X	X	X	X	X	X	X	X	X	X	X	66%	X	X		X	80%	X	X	
Slouq hospital						X	36%	X	X	X	X	X	X	X	X								X	40%	X	X	
Sooq Al Khamees hospital - Al khums																										X	
Subrata Hospital			X	X	40%	X	75%	X	X	X	X	X	X	X	X	X	X	X	64%	X	X		X	80%	X	X	
Surmann Hospital			X	X	30%																					X	
Sussa Hospital						X	50%	X	X	X	X	X	X	X	X	X	X	X	16%	X	X		X	80%		X	
Tajurra hospital	X	X	X	X	50%	X	87%	X	X	X	X	X	X	X	X	X	X	X	57%	X		X	X	80%	X	X	
Tarhuna hospital	X	X		X	50%	X	63%	X	X	X	X	X	X	X	X	X	X	X	78%	X			X	60%	X	X	
Tazarbu hospital						X	35%	X	X	X	X	X	X	X	X	X	X	X	22%		X	X	X	80%	X	X	
Tegi hospital	X	X		X	40%	X	25%	X	X	X	X	X	X	X	X	X	X	X	20%	X	X	X	X	100%	X	X	
Traghen hospital	X	X	X	X	50%	X	62%	X	X	X	X	X	X	X	X	X	X	X	44%	X	X		X	80%	X	X	
Tripoli medical center	X	X	X	X	70%	X	69%	X	X	X	X	X	X	X	X	X	X	X	82%	X	X		X	80%	X	X	
Tubruq Medical Center	X	X	X	X	100%	X	100%	X	X	X	X	X	X	X	X	X	X	X	96%	X	X	X	X	100%	X	X	
Tukaraa Hospital																										X	
Weddan hospital	X	X	X	X	50%	X	26%	X	X		X	X	X	X							X	X	X	100%	X	X	
Yaffren Hospital	X	X	X	X	40%	X	21%	X	X	X	X	X	X	X	X	X	X	X	44%	X	X		X	80%	X	X	
Zlitan hospital	X	X	X	X	50%	X	45%	X	X	X	X	X	X	X	X	X	X	X	47%	X	X		X	80%	X	X	
Al Hraba hospital																										X	
Al Shewarif hospital	X	X	X	X	50%																					X	
Bin Jawad hospital																									X		
Emhamd Al Meqrif Hospital Ejdabiya	X	X	X	X	70%	X	70%	X	X	X	X	X	X	X	X	X	X	X	94%	X	X	X	X	100%	X	X	
Misratah hospital	X	X	X	X	80%	X	47%	X	X	X	X	X	X	X	X	X	X	X	70%	X	X		X	80%	X	X	
Thuarra hospital	X	X	X	X	60%	X	42%	X	X	X	X	X	X	X	X	X	X	X	66%	X	X		X	80%	X	X	
<b>Total</b>	<b>29</b>	<b>29</b>	<b>32</b>	<b>38</b>		<b>52</b>		<b>52</b>	<b>52</b>	<b>51</b>	<b>52</b>	<b>52</b>	<b>52</b>	<b>52</b>	<b>51</b>	<b>43</b>	<b>44</b>	<b>43</b>		<b>43</b>	<b>42</b>	<b>12</b>	<b>52</b>	<b>77%</b>	<b>52</b>	<b>59</b>	



## 5 Communicable diseases

The burden of disease attributable to communicable diseases in Libya was estimated to be 9.8% for 2012 (20). This means that one in ten health conditions in the country can be attributed to an infection, which is a relatively low proportion, because unlike many other African countries, Libya is fortunate to have low prevalence rates of communicable diseases such as HIV/AIDS and malaria.

The first point of contact for any patient suffering from a communicable disease is often the primary health care system, whether public or private. Treatment of common infections such as respiratory tract and skin infections is prescribed on the spot. There are some communicable diseases with a potentially significant public health impact. These are subject to close monitoring, and specific disease control programs are run by the government to contain their potential spread. These diseases are the focus of this chapter, and include tuberculosis (TB), HIV/AIDS, sexually transmitted infections (STIs), leishmaniasis, and brucellosis. Patients suspected of suffering from one of these communicable diseases are referred to a specialist health facility where final diagnosis and treatment are provided. For TB, this specialist network consists of 27 NCDC facilities (of which 23 were functioning at time of survey) and four chest hospitals, while five hospitals and three PHC facilities provide HIV/AIDS counselling and testing. Confirmatory testing and treatment for leishmaniasis and brucellosis are available from 36 and 28 earmarked PHC facilities, respectively.

Table 43: Availability and readiness of communicable diseases services provided by type of facility

	General overview (% of all health facilities)	N Hospitals (% of all 80 hospitals)	Hospital Readiness score	N PHC facilities (% of all PHC facilities)	PHC Readiness score
Tuberculosis	27 (2%)	4 (5%)	-	23*	44%*
HIV/AIDS: counselling & testing	8 (0.7%)	5 (6%)	32%	3 (0.3%)	47%
HIV/AIDS: PMTCT	4 (0.3%)	4 (5%)	36%	0	-
STIs	15 (1%)	9 (11%)	29%	6 (0.6%)	33%
Leishmaniasis	36 (3%)	-	-	36 (3%)	-
Brucellosis	28 (2%)	-	-	28 (3%)	-

\*services provided only through NCDC facilities, not through hospitals or PHCs

The SARA methodology includes specific availability and readiness indices for TB, HIV, and STIs, and for these diseases both availability and readiness can be assessed. The methodology does not include detailed information for leishmaniasis and brucellosis, but these diseases were of concern to the Libyan MoH, therefore simple questions on availability and treatment for these diseases were added to the standard questionnaires. This provided sufficient information to assess the general availability of these specific services, but a more detailed analysis of readiness was not possible.

### 5.1 Tuberculosis

The most recent complete data on TB in Libya dates from 2015. For this year, TB-related mortality was estimated at 11 deaths per 100 000 population. A total of 1,014 detected tuberculosis cases were notified in 2015, of which 486 were sputum smear-positive cases. The treatment success rate of new and relapsed TB cases registered in 2014 was 57%. Drug-resistant tuberculosis is estimated at 4% among new cases and 48% among previously treated cases (21). There are reported gaps in communication with and follow-up of patients, although improvements are expected with implementation of the 2015 program for surveillance of TB and multidrug-resistant TB (MDR-TB) cases (20).

TB diagnosis and treatment are provided through 23 NCDC centers and the specialized chest hospitals in Tripoli, Misrata, Sebha and Benghazi. Suspected cases of TB are initially identified through the PHCs, who

refer them to the NCDC centers where sputum analysis, chest X-rays and biopsies for extra-pulmonary TB are used to confirm the final diagnosis. In order to prevent drug resistance, TB treatment is provided only through NCDC centers and the specialist hospitals, and are not at all available through the private sector. Treatment is free of charge, and patients are given two to three months of treatment to take home. Extra-pulmonary TB cases are followed up on a monthly basis.

### 5.1.1 Availability and readiness

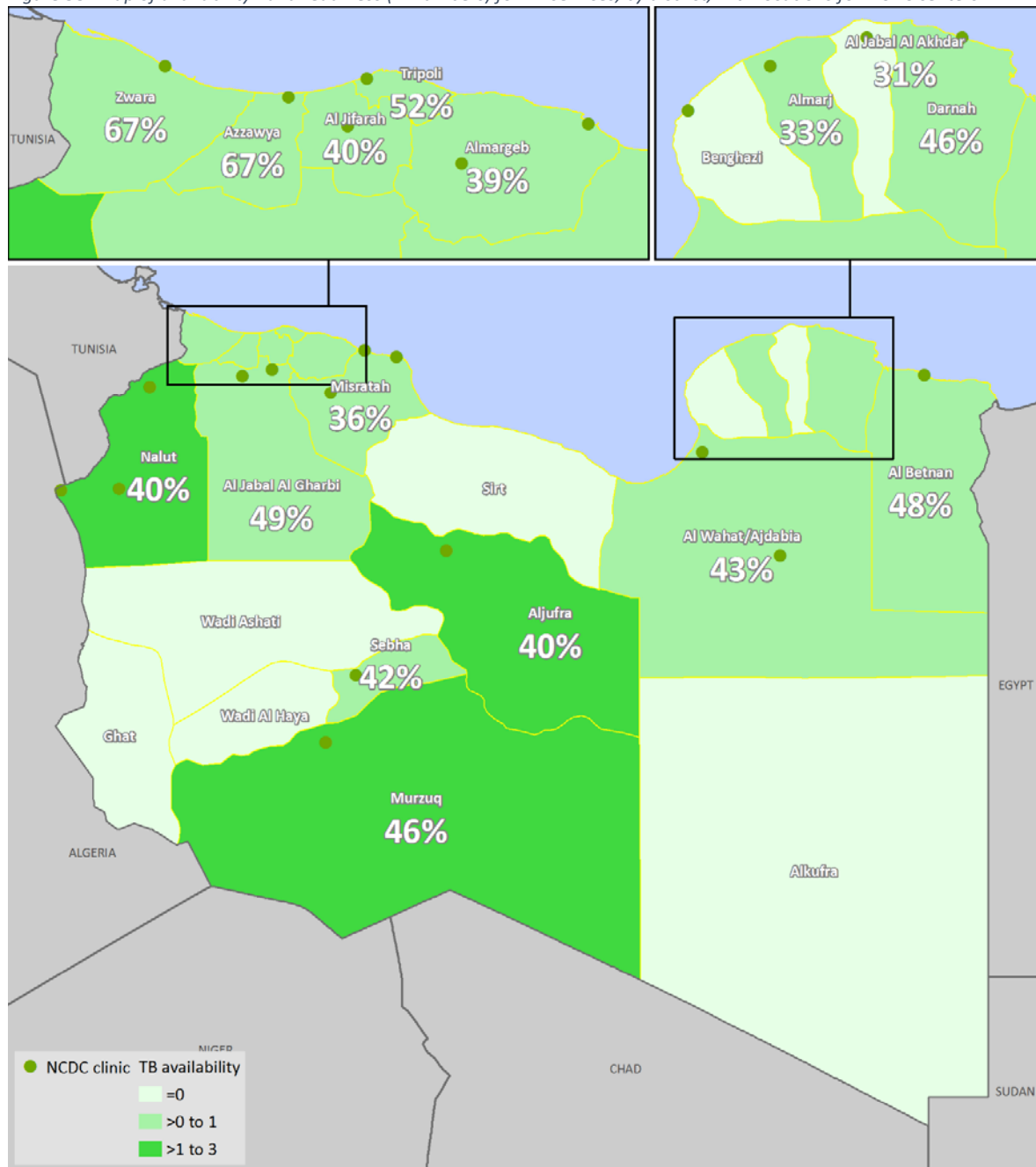
The SARA Hospital questionnaires did not include questions on the provision of TB services, therefore no data on availability and readiness for TB is available at the hospital level. The analysis in this section is therefore limited to the 22 specialized branches of the National Center for Disease Control (NCDC) that offer diagnosis and treatment of TB, and which were included in the “other” health facilities list.

The overall TB readiness index is calculated on the basis of selected tracer items in four domains: (1) medicines, (2) guidelines, (3) trainings, and (4) diagnostics. The overall readiness score for TB services provided through the 22 NCDC facilities was 44%. Low scores were measured especially for the availability of specific TB diagnostics, where specific testing components were often not available (i.e., slides, stains, and HIV tests) and the availability of medicines. Only the NCDC facilities in Tripoli, Azzawya and Zwara had readiness scores above 50%.

Table 44: NCDC facilities availability and readiness index for management of TB services by district

	N facilities offering TB services	Guidelines scores	Trained staff scores	Diagnosis scores	Medicines scores	Overall readiness scores
Al Wahat/Ajdabia	2	75%	63%	33%	0%	43%
Alkufra	0					
Benghazi	0					
Al Betnan	1	75%	50%	67%	0%	48%
Al Jabal Al Akhdar	1	50%	75%	0%	0%	31%
Darnah	1	75%	75%	33%	0%	46%
Almarj	1	50%	50%	33%	0%	33%
Sirt	0					
Aljufra	1	50%	75%	33%	0%	40%
Misratah	3	42%	58%	44%	0%	36%
Almargeb	2	50%	50%	33%	22%	39%
Al Jifarah	1	50%	75%	33%	0%	40%
Tripoli	1	75%	100%	33%	0%	52%
Azzawya	1	100%	100%	67%	0%	67%
Zwara	1	100%	100%	67%	0%	67%
Al Jabal Al Gharbi	2	75%	88%	33%	0%	49%
Nalut	3	58%	58%	44%	0%	40%
Wadi Ashati	0					
Sebha	1	100%	0%	67%	0%	42%
Wadi Al Haya	0					
Murzuq	1	50%	100%	33%	0%	46%
Ghat	0					
<b>Total</b>	<b>23</b>	<b>64%</b>	<b>67%</b>	<b>41%</b>	<b>2%</b>	<b>44%</b>

Figure 58: Map of availability\* and readiness (in numbers) for TB services, by district, with locations for NCDC centers



\* Availability is defined as the ratio of facilities providing a selected service to 100,000 population; service-specific readiness is included in the map as a written percentage; only NCDC facilities are mapped (including closed facilities)

*Box 7: Tuberculosis services availability and readiness*

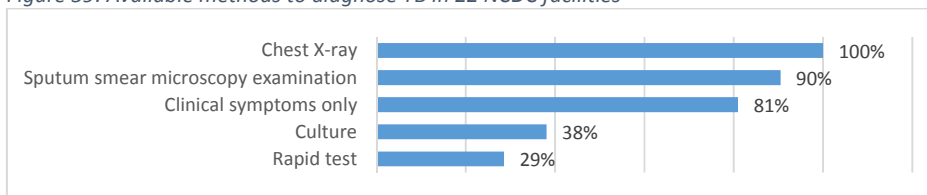
The referral capacity of PHC facilities to TB diagnostic and treatment services was not measured. Diagnosis and treatment for TB was available through 22 functional NCDC facilities located in 15 districts, and four specialist hospitals. The overall readiness score of 44% indicates that there is still considerable room for improvement in the readiness domains, especially in terms of the availability of diagnostics and key medicines.

### 5.1.2 Breakdown of readiness indicators for TB services

The proportions reported in this section may not necessarily correspond to those reported for the readiness scores in the previous section, because the number of respondents are often different, given that the data used here may come from a different subset of health facilities or a different section of the survey, or may not reflect all the indicators used to calculate the index scores. The figures in this section can be used as a reference point to assess the validity of the readiness scores, and also provide insight into the individual items used for calculating the readiness indices.

Of the 22 functional NCDC facilities that offer TB services and provided data, 21 facilities offer TB diagnosis. All 21 facilities had the capacity to provide initial diagnosis using chest x-rays, while 90% have sputum smear microscopy available. Culture and rapid test diagnosis are less commonly available, at 38% and 29%, respectively.

Figure 59: Available methods to diagnose TB in 22 NCDC facilities



A more detailed breakdown of TB diagnostics availability by municipality is provided in Table 45. This table indicates that the facilities in Jalu and Misrata rely only on X-ray diagnosis for TB.

It is worth noting that there are two hospitals that report having GeneXpert testing available. At the time of survey, the machine at Bin Jawad Hospital in Sirt was functional, while the machine at Abi Sitta Chest Diseases Hospital in Tripoli was said not to be available.

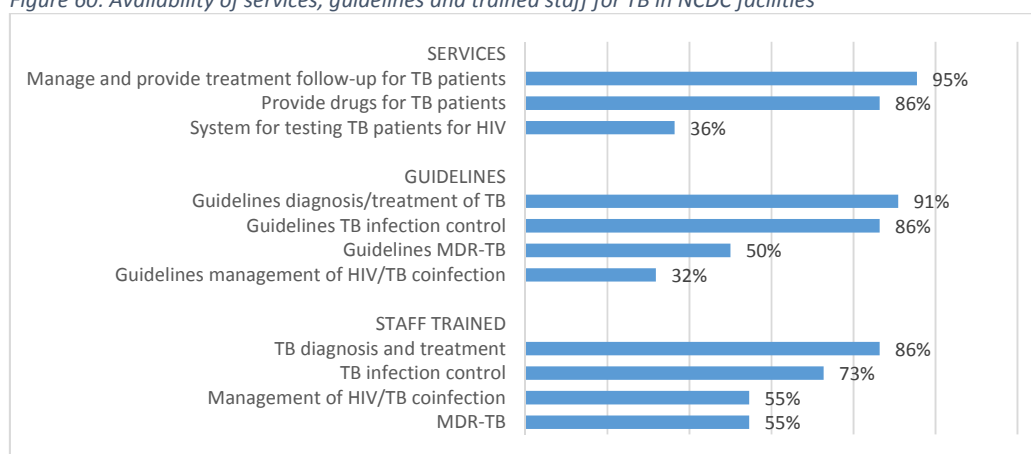
Services provided through all 22 NCDC facilities include management and follow-up of treatment for TB patients (95%), provision of drugs (86%), and HIV testing (36%). The guidelines available in the facilities include those on the diagnosis and treatment of TB (91%), TB infection control (86%), MDR-TB (50%), while guidelines on the management of TB/HIV coinfection are available at a limited number of facilities (32%).

Table 45: Overview of TB diagnostics available by municipality

	Clinical symptoms only	Sputum smear microscopy examination	Culture	Rapid test	Chest X-ray
Al Aziziya	X	X	X		X
Albayda	X	X			X
Aljufra	X	X			X
Alkhums	X	X			X
Almarj	X	X			X
Azzawya	X	X	X		X
Bani Waleed		X	X		X
Daraj	X	X	X	X	X
Darnah	X	X	X	X	X
Ejdabia	X	X	X	X	X
Ghadamis	X	X			X
Ghiryan	X	X			X
Hai Alandalus	X	X	X	X	X
Jalu					X
Misrata					X
Murzuq		X			X
Nalut	X	X			X
Sebha	X	X			X
Tarhuna	X	X			X
Al Betnan	X	X	X	X	X
Zliten	X	X			X
Zwara	X	X		X	X
Total	81%	90%	38%	29%	100%

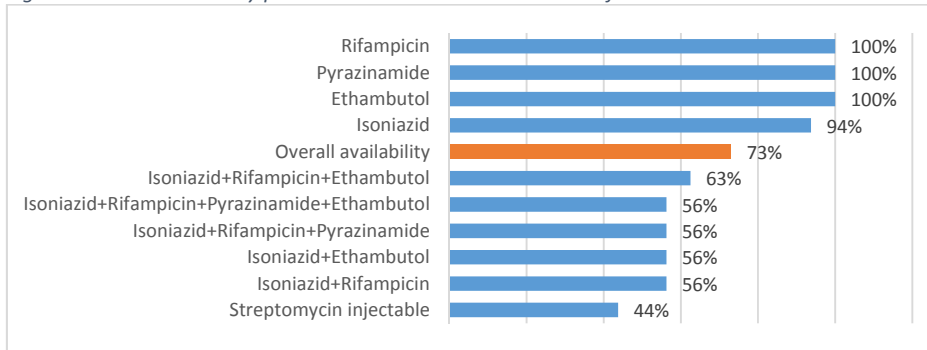
The availability of trained staff for TB services is good, with 86% of facilities having staff specifically trained on TB diagnosis and treatment, 73% being trained on TB infection control, and more than half of the facilities (55%) having staff trained on the management of HIV/TB coinfection and MDR-TB.

Figure 60: Availability of services, guidelines and trained staff for TB in NCDC facilities



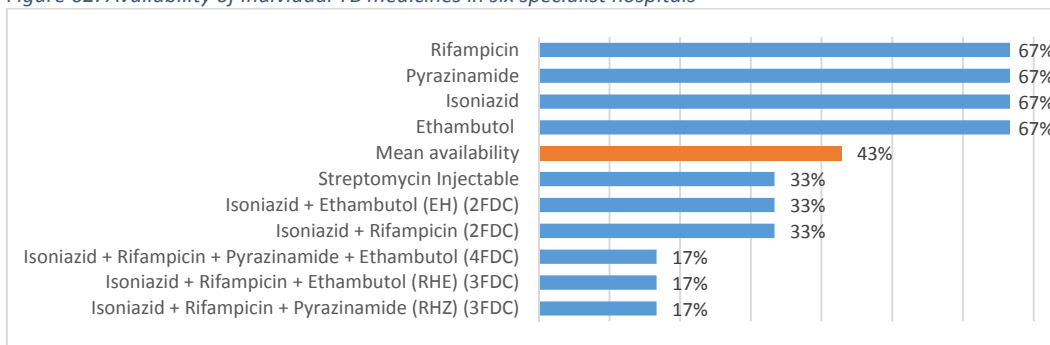
In terms of the provision of TB treatment, 19 out of 22 NCDC facilities have pharmacy storage available to provide patients with medicines. Storage of TB medicines is onsite in 16 facilities, three facilities have offsite drug storage, and three don't have any medicines available at all. The overall availability of TB drugs in the 16 facilities with on-site pharmacy services was 73% according to the reports from the NCDC staff (Figure 61) but when the pharmacy itself was checked, the actual availability of the medicines was only 2%. The data suggests that the individual TB drugs are most commonly used in Libya, while the fixed dose combination drugs are used far less frequently.

Figure 61: Most commonly prescribed TB medicines in 16 NCDC facilities



The availability of TB medicines was also assessed through the SARA Hospital questionnaire, and six specialist hospitals provided information on their stocks. The overall availability of TB medicines at the hospital level was 42%, with the four chest hospitals reporting the availability of Ethambutol, Isoniazid, Pyrazinamide, and Rifampicin (67%). Fixed Dose Combination (FDC) drugs were not readily available, with a range of 17% to 33%.

Figure 62: Availability of individual TB medicines in six specialist hospitals



## 5.2 HIV/AIDS

HIV prevalence is low. The most affected population is people who inject drugs (PWID), with an estimated overall HIV prevalence of 22% in this population (20), although an integrated biobehavioural study conducted in 2010 amongst 328 PWID in Tripoli yielded an estimated prevalence of 87% in this population (22). The most recent population based survey on HIV/AIDS, which used random cluster sampling among 65,000 persons, was carried out in 2004/2005. An HIV prevalence of 0.13% (90 cases) was measured in the general population, indicative of a concentrated epidemic. A higher prevalence in Alkufra in the south (0.67%) and in Tripoli (0.4%) indicated hotspots in urban areas and on migration and drug smuggling routes (23). In 2011 the Tripoli Central Blood Bank reported that 0.3% of blood donors tested HIV positive, with a much higher prevalence noted at the Benghazi Blood Bank during the same period (24). Overwhelmingly low CD4 counts at the time of diagnosis indicate that most People Living with HIV (PLHIV) are identified late in the course of their disease, suggesting that identified cases represent a relatively low proportion of the total number of PLHIV.

The Libyan national response to HIV/AIDS is coordinated by the NCDC. The National AIDS Program (NAP) was launched in 2002, reporting to the Director General of the NCDC. The NAP often also goes by the title 'Department for the control of AIDS and STIs'. The NCDC is responsible for M&E, education and awareness, therapy management and research on HIV/AIDS in Libya. According to the 2015 Country Progress Report

by the NAP, Tripoli Medical Centre (TMC), Tripoli Central Hospital (CH), Al Jumhuria in Benghazi and Sebha Medical Centre are the main hospitals in the country that offer HIV treatment and care. At time of this survey, however, Al Jumhuria Hospital was closed.

### 5.2.1 HIV counselling and testing

The planned implementation of recommendations stemming from a 2009 UNAIDS assessment of VCT (Voluntary Counselling and Testing) services was put on hold when the civil war broke out in 2011. Subsequently, the expansion and improvement of VCT centers planned in the national draft HIV strategy could also not be implemented. At present, most HIV testing continues to be mandatory screening for various certificates (e.g. employment, marriage, driving licenses, hospital admissions, ANC, prison admissions). Laboratory testing for HIV is widely available in both public and private laboratories throughout the country, but it lacks the counselling aspect of VCT. Fixed VCT is available only at the NCDC reference laboratory in Tripoli, which is used primarily for referral services for people sent for confirmatory testing from other laboratories. Prior to the conflict, the NCDC had planned to expand testing to all NCDC regional branches but the plans were put on hold (24).

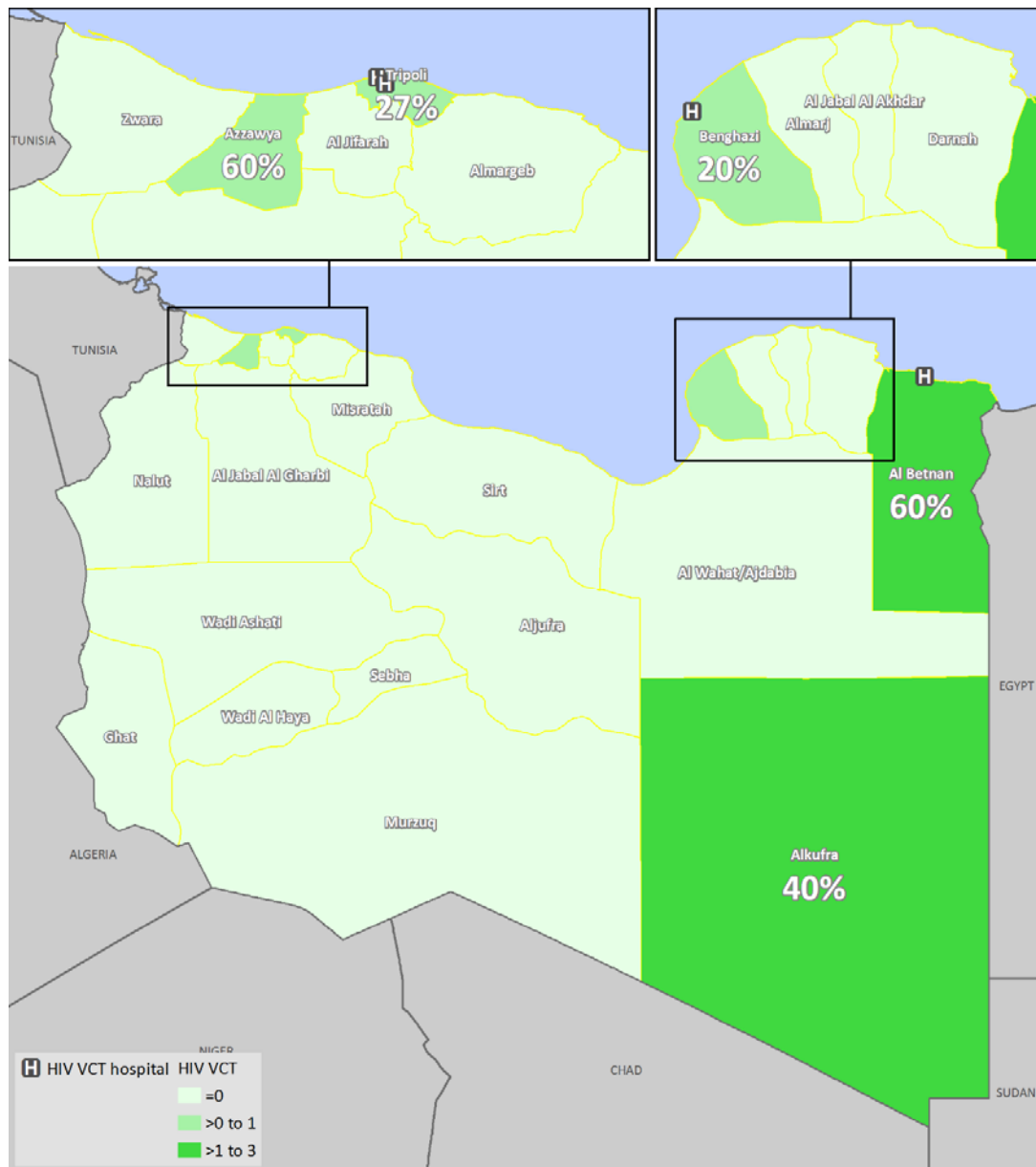
#### 5.2.1.1 Availability and readiness

HIV counselling and testing services are offered by three PHC facilities and five hospitals. These facilities are located in five districts, including Alkufra, Benghazi, Al Betnan, Tripoli and Azzawya. For the limited services that are available, overall readiness scores are low for both the hospital (32%) and the PHC-level services (47%).

Table 46: Availability and readiness index for HIV counselling and testing services by district

	N of PHC facilities offering service	Guidelines HIV counselling and testing	Staff trained HIV counselling and testing	Room with auditory/visual privacy for HIV	HIV rapid test kit available	Condoms in service site	Overall readiness scores	N of hospitals offering service	Guidelines HIV counselling and testing	Staff trained HIV counselling and testing	Room with auditory/visual privacy for HIV	HIV rapid test kit	Condoms in service site	Overall readiness scores
Al Wahat/Ajdabia	0							0						
Alkufra	1	100%	0%	0%	100%	0%	40%	0						
Benghazi	0							1	0%	0%	0%	100%	0%	20%
Al Betnan	1	100%	0%	0%	0%	0%	20%	1	100%	0%	100%	100%	0%	60%
Al Jabal Al Akhdar	0							0						
Darnah	0							0						
Almarj	0							0						
Sirt	0							0						
Aljufra	0							0						
Misratah	0							0						
Almargeb	0							0						
Al Jifarah	0							0						
Tripoli	0							3	33%	0%	33%	67%	0%	27%
Azzawya	1	100%	0%	100%	100%	0%	60%	0						
Zwara	0							0						
Al Jabal Al Gharbi	0							0						
Nalut	0							0						
Wadi Ashati	0							0						
Sebha	0							0						
Wadi Al Haya	0							0						
Murzuq	0							0						
Ghat	0							0						
<b>Total</b>	<b>3</b>	<b>100%</b>	<b>0%</b>	<b>33%</b>	<b>100%</b>	<b>0%</b>	<b>47%</b>	<b>5</b>	<b>40%</b>	<b>0%</b>	<b>40%</b>	<b>80%</b>	<b>0%</b>	<b>32%</b>

Figure 63: Map of availability\* and readiness (in numbers) for HIV counselling and testing services, by district



\* Availability is defined as the ratio of facilities providing a selected service to 100,000 population; service-specific readiness is included in the map as a written percentage; only service-specific referral facilities are mapped

**Box 8: HIV counselling and testing services availability and readiness**

Just eight facilities in Libya offer counselling and testing for HIV. The general capacity for referral of suspect HIV cases to these facilities was not examined. The overall readiness scores for counselling and testing services is 32% for hospital-based facilities and 47% for PHC-based facilities, which indicates a need for improvement in terms of staff training, availability of condoms, and improvement in terms of the privacy of counselling rooms.



### 5.2.1.2 Breakdown of readiness indicators

The proportions reported in this section may not necessarily correspond to those reported for the readiness scores in the previous section, because the number of respondents are often different, given that the data used here may come from a different subset of health facilities or a different section of the survey, or may not reflect all the indicators used to calculate the index scores. The figures in this section can be used as a reference point to assess the validity of the readiness scores, and provide insight into the individual items used for calculating the readiness indices.

The overall readiness index is calculated based on the availability of five tracer items: (1) rapid test kits, (2) guidelines and (3) trainings on HIV counselling and testing services, (4) condoms and (5) room with auditory and visual privacy. The biggest weaknesses in terms of readiness include unavailability of staff trained on counselling and testing in the past two years, and no condoms available in any of the facilities. Rooms offering a private space for counselling are available in only three out of the eight facilities, while only two out of five hospitals had relevant guidelines available.

#### 5.2.1.2.1 Diagnostic testing for HIV

Of the 13 hospitals offering blood screening, all (100%) screened blood for HIV. Out of 58 hospitals questioned, blood testing for HIV was available onsite in 41 locations, and offsite in two hospitals. HIV rapid tests were available in 51 out of 78 hospitals, with corresponding kits available in 49 of these locations. Dry blood spots for HIV viral load were available in 20 out of 78 hospitals, while HIV antibody testing by EIA/ELISA was available in 33 out of 42 facilities providing a response. Molecular/biological techniques for testing HIV viral loads could be done in six out of 41 hospitals, while HIV serology was available in four hospitals.

#### 5.2.1.2.2 Guidelines and trained staff

All four PHC facilities offering HIV counselling and testing reported the availability of relevant guidelines in their premises, while only 40% of hospitals had these guidelines available. In terms of staff training, staff at neither the hospitals nor the PHC facilities that offer HIV services have received relevant training during the preceding two years.

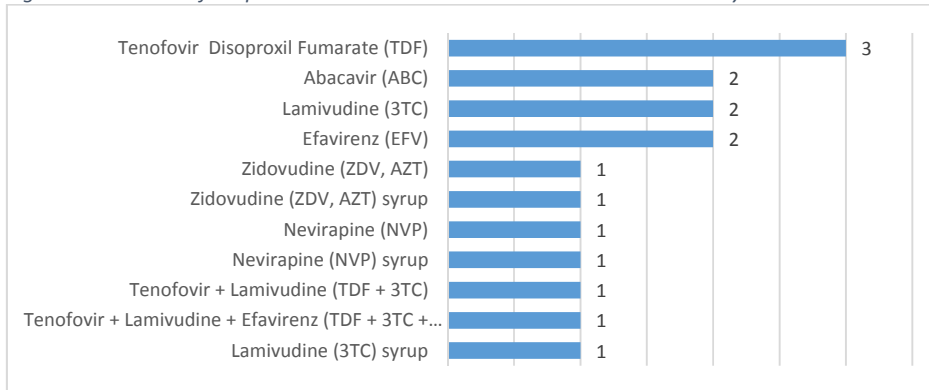
Table 47: PHCs and hospitals with staff trained in HIV-related subjects during the past two years

<b>Training course</b>	<b>N of Hospitals offering services</b>	<b>% of these hospitals with trained staff</b>	<b>N of PHCs offering services</b>	<b>% of these PHCs with trained staff</b>
<i>Prevention of Mother and Child Transmission (PMTCT) for HIV</i>	4	0%	0	0%
<i>Infant and young child feeding (IYCF) for HIV</i>	4	25%	0	0%
<i>HIV counselling and testing</i>	8	0%	3	0%
<i>HIV/AIDS prevention/care/management</i>	8	13%	3	33%
<i>Anti-retroviral therapy (ART)</i>	0	0%	0	0%
<i>Clinical management HIV/AIDS</i>	0	0%	0	0%

#### 5.2.1.2.3 HIV medicines

Three hospitals reported the availability of antiretroviral (ARV) medicines. Of these drugs, only Tenofovir Disoproxil Fumarate (TDF) was available in all hospitals, while two hospitals had Abacavir, Lamivudine and Efavirenz in their pharmacy stores.

Figure 64: Number of hospitals with individual ARV medicines available in Libya.



### 5.2.2 PMTCT services

The dominant route of HIV transmission in young children is from mother to child. With the implementation of a PMTCT program the risk of transmission can be reduced to 1%. Rates of HIV in pregnancy in Libya are low, however. The HIV incidence rate in 70,442 pregnant women in three of the largest hospitals providing maternity care in Tripoli between 2003-2006 ranged from 0.07% to 0.3%, depending on the hospital (24). National guidelines for PMTCT were developed in collaboration with the European Union in 2009.

Pregnant women known to be HIV positive are referred to the nearest hospital offering PMTCT services to reduce the risk of HIV transmission to their infant. Before the start of the 2011 conflict, two sites provided PMTCT services. These were Tripoli Medical Center and Benghazi Centre for Infectious Diseases and Immunology. An expansion was proposed around 2010, but its implementation was affected by the conflict, and the delivery of PMTCT services remains limited across the country.

#### 5.2.2.1 Availability and readiness

At the time of survey, four hospitals offered PMTCT services. These are Benghazi medical center, Tripoli central hospital, Tripoli medical center, and Tubruq Medical Center. Not all hospitals offer the complete range of PMTCT services, with availability scores at an acceptable level only for the hospitals in Tripoli and Benghazi. Only one hospital in Tripoli offers family planning counselling to HIV+ pregnant women, while other PMTCT services are more commonly available. The hospital in Tubruq offers only counselling and testing, and does not have the full package of services available. Readiness scores are low, with an overall score of 37%.

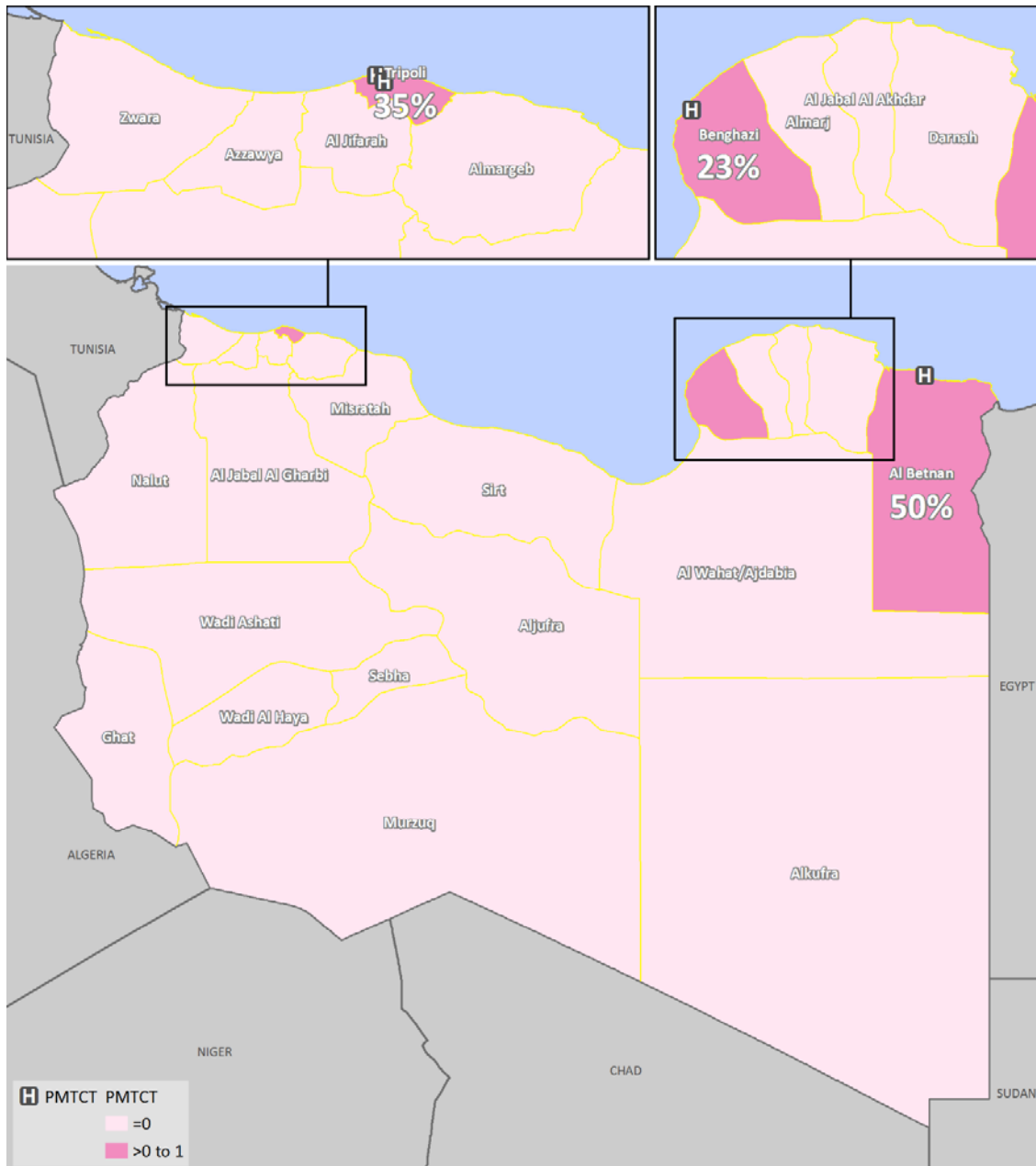
*Box 9: Prevention of Mother to Child Transmission of HIV services: availability and readiness*

Four facilities offer PMTCT services in Libya. Most sites have the full package of PMTCT services available, with an average score of 75%, but overall readiness scores are low at 37%. This low score is due to a lack of guidelines and trained staff available in the hospitals, a significant shortage of medicines, and the limited availability of relevant diagnostics.

Table 48: Availability and readiness of PMTCT services at hospitals, by activity and district

	N of facilities offering PMTCT	HIV counselling and testing to HIV+ pregnant women	HIV counselling and testing to infants born to HIV+ women	ARV prophylaxis to HIV+ pregnant women	ARV prophylaxis to newborns of HIV+ pregnant women	Infant and young child feeding counselling	Nutritional counselling for HIV+ women and their infants	Family planning counselling to HIV+ pregnant women	Mean availability scores	Guidelines scores	Training scores	Diagnosis scores	Equipment (Visual and auditory privacy)	Medicines scores	Overall readiness
<i>Al Wahat/Ajdabia</i>	0														
<i>Alkufra</i>	0														
<i>Benghazi</i>	1	100%	100%	100%	100%	100%	100%	0%	86%	0%	0%	0%	100%	13%	23%
<i>Al Betnan</i>	1	100%	100%	0%	0%	0%	0%	0%	29%	50%	50%	50%	100%	0%	50%
<i>Al Jabal Al Akhdar</i>	0														
<i>Darnah</i>	0														
<i>Almarj</i>	0														
<i>Sirt</i>	0														
<i>Aljufra</i>	0														
<i>Misratah</i>	0														
<i>Almargeb</i>	0														
<i>Al Jifarah</i>	0														
<i>Tripoli</i>	2	100%	100%	100%	100%	100%	100%	50%	93%	0%	0%	50%	100%	25%	35%
<i>Azzawya</i>	0														
<i>Zwara</i>	0														
<i>Al Jabal Al Gharbi</i>	0														
<i>Nalut</i>	0														
<i>Wadi Ashati</i>	0														
<i>Sebha</i>	0														
<i>Wadi Al Haya</i>	0														
<i>Murzuq</i>	0														
<i>Ghat</i>	0														
<b>Total</b>	<b>4</b>	<b>100%</b>	<b>100%</b>	<b>75%</b>	<b>75%</b>	<b>75%</b>	<b>75%</b>	<b>25%</b>	<b>75%</b>	<b>13%</b>	<b>13%</b>	<b>38%</b>	<b>100%</b>	<b>21%</b>	<b>36%</b>

Figure 65: Map of availability\* and readiness (in numbers) of PMTCT services, by district



\* Availability is defined as the ratio of facilities providing a selected service to 100,000 population; service-specific readiness is included in the map as a written percentage; only service-specific referral facilities are mapped

#### 5.2.2.2 Breakdown of readiness indicators

Benghazi medical center has only basic equipment available and almost no medicines, no trained staff and guidelines, and no diagnostics. The hospitals in Tripoli are not much better off, and although Tubruq medical center has a limited number of services available, it is slightly better equipped in terms of trained staff and guidelines, although it has no anti-retroviral medicines available. PMTCT-specific diagnostics are in short supply across all the hospitals, with a domain-specific score of 21%. See Section 5.2.1.2 for more relevant details.

### 5.3 Sexually Transmitted Diseases

Sexually transmitted infections (STIs), also known as Sexually Transmitted Diseases (STDs), are caused by bacteria, viruses, or parasites that are transmitted through unprotected sex (vaginal, anal, or oral) and skin to skin genital contact. Bacterial infections include bacterial vaginosis, chlamydia, gonorrhea, lymphogranuloma venereum (LGV) and syphilis. Viruses cause genital herpes, Hepatitis B, Human Papillomavirus (HPV) and Human Immunodeficiency Virus (HIV). Parasites are responsible for trichomoniasis and pubic lice. Very little data is available on the prevalence of STDs in Libya, with the exception of a limited understanding of the HIV prevalence, which was described in Section 5.2.

Health education, and the monitoring and follow-up of known STD cases in Libya is part of the vertical STD control program run by NCDC. These centers do not have patient contact or provide diagnosis or treatment. Instead, initial diagnosis for STDs is available at any health facility that has a laboratory. Free treatment is available from the PHC facilities and the infectious disease department in the hospitals, with all facilities required to report confirmed STD cases to the NCDC.

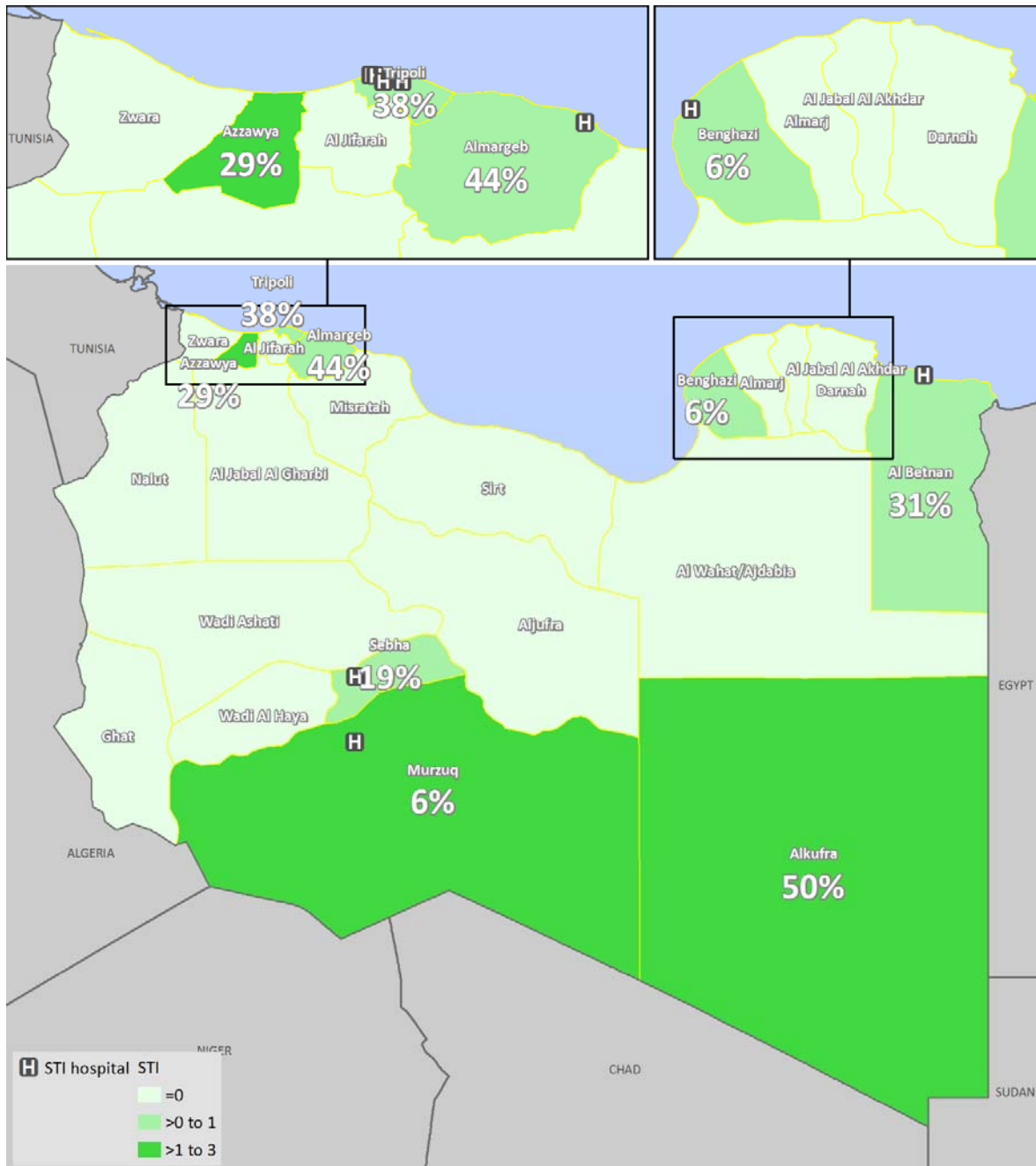
#### 5.3.1 Availability and readiness

Although theoretically a far greater number of facilities should offer diagnosis and treatment of STDs, during the SARA survey only six PHC facilities and nine hospitals, or a total of 15 public health facilities reported offering STD treatment. These facilities are in only eight out of 22 districts, with nine out of 15 facilities located in only two districts (Tripoli and Azzawya), suggesting a severely inequitable distribution of services. Overall readiness scores were low, at 33% for PHC facilities, and 29% for hospitals.

Table 49: Availability and readiness indices for management of STI services by type and district

	PHCs								Hospitals							
	N of facilities offering STI	Diagnose STIs	Treatment for STIs	Guidelines Scores	Staff trained Scores	Diagnostics Scores (Rapid syphilis testing)	Medicine scores	Overall readiness scores	N of facilities offering STI	Diagnose STIs	Treatment for STIs	Guidelines STI diagnosis and treatment	Staff trained STI diagnosis and treatment	Diagnostics Scores (Rapid syphilis testing)	Medicine scores	Overall readiness scores
Al Wahat/Ajdabia	0								0							
Alkufra	1	100%	0%	100%	0%	100%	0%	50%	0							
Benghazi	0								1	100%	100%	0%	0%	0%	25%	6%
Al Betnan	0								1	100%	100%	100%	0%	0%	25%	31%
Al Jabal Al Akhdar	0								0							
Darnah	0								0							
Almarj	0								0							
Sirt	0								0							
Aljufra	0								0							
Misratah	0								0							
Almargeb	0								1	100%	100%	100%	0%	0%	75%	44%
Al Jifarah	0								0							
Tripoli	0								4	100%	100%	50%	0%	50%	50%	38%
Azzawya	5	80%	100%	60%	20%	25%	10%	29%	0							
Zwara	0								0							
Al Jabal Al Gharbi	0								0							
Nalut	0								0							
Wadi Ashati	0								0							
Sebha	0								1	100%	100%	0%	0%	0%	75%	19%
Wadi Al Haya	0								0							
Murzuq	0								1	100%	0%	0%	0%	0%	25%	6%
Ghat	0								0							
<b>Total</b>	<b>6</b>	<b>83%</b>	<b>83%</b>	<b>67%</b>	<b>17%</b>	<b>40%</b>	<b>10%</b>	<b>33%</b>	<b>9</b>	<b>100%</b>	<b>89%</b>	<b>44%</b>	<b>0%</b>	<b>22%</b>	<b>47%</b>	<b>29%</b>

Figure 66: Map of availability\* and readiness (in numbers) of STI services, by district, with referral hospitals



\* Availability is defined as the ratio of facilities providing a selected service to 100,000 population; service-specific readiness is included in the map as a written percentage; only service-specific referral facilities are mapped

*Box 10: Sexually Transmitted Infection services: availability and readiness*

Although the overall prevalence of STIs in Libya is unknown, it can be assumed that transmission is not limited to specific geographical areas. Nevertheless, only eight out of 22 districts seem to have STI specific services available, with six PHC facilities and nine hospitals reportedly offering diagnosis and treatment. Training of staff and availability of medicines are low, and readiness scores do not exceed 35%, indicating that there is a considerable gap in service availability and readiness for STIs.

### 5.3.2 Breakdown of readiness indicators

The proportions reported in this section may not necessarily correspond to those reported for the readiness scores in the previous section. This is because the number of respondents are often different, given that the data used here may come from a different subset of health facilities or a different section of the survey, or may not reflect all the indicators used to calculate the index scores. The figures in this section can be used as a reference point to assess the validity of the readiness scores, and provide insight into the individual items used for calculating the readiness indices.

The overall STD-specific readiness indices are calculated based on the availability of tracer items in four domains: (1) medicines, (2) diagnostic capacity, (3) guidelines and (4) staff having received relevant training on sexually transmitted infections. The availability of antibiotics that can be used for the treatment of STDs at the PHC level is covered in Table 54, while the diagnostic capacity is described in more detail in Chapter 0. Guidelines on the diagnosis and treatment of STDs are available in four out of the six PHC facilities (67%) and four out of the nine hospitals (44%) that offer STD care. None of the nine hospitals report having staff trained in STD diagnosis or treatment, while only one of the six PHC facilities (17%) has a staff member who has received STD training in the past two years.

## 5.4 Leishmaniasis

Transmission of both visceral and cutaneous leishmaniasis occurs in Libya. Transmission occurs throughout the country, although cutaneous leishmaniasis is most common, and is generally found in rural villages in the northwestern part of the country, in the semi-arid area extending from Tripoli to the Tunisian border, and from the coast to the plateau of Jebel Nefusa. Visceral leishmaniasis occurs sporadically, and has been reported from the Benghazi region and the northeastern coastal areas. Diagnosis and free-of-charge treatment is available through PHC and hospital facilities in endemic areas, with suspected cases of visceral leishmaniasis referred to the hospitals for confirmation and treatment. The NCDC, the Environmental Health Services run by the MoH, and other ministries such as the Ministry of Agriculture, share the responsibility for control of the sandfly and rodent populations that are part of the disease transmission cycle. In addition to control, the NCDC is also responsible for health education.

### 5.4.1 Availability of services

Leishmaniasis is not one of the diseases that is included in a standard SARA survey, and therefore no indicators for service-specific availability and readiness are available. Instead, this section will provide a brief overview of a few basic questions that were added to the questionnaire. Leishmaniasis treatment is available in 36 PHC facilities, which can be found in nine out of 22 districts. Most of the facilities can be found in the district of Azzawya, where cutaneous leishmaniasis transmission most commonly occurs.

Table 50: Availability of leishmaniasis services, by district

District	N facilities	N facilities providing leishmaniasis diagnostics	% facilities providing leishmaniasis diagnostics
Al Wahat/Ajdabia	37	0	0%
Alkufra	18	0	0%
Benghazi	31	2	6%
Al Betnan	30	0	0%
Al Jabal Al Akhdar	59	0	0%
Darnah	28	0	0%
Almarj	29	0	0%
Sirt	15	0	0%
Aljufra	13	0	0%
Misratah	61	4	7%
Almargeb	109	2	2%
Al Jifarah	62	2	3%
Tripoli	115	1	1%
Azzawya	68	20	29%
Zwara	35	1	3%
Al Jabal Al Gharbi	117	3	3%
Nalut	31	1	3%
Wadi Ashati	15	0	0%
Sebha	22	0	0%
Wadi Al Haya	25	0	0%
Murzuq	87	0	0%
Ghat	9	0	0%
<b>Total</b>	<b>1,016</b>	<b>36</b>	<b>4%</b>

Diagnosis of leishmaniasis is most commonly done by clinical history only (53% of 36 clinics). Direct smear can be performed in 25% of facilities, with PCR (6%) and culture (3%) rarely available. In terms of treatment, local disinfection is most commonly prescribed (64%). The availability of injections of Pentostam (42%) and Glucantime (28%) are available in select facilities only, while thermotherapy is available in only two facilities (6%).

Figure 67: Diagnosis and treatment methods for leishmaniasis in 36 PHC facilities

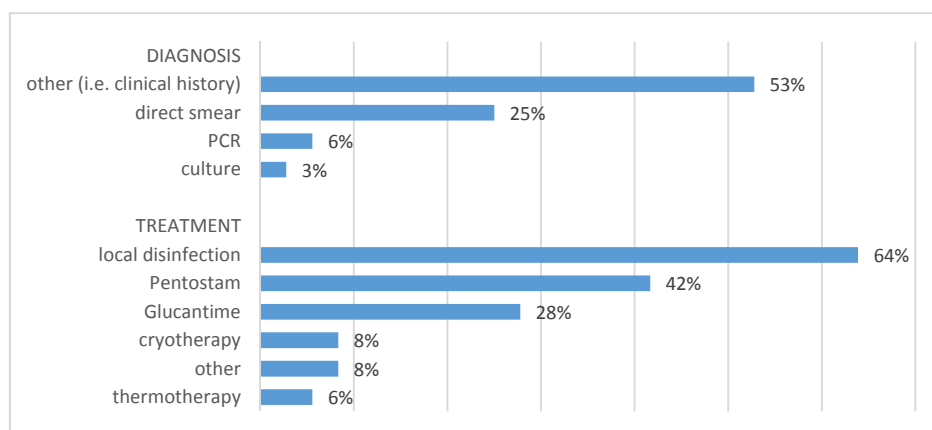
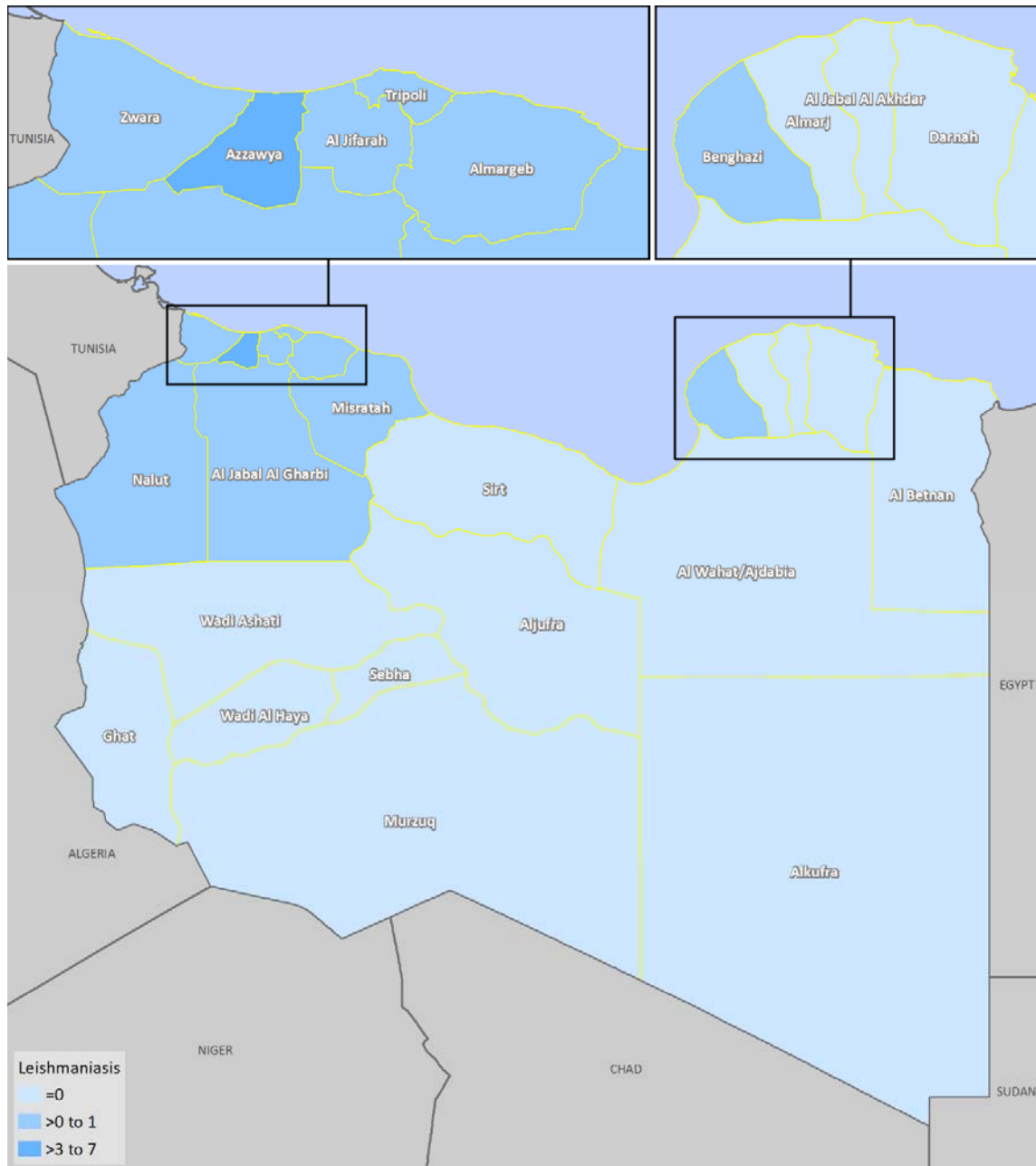




Figure 68: Map of availability\* of leishmaniasis services, by district



\* Availability is defined as the ratio of facilities providing a selected service to 100,000 population

**Box 11: Leishmaniasis services: availability and readiness**

Leishmaniasis services are primarily provided in those areas of the country where transmission is known to occur. With only 36 facilities located in nine districts providing services, availability across the country is limited. The capacity to deliver these services is further limited by the low availability of relevant diagnostics methods and medicines.

## 5.5 Brucellosis

Brucellosis transmission is a significant public health problem especially in the northwest of Libya. A 2012 study reviewed the laboratory records of over 3,500 suspected human samples referred from hospitals in Al Jabal al Gharbi district in northwestern Libya for the periods 1983–2008 and 2009. The seropositive brucellosis rates for the two respective periods were 50% and 65%. The overall prevalence was estimated to be 0.2–22 cases per 100 000 inhabitants (25). A study involving humans and domestic animals found 40% seropositivity among healthy suburban residents and 28% among ruminants and camels in the northwest region of Libya (26).

Diagnosis and treatment are provided through both selected PHC facilities and a few specialized hospitals. The NCDC works with the Animal Health Department of the Ministry of Agriculture in the control of brucellosis.

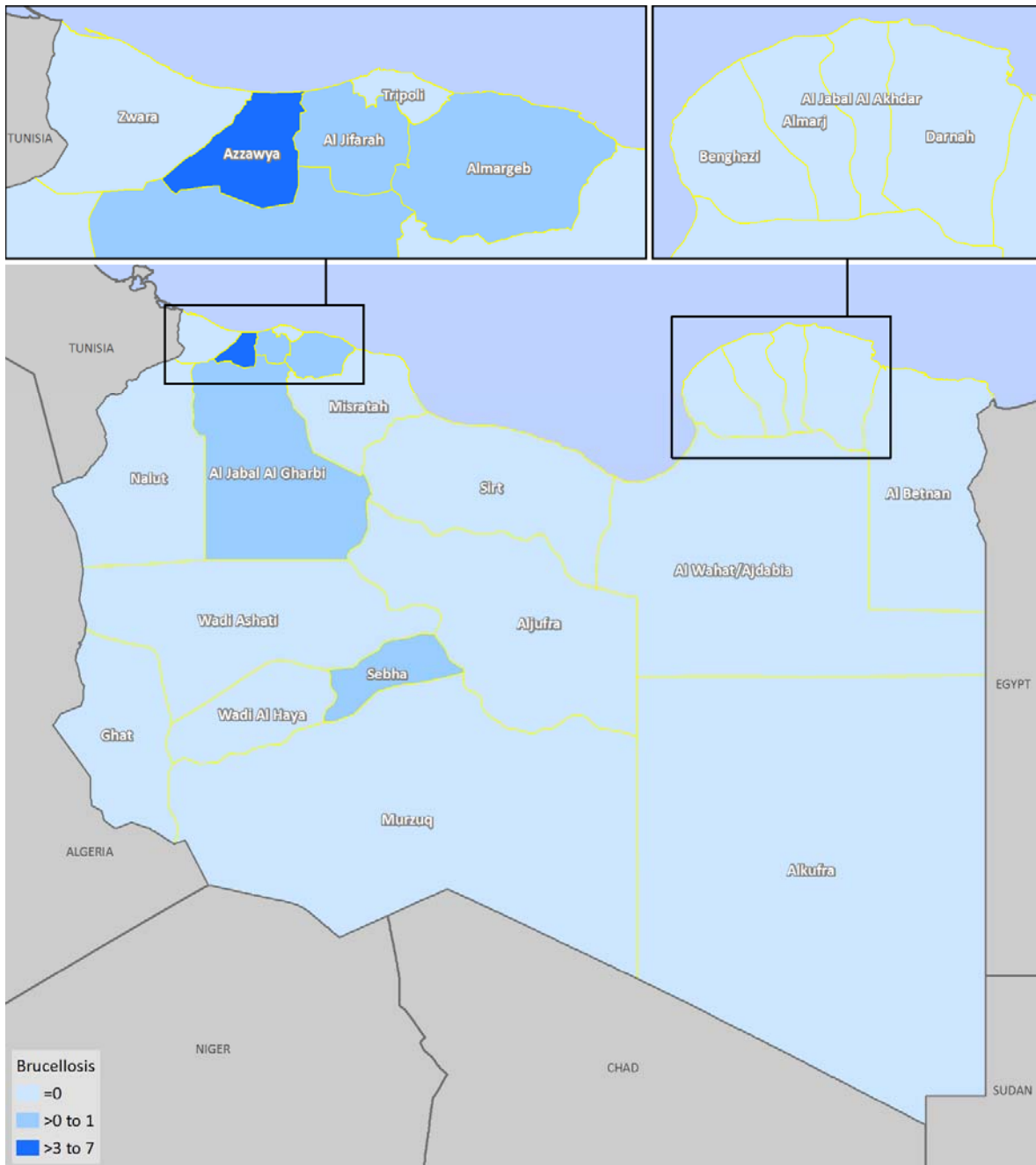
### 5.5.1 Availability of services

The SARA hospital survey did not include any questions on brucellosis, therefore no hospital data is presented here. Furthermore, as brucellosis is not one of the services included in the service-specific readiness and availability component of SARA surveys, no methodology has yet been developed to calculate specific availability and readiness indices for brucellosis services. The data presented here comes from a small number of questions that were added to the SARA survey for Libya, and focuses primarily on the 28 PHC facilities through which brucellosis services are being provided. These facilities are available in five out of 22 districts, with the largest number of facilities (21 in total) located in the district of Azzawya.

Table 51: Availability of brucellosis services, by district

District	N facilities	N facilities offering brucellosis diagnostics	% facilities offering brucellosis diagnostics
Al Wahat/Ajdabia	37	0	0%
Alkufra	18	0	0%
Benghazi	31	0	0%
Al Betnan	30	0	0%
Al Jabal Al Akhdar	59	0	0%
Darnah	28	0	0%
Almarj	29	0	0%
Sirt	15	0	0%
Aljufra	13	0	0%
Misratah	61	0	0%
Almargeb	109	1	1%
Al Jifarah	62	2	3%
Tripoli	115	0	0%
Azzawya	68	21	31%
Zwara	35	0	0%
Al Jabal Al Gharbi	117	3	3%
Nalut	31	0	0%
Wadi Ashati	15	0	0%
Sebha	22	1	5%
Wadi Al Haya	25	0	0%
Murzuq	87	0	0%
Ghat	9	0	0%
<b>Total</b>	<b>1,016</b>	<b>28</b>	<b>3%</b>

Figure 69: Map of availability\* of brucellosis services, by district



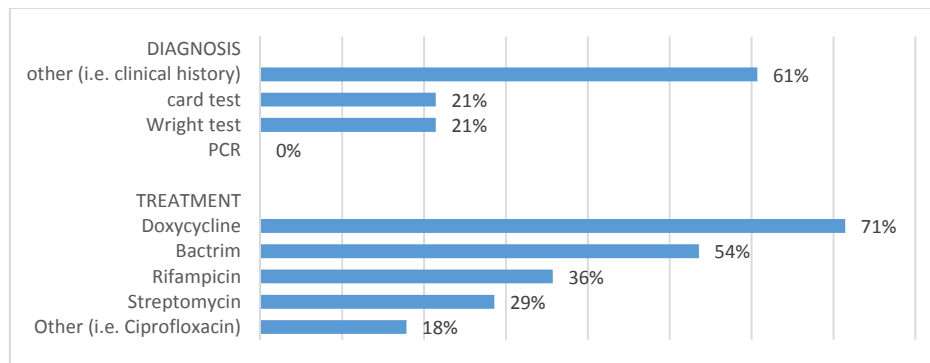
\* Availability is defined as the ratio of facilities providing a selected service to 100,000 population

*Box 12: Brucellosis services: availability and readiness*

Brucellosis services are primarily provided in the northwest of the country, where transmission is known to occur. With only 28 facilities located in five districts providing relevant services, availability across the country is limited. The capacity to deliver these services is further limited by the low availability of relevant diagnostics methods and medicines.

Brucellosis diagnosis is most commonly done using non lab-based methods such as clinical history (61% of 28 facilities), followed by the card test and the Wright test (21%). PCR testing for brucellosis is not available in PHC facilities. The most commonly available treatment is Doxycycline (71% of facilities), followed by Bactrim (54%). Least commonly available are Streptomycin (29%) and other medicines such as Ciprofloxacin (18%).

Figure 70: Diagnosis and treatment methods for brucellosis in 28 PHC facilities



## 5.6 Overview of communicable diseases services through PHC facilities, by municipality

Early diagnosis and treatment of communicable diseases can avert further spread of the disease, making it a potentially effective control method. Municipality level availability of these services would therefore benefit communicable disease control programs. This section includes data on PHC level communicable diseases services for 100 municipalities. The municipality of Alshweirf is not included, as it did not have any functional PHC facility at the time of survey.

### 5.6.1 Availability and readiness of communicable diseases services

The average number of communicable disease specific services available, out of six potential services included in the survey, is 0.5 per municipality. Most municipalities (69 out of 100) do not have any communicable disease services available. The most commonly available services are tuberculosis diagnosis and treatment (22% of municipalities), leishmaniasis diagnosis and treatment (14% of municipalities), and brucellosis diagnosis and treatment (8% of municipalities). A small number of PHC facilities offer HIV and STI services, but these services are also provided by a small number of hospitals. PMTCT services are not provided through PHC facilities at all. Overall readiness scores, where data is available, are low for all types of services across all municipalities. See Table 52 for more details.

Table 52: Availability and readiness of communicable disease services by municipality

	N facilities	Tuberculosis		PMTCT	HIV counselling and testing		STI diagnosis and treatment		Leishmaniasis	Brucellosis	N of the 6 CD services available
		N providing services (availability)	readiness	% providing services	N (%) providing services	readiness	N (%) providing services	readiness	N (%) providing services	N (%) providing services	
Abusliem	15	0 (0%)		0 (0%)	0 (0%)		0 (0%)		0 (0%)	0 (0%)	0
Ain Zara	12	0 (0%)		0 (0%)	0 (0%)		0 (0%)		0 (0%)	0 (0%)	0
Al Ajaylat	21	0 (0%)		0 (0%)	0 (0%)		0 (0%)		1 (4.5%)	0 (0%)	1
Al Aziziya	14	1 (7%)	40%	0 (0%)	0 (0%)		0 (0%)		1 (6.7%)	1 (6.7%)	3
Al Galaa	4	0 (0%)		0 (0%)	0 (0%)		0 (0%)		0 (0%)	0 (0%)	0
Al Jagboub	1	0 (0%)		0 (0%)	0 (0%)		0 (0%)		0 (0%)	0 (0%)	0
Al Maya	6	0 (0%)		0 (0%)	0 (0%)		0 (0%)		0 (0%)	0 (0%)	0
Al Shate Al Garbe	20	0 (0%)		0 (0%)	0 (0%)		0 (0%)		0 (0%)	0 (0%)	0
Al Shate Al Sharge	15	0 (0%)		0 (0%)	0 (0%)		0 (0%)		0 (0%)	0 (0%)	0
Al Swani	11	0 (0%)		0 (0%)	0 (0%)		0 (0%)		1 (8.3%)	1 (8.3%)	2
Alabyar	12	0 (0%)		0 (0%)	0 (0%)		0 (0%)		0 (0%)	0 (0%)	0
Alasabaa	13	0 (0%)		0 (0%)	0 (0%)		0 (0%)		0 (0%)	0 (0%)	0
Albawanees	4	0 (0%)		0 (0%)	0 (0%)		0 (0%)		0 (0%)	0 (0%)	0
Albayda	21	1 (5%)	31%	0 (0%)	0 (0%)		0 (0%)		0 (0%)	0 (0%)	0
Albrayga	5	0 (0%)		0 (0%)	0 (0%)		0 (0%)		0 (0%)	0 (0%)	0
Aldawoon	1	0 (0%)		0 (0%)	0 (0%)		0 (0%)		0 (0%)	0 (0%)	0
Algatroun	3	0 (0%)		0 (0%)	0 (0%)		0 (0%)		0 (0%)	0 (0%)	0
Algaygab	3	0 (0%)		0 (0%)	0 (0%)		0 (0%)		0 (0%)	0 (0%)	0
Alghrayfa	11	0 (0%)		0 (0%)	0 (0%)		0 (0%)		0 (0%)	0 (0%)	0
Algurdha Ashshati	19	0 (0%)		0 (0%)	0 (0%)		0 (0%)		0 (0%)	0 (0%)	0
Alharaba	3	0 (0%)		0 (0%)	0 (0%)		0 (0%)		0 (0%)	0 (0%)	0
Alhawamid	3	0 (0%)		0 (0%)	0 (0%)		0 (0%)		0 (0%)	0 (0%)	0
Aljmail	17	0 (0%)		0 (0%)	0 (0%)		0 (0%)		0 (0%)	0 (0%)	0
Aljufra	13	1 (7%)	40%	0 (0%)	0 (0%)		0 (0%)		0 (0%)	0 (0%)	1
Alkhums	32	1 (3%)	51%	0 (0%)	0 (0%)		0 (0%)		1 (3%)	0 (0%)	2
Alkufra	17	0 (0%)		0 (0%)	1 (5.9%)	40%	1 (5.9%)	50%	0 (0%)	0 (0%)	2
Almarj	8	1 (11%)	33%	0 (0%)	0 (0%)		0 (0%)		0 (0%)	0 (0%)	1
Alqubba	6	0 (0%)		0 (0%)	0 (0%)		0 (0%)		0 (0%)	0 (0%)	0
Alsharguiya	11	0 (0%)		0 (0%)	0 (0%)		0 (0%)		0 (0%)	0 (0%)	0
Arrajban	3	0 (0%)		0 (0%)	0 (0%)		0 (0%)		0 (0%)	0 (0%)	0
Arrayayna	4	0 (0%)		0 (0%)	0 (0%)		0 (0%)		0 (0%)	0 (0%)	0
Arrhaibat	5	0 (0%)		0 (0%)	0 (0%)		0 (0%)		0 (0%)	0 (0%)	0
Ashshgega	3	0 (0%)		0 (0%)	0 (0%)		0 (0%)		0 (0%)	0 (0%)	0
Assahel	9	0 (0%)		0 (0%)	0 (0%)		0 (0%)		0 (0%)	0 (0%)	0
Aujala	8	0 (0%)		0 (0%)	0 (0%)		0 (0%)		0 (0%)	0 (0%)	0
Azzahra	16	0 (0%)		0 (0%)	0 (0%)		0 (0%)		0 (0%)	0 (0%)	0
Azzawya	34	1 (3%)	67%	0 (0%)	0 (0%)		2 (5.9%)	13%	17 (33.3%)	16 (32%)	4
Azzintan	11	0 (0%)		0 (0%)	0 (0%)		0 (0%)		2 (15.4%)	2 (15.4%)	2
Bani Waleed	17	1 (6%)	46%	0 (0%)	0 (0%)		0 (0%)		3 (15%)	0 (0%)	2
Baten Aljabal	5	0 (0%)		0 (0%)	0 (0%)		0 (0%)		0 (0%)	0 (0%)	0
Benghazi	25	0 (0%)		0 (0%)	0 (0%)		0 (0%)		2 (7.4%)	0 (0%)	1
Bint Bayya	10	0 (0%)		0 (0%)	0 (0%)		0 (0%)		0 (0%)	0 (0%)	0
Bir Alashhab	1	0 (0%)		0 (0%)	0 (0%)		0 (0%)		0 (0%)	0 (0%)	0
Daraj	8	1 (11%)	67%	0 (0%)	0 (0%)		0 (0%)		0 (0%)	0 (0%)	1
Darnah	14	1 (7%)	46%	0 (0%)	0 (0%)		0 (0%)		0 (0%)	0 (0%)	1
Ejdabia	12	1 (8%)	67%	0 (0%)	0 (0%)		0 (0%)		0 (0%)	0 (0%)	1
Ejkherra	2	0 (0%)		0 (0%)	0 (0%)		0 (0%)		0 (0%)	0 (0%)	0
Emsaed	2	0 (0%)		0 (0%)	0 (0%)		0 (0%)		0 (0%)	0 (0%)	0
Espeaa	4	0 (0%)		0 (0%)	0 (0%)		0 (0%)		0 (0%)	0 (0%)	0
Garaballi	18	0 (0%)		0 (0%)	0 (0%)		0 (0%)		0 (0%)	0 (0%)	0
Gasr Akhyar	11	0 (0%)		0 (0%)	0 (0%)		0 (0%)		0 (0%)	0 (0%)	0
Gasr Bin Ghasheer	4	0 (0%)		0 (0%)	0 (0%)		0 (0%)		0 (0%)	0 (0%)	0
Gemienis	8	0 (0%)		0 (0%)	0 (0%)		0 (0%)		0 (0%)	0 (0%)	0
Ghadamis	1	1 (50%)	15%	0 (0%)	0 (0%)		0 (0%)		0 (0%)	0 (0%)	1
Gharb Azzawya	11	0 (0%)		0 (0%)	0 (0%)		1 (9.1%)	31%	0 (0%)	0 (0%)	1
Ghat	9	0 (0%)		0 (0%)	0 (0%)		0 (0%)		0 (0%)	0 (0%)	0
Ghiryen	51	1 (2%)	40%	0 (0%)	0 (0%)		0 (0%)		0 (0%)	0 (0%)	1

	N facilities	Tuberculosis		PMTCT	HIV counselling and testing		STI diagnosis and treatment		Leishmaniasis	Brucellosis	N of the 6 CD services available
		N providing services (availability)	readiness	% providing services	N (%) providing services	readiness	N (%) providing services	readiness	N (%) providing services	N (%) providing services	
Hai Alandalus	17	1 (6%)	52%	0 (0%)	0 (0%)		0 (0%)		0 (0%)	0 (0%)	1
Jadu	7	0 (0%)		0 (0%)	0 (0%)		0 (0%)		0 (0%)	0 (0%)	0
Jalu	9	1 (10%)	19%	0 (0%)	0 (0%)		0 (0%)		0 (0%)	0 (0%)	1
Janzour	19	0 (0%)		0 (0%)	0 (0%)		0 (0%)		1 (5%)	0 (0%)	1
Jardas Alabeed	5	0 (0%)		0 (0%)	0 (0%)		0 (0%)		0 (0%)	0 (0%)	0
Kabaw	5	0 (0%)		0 (0%)	0 (0%)		0 (0%)		0 (0%)	0 (0%)	0
Khalege Alsedra	8	0 (0%)		0 (0%)	0 (0%)		0 (0%)		0 (0%)	0 (0%)	0
Kikkla	5	0 (0%)		0 (0%)	0 (0%)		0 (0%)		0 (0%)	0 (0%)	0
Labriq	2	0 (0%)		0 (0%)	0 (0%)		0 (0%)		0 (0%)	0 (0%)	0
Marada	1	0 (0%)		0 (0%)	0 (0%)		0 (0%)		0 (0%)	0 (0%)	0
Misrata	25	1 (4%)	23%	0 (0%)	0 (0%)		0 (0%)		0 (0%)	0 (0%)	1
Mizda	3	0 (0%)		0 (0%)	0 (0%)		0 (0%)		0 (0%)	0 (0%)	0
Msallata	13	0 (0%)		0 (0%)	0 (0%)		0 (0%)		0 (0%)	0 (0%)	0
Murzuq	10	1 (9%)	46%	0 (0%)	0 (0%)		0 (0%)		0 (0%)	0 (0%)	1
Nalut	3	1 (25%)	40%	0 (0%)	0 (0%)		0 (0%)		1 (25%)	0 (0%)	2
Nesma	5	0 (0%)		0 (0%)	0 (0%)		0 (0%)		1 (16.7%)	1 (16.7%)	2
Rigdaleen	4	0 (0%)		0 (0%)	0 (0%)		0 (0%)		0 (0%)	0 (0%)	0
Sabratha	20	0 (0%)		0 (0%)	0 (0%)		0 (0%)		0 (0%)	0 (0%)	0
Sebha	18	1 (5%)	42%	0 (0%)	0 (0%)		0 (0%)		0 (0%)	1 (5.3%)	2
Shahhat	26	0 (0%)		0 (0%)	0 (0%)		0 (0%)		0 (0%)	0 (0%)	0
Sidi Assayeh	2	0 (0%)		0 (0%)	0 (0%)		0 (0%)		0 (0%)	0 (0%)	0
Sirt	7	0 (0%)		0 (0%)	0 (0%)		0 (0%)		0 (0%)	0 (0%)	0
Sug Aljumaa	21	0 (0%)		0 (0%)	0 (0%)		0 (0%)		0 (0%)	0 (0%)	0
Sug Alkhamees	5	0 (0%)		0 (0%)	0 (0%)		0 (0%)		0 (0%)	0 (0%)	0
Suloug	5	0 (0%)		0 (0%)	0 (0%)		0 (0%)		0 (0%)	0 (0%)	0
Surman	14	0 (0%)		0 (0%)	1 (7.1%)	60%	2 (14.3%)	41%	3 (17.6%)	5 (26.3%)	4
Tajoura	18	0 (0%)		0 (0%)	0 (0%)		0 (0%)		0 (0%)	0 (0%)	0
Taraghin	11	0 (0%)		0 (0%)	0 (0%)		0 (0%)		0 (0%)	0 (0%)	0
Tarhuna	34	1 (3%)	27%	0 (0%)	0 (0%)		0 (0%)		1 (2.9%)	1 (2.9%)	3
Tazirbu	1	0 (0%)		0 (0%)	0 (0%)		0 (0%)		0 (0%)	0 (0%)	0
Thaher Aljabal	5	0 (0%)		0 (0%)	0 (0%)		0 (0%)		0 (0%)	0 (0%)	0
Tobruk	26	1 (4%)	48%	0 (0%)	1 (3.8%)	20%	0 (0%)		0 (0%)	0 (0%)	2
Toukra	4	0 (0%)		0 (0%)	0 (0%)		0 (0%)		0 (0%)	0 (0%)	0
Tripoli	13	0 (0%)		0 (0%)	0 (0%)		0 (0%)		0 (0%)	0 (0%)	0
Ubari	4	0 (0%)		0 (0%)	0 (0%)		0 (0%)		0 (0%)	0 (0%)	0
Umm arrazam	8	0 (0%)		0 (0%)	0 (0%)		0 (0%)		0 (0%)	0 (0%)	0
Wadi Etba	13	0 (0%)		0 (0%)	0 (0%)		0 (0%)		0 (0%)	0 (0%)	0
Wazin	1	0 (0%)		0 (0%)	0 (0%)		0 (0%)		0 (0%)	0 (0%)	0
Yefren	5	1 (17%)	58%	0 (0%)	0 (0%)		0 (0%)		0 (0%)	0 (0%)	1
Zamzam	5	0 (0%)		0 (0%)	0 (0%)		0 (0%)		0 (0%)	0 (0%)	0
Ziltun	6	0 (0%)		0 (0%)	0 (0%)		0 (0%)		0 (0%)	0 (0%)	0
Zliten	25	1 (4%)	40%	0 (0%)	0 (0%)		0 (0%)		1 (3.8%)	0 (0%)	2
Zwara	6	1 (14%)	67%	0 (0%)	0 (0%)		0 (0%)		0 (0%)	0 (0%)	1
<b>Total</b>	<b>1071</b>	<b>22 (2%)</b>	<b>44%</b>	<b>0 (0%)</b>	<b>3 (0.3%)</b>	<b>47%</b>	<b>6 (0.6%)</b>	<b>33%</b>	<b>36 (3.3%)</b>	<b>28 (2.5%)</b>	<b>0.51</b>

### 5.6.2 Breakdown of readiness indicators

Due to the small number of facilities offering specific services for communicable diseases, a full breakdown of readiness indicators by municipality is not provided, as it would largely consist of a repetition of the data provided in the disease-specific sections of this chapter. This section will highlight only the availability of trained staff and essential medicines for communicable disease service provision.

#### 5.6.2.1 Availability of staff trained in communicable diseases in PHC facilities

As PMTCT is not provided through PHC facilities, it is not surprising to find that no health facilities have any trained staff in topics related to these services. One facility did report having a staff member trained

in HIV prevention and care in adolescents. Overall, the best rates of service-specific training can be found in the NCD facilities related to the diagnosis and treatment of tuberculosis, ranging from 55% to 86% of the facilities having trained staff, depending on the topic. Notwithstanding the relatively high rates of trained staff, there remains a need for further training in TB, as well as the diagnosis and treatment for all other communicable diseases.

Table 53: Proportion of PHC facilities with staff trained in communicable disease topics in the past two years

Training course	N of PHCs offering services	% of these PHCs with trained staff
Prevention of Mother and Child Transmission (PMTCT) for HIV	0	
Infant and young child feeding (IYCF)	0	
HIV counselling and testing	3	0%
HIV/AIDS prevention/care/management adolescents	3	33%
Anti-retroviral therapy (ART)	0	
Clinical management HIV/AIDS	0	
Sexually transmitted infections (STI) diagnosis and treatment	6	17%
Tuberculosis (TB) diagnosis and treatment	22*	86%
Management of HIV/TB coinfection	22*	55%
Multi-drug resistant (MDR) TB	22*	55%
TB infection control	22*	73%

\*NCD clinics

#### 5.6.2.2 Availability of individual medicines for communicable diseases in PHC facilities

With an overall availability of 19% for a selection of seven anti-infective medicines in 318 PHC facilities that reported having pharmaceutical storage available, there is a clear indication of an acute and significant shortage of medicines for the treatment of communicable diseases.

Table 54: Availability of individual anti-infective medicines in PHC facilities, by district

	N of PHCs having drug store	Co-trimoxazole cap/tab	Fluconazole cap/tab or suspension	Albendazole or Mebendazole cap/tab	Metronidazole cap/tab	Amoxicillin cap/tab	Ceftriaxone injection	Ciprofloxacin cap/tab	Overall availability
Al Wahat/Ajdabia	11	9%	0%	18%	9%	18%	18%	9%	12%
Alkufra	10	10%	10%	10%	20%	20%	20%	20%	16%
Benghazi	21	43%	0%	33%	33%	5%	19%	43%	25%
Al Betnan	1	100%	100%	100%	100%	100%	100%	100%	100%
Al Jabal Al Akhdar	21	86%	29%	91%	81%	81%	33%	76%	68%
Darnah	1	100%	100%	100%	100%	100%	100%	100%	100%
Almarj	4	75%	50%	100%	100%	100%	75%	100%	86%
Sirt	5	0%	0%	0%	0%	0%	0%	0%	0%
Aljufra	1	100%	0%	100%	0%	100%	0%	0%	43%
Misratah	22	23%	18%	23%	18%	23%	14%	18%	19%
Almargeb	48	0%	0%	2%	6%	19%	4%	4%	5%
Al Jifarah	9	22%	22%	22%	22%	22%	22%	22%	22%
Tripoli	64	9%	2%	11%	2%	45%	14%	19%	15%
Azzawya	56	7%	2%	16%	30%	43%	9%	5%	16%
Zwara	22	0%	0%	5%	0%	5%	0%	0%	1%
Al Jabal Al Gharbi	12	42%	42%	42%	42%	50%	42%	42%	43%
Nalut	1	0%	0%	0%	0%	0%	0%	0%	0%
Wadi Ashati	0								
Sebha	3	0%	33%	67%	0%	0%	0%	0%	14%
Wadi Al Haya	0								
Murzuq	2	0%	0%	0%	0%	0%	0%	0%	0%
Ghat	4	0%	0%	0%	0%	0%	0%	0%	0%
<b>Total</b>	<b>318</b>	<b>18%</b>	<b>8%</b>	<b>21%</b>	<b>20%</b>	<b>33%</b>	<b>15%</b>	<b>20%</b>	<b>19%</b>

Oral Amoxicillin was most widely available, at 33% of facilities, with oral Fluconazole available in only 8% of facilities. Eighteen out of 22 districts had an overall availability below 50% for the seven tracer drugs, with Al Betnan and Darnah districts performing best, having 100% availability of all seven medicines. The significant shortage of these essential medicines will severely hamper the delivery of potentially life-saving treatment for communicable diseases.

## 5.7 Overview of communicable diseases services by hospital facility

Table 56 provides an overview of service-specific availability and readiness data for communicable disease diagnosis and treatment at the hospital level. Hospitals that were not known to provide the earmarked services were excluded from the table, but this does not necessarily mean that the list is comprehensive. It is known, for example, that specific referral hospitals exist for more complicated cases of leishmaniasis, but these were not specifically identified in this survey. Therefore, the overview consists of only 13 out of 80 functional hospitals. This is a clear indication that the availability of specialist care for key infectious diseases is limited.

This is also reflected in the overview of the availability of hospital staff with specialized training. Even in the four hospitals that offer PMTCT, staff have received little to no training on specific services that are included in this package of care. Even specialist training on STD diagnosis and treatment has not been received by any hospital staff in the preceding two years.

Table 55: Proportion of hospitals with staff receiving training in communicable disease topics in the last two years

<i>Training course</i>	<b>N of Hospitals offering services</b>	<b>% of these hospitals with trained staff</b>
<i>Prevention of Mother and Child Transmission (PMTCT) for HIV</i>	4	0%
<i>Infant and young child feeding (IYCF)</i>	4	25%
<i>HIV counselling and testing</i>	8	0%
<i>HIV/AIDS prevention/care/management</i>	8	13%
<i>Clinical management HIV/AIDS</i>	0	0%
<i>Sexually transmitted infections (STI) diagnosis and treatment</i>	9	0%

The general availability of anti-infective drugs across all 79 hospitals providing responses was 37% for the selected sample of 21 medicines. Amoxicillin tablets (73%) and Gentamycin injections (66%) were the most commonly available medicines, although they were also the most likely to be out of stock in the preceding three months (in 29% of hospitals). Intravenous (IV) drugs to treat fungal infections (11%) and Clindamycin injection (10%) were the least commonly available.



Figure 71: Availability and stock-outs of individual anti-infective medicines in 79 hospitals

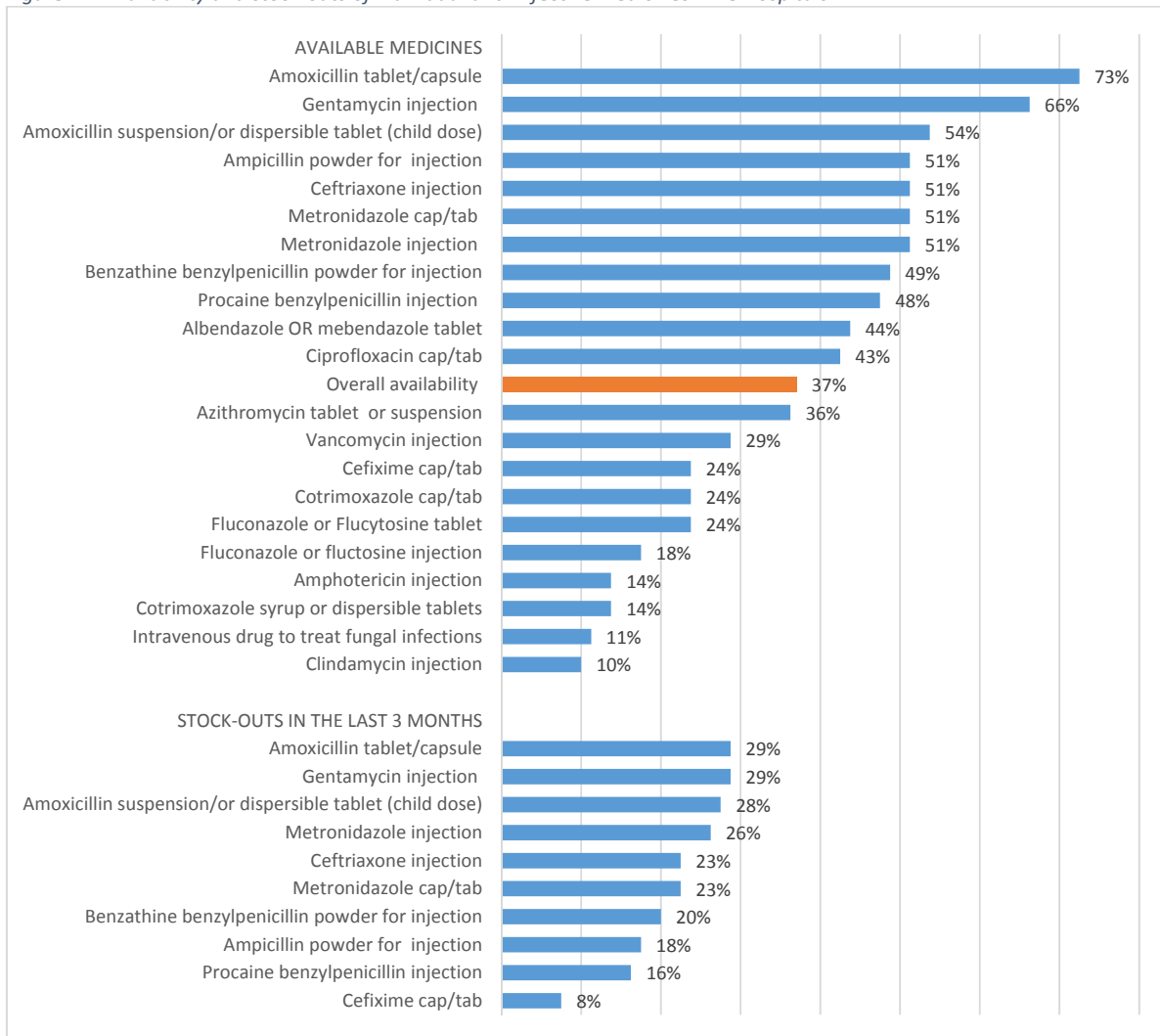


Table 56: Communicable disease availability and readiness scores, by hospital

	TB services offered		HIV services offered					PMTCT services offered							STI services offered					
	Guidelines HIV counselling and testing	Staff trained HIV counselling and testing	Both auditory and visual privacy	Diagnosis HIV rapid test kit available	Medicines Condoms in service site	Overall readiness HIV counselling & testing	N of hospitals offering HIV counselling and testing services	PMTCT Guidelines scores	PMTCT Trained Staff Scores	PMTCT Diagnostics scores	PMTCT Private room	PMTCT Medicines scores	PMTCT Overall readiness	N of hospitals PMTCT services offered	Guidelines STI diagnosis and treatment	Staff trained STI diagnosis and treatment	Diagnosis (Rapid syphilis testing)	STI Medicines scores	STI Overall readiness	N of hospitals offering STI services
<i>Al Jalea gynecology hospital - Tripoli</i>	X			X		40%	X							0%	0%	0%	75%	19%	X	
<i>Al Kewefia chest diseases hospital</i>	X																			
<i>Al khums hospital</i>														100%	0%	0%	75%	44%	X	
<i>Be'ar Al Austa Milad hospital</i>														100%	0%	0%	50%	38%	X	
<i>Benghazi medical center</i>				X		20%	X	0%	0%	0%	100%	13%	23%	X	0%	0%	0%	25%	6%	X
<i>Chest diseases hospital, Misratah</i>	X																			
<i>Sebha Medical Center</i>														0%	0%	0%	75%	19%	X	
<i>Shehat Chest Hospital</i>	X																			
<i>Traghen hospital</i>														0%	0%	0%	25%	6%	X	
<i>Tripoli central hospital</i>			X			20%	X	0%	0%	50%	100%	25%	35%	X	0%	0%	100%	25%	31%	X
<i>Tripoli medical center</i>				X		20%	X	0%	0%	50%	100%	25%	35%	X	100%	0%	100%	50%	63%	X
<i>Tubruq Medical Center</i>		X	X	X		60%	X	50%	50%	50%	100%	0%	50%	X	100%	0%	0%	25%	31%	X
<i>Abi Sitta chest diseases hospital</i>	X																			
<b>N facilities/average score</b>	<b>4</b>					<b>32%</b>	<b>5</b>						<b>36%</b>	<b>4</b>					<b>29%</b>	<b>9</b>

## 6 Non-communicable diseases

Non-communicable (or chronic) diseases (NCDs) are defined by WHO as diseases of long duration and generally slow progression. There are four main types of NCDs: cardiovascular diseases (heart attacks and strokes), cancer, chronic respiratory diseases (such as chronic obstructed pulmonary disease and asthma), and diabetes. The main risk factors for NCDs include tobacco use, physical inactivity, unhealthy diets, and the harmful use of alcohol. Unlike communicable diseases, where environmental control measures can reduce the disease burden, the prevention of NCDs lies in personal lifestyle choices, and measures often cannot be implemented by an external agent. The main role of the health system in NCDs therefore consists of health education and the long-term treatment of symptoms such as hypertension and high blood sugar as to prevent complications such as stroke or blindness. Mental health is traditionally not classed as an NCD, but given the generally chronic nature of related diseases and conditions and the need for long-term treatment and follow-up, it is also included in this section of the report.

In Libya, 78% of the overall burden of disease is attributable to non-communicable diseases. Cardiovascular diseases account for 43%, cancers 14%, respiratory diseases 4% and diabetes mellitus 5% of all deaths (27), and 18% of adults between the ages of 30 and 70 years are expected to die from one of the four main non-communicable diseases (28). Risk behavior is common in Libya. A 2010 survey amongst youth (13–15 years of age) found that more than 13% have ever smoked cigarettes (20% boys, 7% girls), while 36% of youth have been affected by passive smoking (29). A survey in 2014 found that 13% of those aged over 15 regularly smoked cigarettes (24% male, 2% female) (15). Per capita consumption of alcohol is 0.1 liters of pure alcohol per capita per year, which is amongst the lowest national rates recorded worldwide (30). The prevalence of other risk behaviors is high, however, with the rate of insufficient physical activity among adolescents at 77% (11–17 years of age, 78% boys, 88% girls). The overall age-standardized rate for insufficient physical activity is 38% (33% males and 43% females) (31). Raised blood pressure affects 36% of adults over 18 years, (40% males and 31% females), while obesity affects 28% of the population (20% males and 36% females) (28).

The incidence and prevalence of NCDs in Libya continues to increase as a consequence of changing lifestyles and the increasing prevalence of risk factors, particularly obesity. Steps are being taken to tackle the burden of non-communicable diseases (NCDs). The WHO Framework Convention on Tobacco Control was signed by the Libyan government in 2004, and the protocol on illicit tobacco trade was signed in 2012. The non-communicable disease program was established at the end of 2010, with components for surveillance, nutrition, violence and injury, disabilities and rehabilitation, and mental health and substance abuse. Much of the PHC-level care in Libya focuses on NCD treatment, as can be seen in Table 57. Although availability rates for NCD services are high, overall readiness scores - which reflect the actual ability to deliver services - are low for both hospital and PHC level services.

Table 57: Availability and readiness of NCD services provided by type of facility

	General overview (% of 1149 total facilities)	Hospitals (% of all 80 hospitals)	Hospital Readiness score	PHC facilities (% of 1069 PHC facilities)	PHC Readiness score	Other facilities
Diabetes	608 (53%)	55 (69%)	56%	550 (51%)	40%	3 diabetes treatment centers
Cardiovascular diseases	565 (49%)	55 (69%)	42%	510 (48%)	24%	
Chronic respiratory diseases	523 (46%)	45 (56%)	40%	478 (45%)	18%	
Cervical cancer	45 (4%)	10 (13%)	45%	34 (3%)	28%	1 oncology center
Breast cancer	-	-	-	396 (37%)	-	
Mental health	15 (1%)	8 (10%)	-	6 (0.6%)	-	1 mental health clinic

## 6.1 Diabetes

A 2014 national household survey in Libya found that 4% of the population reportedly suffered from diabetes (15). Although the actual prevalence of the disease is likely to be higher, this proportion is similar to the relative burden of disease represented by diabetes (5%). Diagnosis and treatment for diabetes are provided by both PHC and hospital facilities. PHC facilities can provide initial diagnosis and care for non-complicated cases, with more complicated cases generally being referred to specialist centers. Although all hospitals can provide diagnosis and treatment of diabetes, complicated cases are often referred to a specialized center for adult diabetes in Tripoli, and Tripoli Medical Center has an endocrinology department which provides specialist care for diabetic children. Additionally, there are two diabetes treatment centers located in Misratah, and one in greater Tripoli.

### 6.1.1 Availability and readiness

A total of 608 health facilities offer diagnosis and management of diabetes, which represents more than half of all health facilities currently functional in Libya. Most of these are PHC facilities (550 facilities or 90% of total). Care for both routine and complicated cases of the disease is provided through 55 hospitals and three diabetes treatment centers.

Table 58: Availability and readiness of diabetes services, by facility type and district

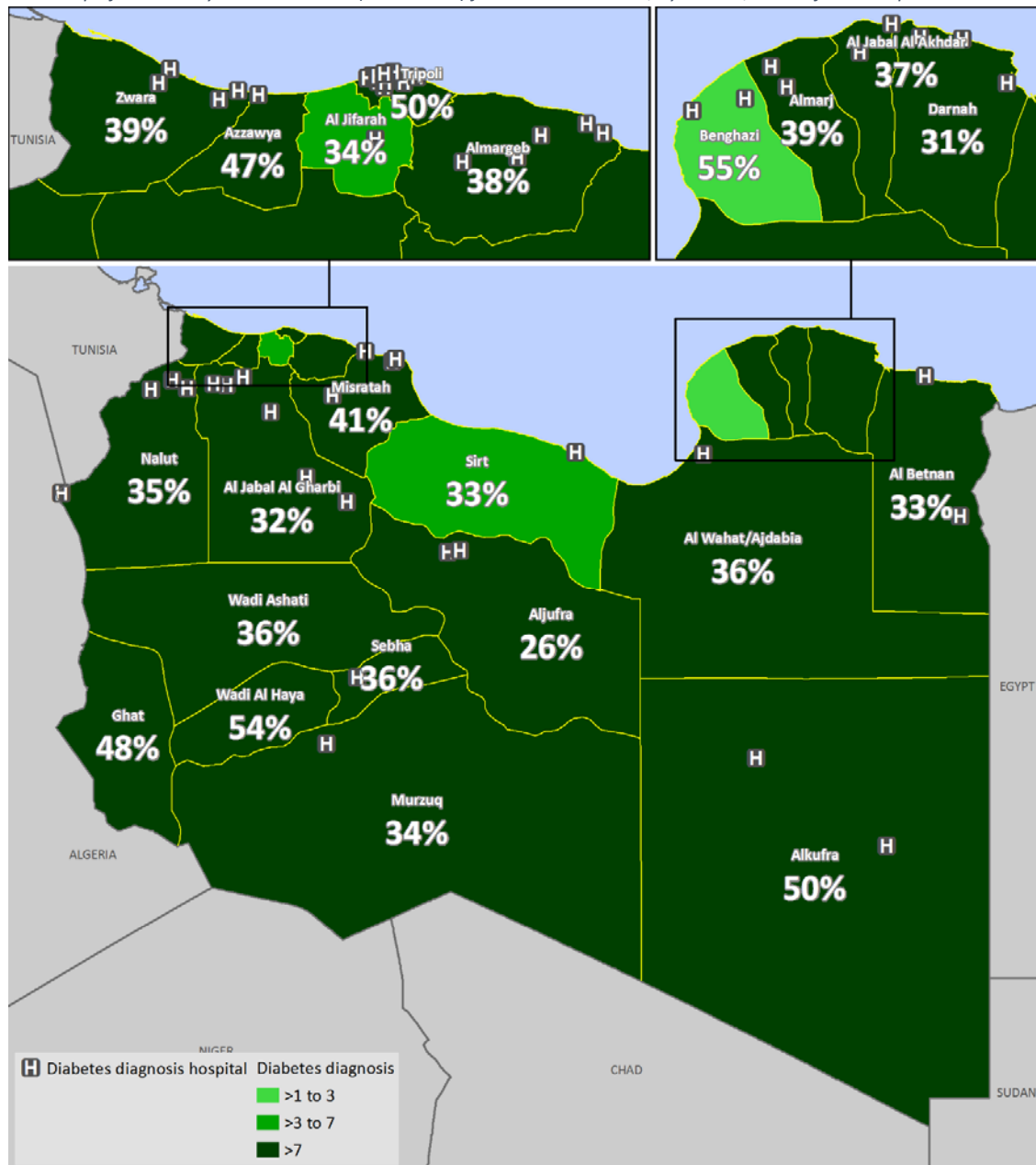
	N of facilities offering service	Guidelines diabetes diagnosis/ management	Staff trained in diabetes diagnosis/ management	Equipment scores	Diagnostics scores	Medicine scores	Overall diabetes readiness scores	N of facilities offering service	Guidelines diabetes diagnosis/ management	Staff trained in diabetes diagnosis/ management	Equipment scores	Diagnostics scores	Medicine scores	Overall diabetes readiness scores	N (%) all facilities providing diabetes care
<i>Al Wahat/Ajdabia</i>	26 (70%)	92%	0%	62%	24%	4%	36%	1 (50%)	100%	0%	100%	100%	40%	20%	27 (69%)
<i>Alkufra</i>	9 (50%)	100%	0%	83%	56%	13%	50%	2 (100%)	0%	0%	100%	100%	10%	42%	11 (55%)
<i>Benghazi</i>	21 (55%)	95%	10%	98%	64%	11%	55%	1 (17%)	0%	100%	100%	33%	20%	51%	22 (50%)
<i>Al Betnan</i>	16 (53%)	94%	6%	50%	6%	6%	33%	2 (67%)	100%	100%	100%	100%	70%	94%	18 (55%)
<i>Al Jabal Al Akhdar</i>	33 (56%)	64%	6%	61%	28%	27%	37%	2 (50%)	0%	0%	100%	50%	30%	36%	35 (56%)
<i>Darnah</i>	23 (82%)	96%	0%	44%	12%	4%	31%	3 (100%)	33%	33%	83%	67%	53%	54%	26 (84%)
<i>Almarj</i>	18 (62%)	94%	6%	78%	9%	6%	39%	3 (75%)	33%	0%	67%	100%	33%	47%	21 (64%)
<i>Sirt</i>	8 (40%)	100%	0%	50%	17%	0%	33%	1 (100%)	0%	0%	100%	100%	80%	56%	9 (43%)
<i>Aljufra</i>	5 (39%)	80%	0%	50%	0%	0%	26%	2 (100%)	0%	0%	100%	100%	20%	44%	7 (47%)
<i>Misratah</i>	42 (63%)	43%	7%	85%	64%	5%	41%	4 (80%)	50%	25%	88%	100%	50%	63%	46 (64%)
<i>Almargeb</i>	63 (58%)	75%	2%	78%	35%	1%	38%	5 (83%)	20%	20%	100%	87%	68%	59%	68 (59%)
<i>Al Jifarah</i>	23 (37%)	96%	0%	65%	7%	1%	34%	1 (100%)	0%	0%	100%	67%	100%	53%	24 (38%)
<i>Tripoli</i>	76 (66%)	68%	28%	87%	54%	15%	50%	11 (79%)	46%	36%	77%	100%	60%	64%	87 (67%)
<i>Azzawya</i>	41 (52%)	68%	42%	72%	42%	9%	47%	1 (50%)	0%	0%	100%	100%	40%	48%	42 (52%)
<i>Zwara</i>	22 (37%)	95%	14%	73%	12%	1%	39%	4 (80%)	0%	0%	88%	92%	75%	51%	26 (41%)
<i>Al Jabal Al Gharbi</i>	44 (38%)	89%	0%	53%	14%	3%	32%	6 (75%)	17%	17%	100%	89%	50%	54%	50 (40%)
<i>Nalut</i>	15 (48%)	80%	0%	77%	16%	1%	35%	4 (80%)	0%	50%	100%	67%	40%	51%	19 (53%)
<i>Wadi Ashati</i>	7 (47%)	100%	0%	79%	0%	0%	36%	0 (0%)							7 (39%)
<i>Sebha</i>	11 (50%)	82%	0%	68%	27%	0%	36%	1 (50%)	0%	0%	50%	100%	100%	50%	12 (50%)
<i>Wadi Al Haya</i>	10 (40%)	100%	0%	95%	77%	0%	54%	0 (0%)							10 (40%)
<i>Murzuq</i>	33 (38%)	94%	0%	67%	7%	0%	34%	1 (50%)	0%	0%	100%	0%	40%	28%	34 (38%)
<i>Ghat</i>	4 (44%)	50%	0%	75%	33%	80%	48%	0 (0%)							4 (44%)
<b>Total</b>	<b>550 (51%)</b>	<b>80%</b>	<b>9%</b>	<b>72%</b>	<b>32%</b>	<b>7%</b>	<b>40%</b>	<b>55 (69%)</b>	<b>26%</b>	<b>24%</b>	<b>90%</b>	<b>87%</b>	<b>53%</b>	<b>56%</b>	<b>605 (53%)</b>

The readiness index for diabetes is calculated based on the availability of specific tracer items in five domains: (1) functional equipment, (2) diagnostics, (3) medicines, (4) guidelines, and (5) staff trained in diabetes diagnosis and management within the past two years. Overall readiness scores are low for both hospital facilities (56%) and PHC facilities (40%). The low scores can primarily be attributed to a low availability of trained staff in both hospital and PHC facilities (24% and 9%, respectively), with further

reductions in the overall readiness score in PHC facilities due to a severe lack of medicines (7%) and a limited availability of such diagnostic tools as blood glucose meters and urine dipsticks (32%).

Wadi Al Haya, Wadi Ashati and Ghat districts do not have a referral hospital available to handle complicated cases, while the relatively low readiness scores in these districts suggests that the availability of diabetes care at the PHC level is also limited. It is reassuring to note that 97 out of 101 municipalities do have a PHC facility available that offers limited services.

Figure 72: Map of availability\* and readiness (in numbers) for diabetes services, by district, with referral hospitals



\* Availability is defined as the ratio of facilities providing a selected service to 100,000 population; service-specific readiness is included in the map as a written percentage; only service-specific referral facilities are mapped.

*Box 13: Diabetes services: availability and readiness*

All districts and 97% of municipalities have a health facility available that can offer diabetic patients diagnosis and management services for their disease. The actual capacity to provide these services is limited, however, as low readiness scores for hospitals (56%) and PHC facilities (40%) reflect a lack of staff with up-to-date training and a significant lack of essential medicines.

### 6.1.2 Breakdown of readiness indicators

The proportions reported in this section may not necessarily correspond to those reported for the readiness scores in the previous section. This is because the number of respondents are often different, given that the data used here may come from a different subset of health facilities or a different section of the survey, or may not reflect all the indicators used to calculate the index scores. The figures in this section can be used as a reference point to assess the validity of the readiness scores, and provide insight into the individual items used for calculating the readiness indices.

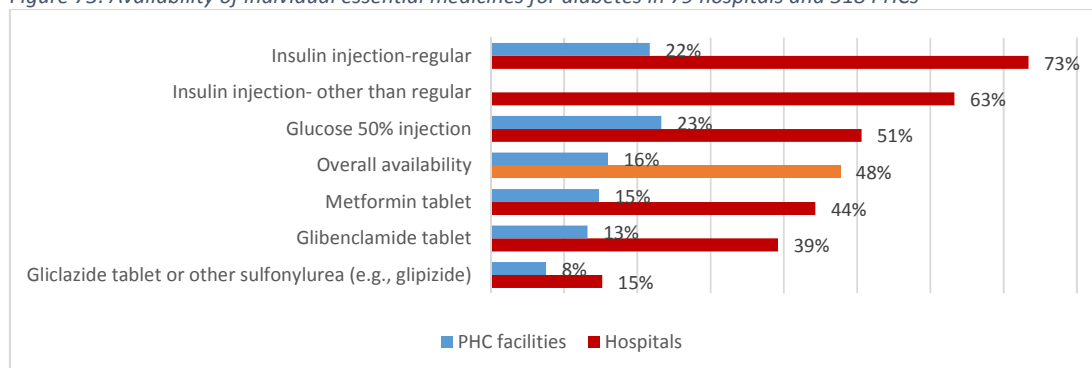
Diabetes guidelines and glucometers are available in a remarkably high proportion of PHC facilities (80% and 83%, respectively), while availability in hospitals is only 25% for guidelines and 48% for glucometers. The proportion of staff trained on diabetes diagnosis and care during the past two years is limited for both facility types, and the availability of glucose test strips is approximately 50% in these health facilities.

Table 59: Availability of guidelines, trained staff and diagnostics for diabetes

	PHC facilities		Hospitals	
	N facilities	Proportion available	N facilities	Proportion available
Diabetes guidelines available	550	80%	55	25%
Staff trained in diabetes	550	9%	55	24%
Glucometer available	300	83%	48	48%
Glucose test strips available	300	52%	48	44%

The overall availability of medicines for diabetes in the 79 hospitals that provided data on their drug stores was 48%, and only 16% in the 318 PHC pharmacies that were assessed. Glicazide tablets were the least available medicines at 15% in hospitals and 8% in PHCs, while regular injectable insulin was available in nearly three-quarters of hospitals (73%) and 22% of PHC facilities.

Figure 73: Availability of individual essential medicines for diabetes in 79 hospitals and 318 PHCs



## 6.2 Cardiovascular diseases

The prevalence of cardiovascular risk factors such as hypertension and hyperlipidemia, and the incidence of complications such as myocardial infarctions are high in Libya, with cardiovascular diseases (CVDs) responsible for an estimated 43% of deaths. A 2014 national household survey in Libya found that the self-reported prevalence of hypertension in the population was 4% (15) although the true prevalence is expected to be much higher, with WHO reporting a prevalence of 36% amongst adults, citing a reference from 2008 (28).

Services for the diagnosis and management of cardiovascular diseases in Libya are primarily provided by the PHCs facilities and general hospital, with complicated cases referred to specialist hospitals in Tripoli and Benghazi. Care in the public sector is all free of charge, even for complicated cases. Care through the private sector is generally paid for out of pocket.

### 6.2.1 Availability and readiness

The diagnosis and management of CVDs is provided through 565 health facilities, representing 49% of all health facilities in Libya. Most facilities are PHCs (90%), with hospitals making up the remaining 10%.

Table 60: Availability and readiness for cardiovascular disease services, by facility type and region

	N (%) of PHC facilities offering services	Guidelines for CVD diagnosis/management	Staff trained in CVD diagnosis/management	Equipment scores	Medicine scores	PHC CVD readiness	N (%) of hospitals offering services	Guidelines for CVD diagnosis/management	Staff trained in CVD diagnosis/management	Equipment scores	Medicine scores	Hospital CVD readiness	Total (% of total) facilities offering CVD services
Al Wahat/Ajdabia	26 (70%)	8%	0%	63%	2%	18%	1 (50%)	0%	0%	100%	17%	29%	27 (69%)
Alkufra	10 (56%)	0%	0%	80%	7%	22%	2 (100%)	0%	0%	100%	8%	27%	12 (60%)
Benghazi	19 (50%)	0%	0%	90%	3%	23%	2 (33%)	0%	50%	100%	8%	40%	21 (48%)
Al Betnan	16 (53%)	6%	6%	52%	6%	18%	2 (67%)	100%	100%	100%	67%	92%	18 (55%)
Al Jabal Al Akhdar	31 (53%)	13%	3%	68%	24%	27%	3 (75%)	0%	0%	89%	50%	35%	34 (54%)
Darnah	23 (82%)	0%	0%	68%	4%	18%	3 (100%)	33%	33%	100%	44%	53%	26 (84%)
Almarj	19 (66%)	5%	0%	84%	2%	23%	1 (25%)	0%	0%	100%	83%	46%	20 (61%)
Sirt	5 (25%)	0%	0%	73%	0%	18%	1 (100%)	0%	0%	100%	67%	42%	6 (29%)
Aljufra	4 (31%)	0%	0%	92%	0%	23%	2 (100%)	0%	0%	100%	0%	25%	6 (40%)
Misratah	42 (63%)	5%	12%	94%	8%	30%	4 (80%)	0%	0%	75%	50%	31%	46 (64%)
Almargeb	56 (51%)	2%	2%	82%	1%	21%	5 (83%)	20%	20%	87%	60%	47%	61 (53%)
Al Jifarah	22 (36%)	0%	0%	82%	1%	21%	0 (0%)	0%	0%	0%	0%	0%	22 (35%)
Tripoli	59 (51%)	2%	20%	88%	5%	29%	11 (79%)	36%	36%	70%	53%	49%	70 (54%)
Azzawya	38 (48%)	53%	29%	84%	7%	43%	2 (100%)	0%	0%	83%	50%	33%	40 (49%)
Zwara	19 (32%)	11%	0%	74%	0%	21%	4 (80%)	0%	0%	83%	63%	36%	23 (36%)
Al Jabal Al Gharbi	44 (38%)	5%	2%	68%	3%	20%	4 (50%)	0%	0%	92%	33%	31%	48 (38%)
Nalut	13 (42%)	0%	0%	92%	0%	23%	5 (100%)	0%	60%	100%	43%	51%	18 (50%)
Wadi Ashati	7 (47%)	0%	0%	71%	0%	18%	0 (0%)						7 (39%)
Sebha	14 (64%)	7%	0%	76%	1%	21%	1 (50%)	0%	0%	67%	100%	42%	15 (63%)
Wadi Al Haya	10 (40%)	0%	0%	87%	0%	22%	0 (0%)						10 (40%)
Murzuq	31 (36%)	0%	0%	63%	0%	16%	2 (100%)	0%	0%	100%	17%	29%	33 (37%)
Ghat	2 (22%)	0%	0%	67%	17%	21%	0 (0%)						2 (22%)
<b>Total</b>	<b>510 (48%)</b>	<b>7%</b>	<b>6%</b>	<b>78%</b>	<b>4%</b>	<b>24%</b>	<b>55 (69%)</b>	<b>15%</b>	<b>22%</b>	<b>87%</b>	<b>46%</b>	<b>42%</b>	<b>565 (49%)</b>

The readiness index for CVDs is calculated based on the availability of specific tracer items in five domains: (1) functional equipment, (2) diagnostics, (3) medicines, (4) guidelines, and (5) staff trained in CVD diagnosis and management within the past two years. Overall readiness scores are low for both hospital facilities (42%) and PHC facilities (24%). The low scores can primarily be attributed to a low availability of trained staff in both hospital and PHC facilities (22% and 6%, respectively), with further reductions in the overall readiness score in PHC facilities due to a severe lack of medicines (4%) and a limited availability of

guidelines (7%). The low score at the hospital level can be further attributed to a general absence of relevant guidelines (15%) and to a lesser extent, to a lack of essential medicines for CVDs (42%).

Wadi Al Haya and Ghat districts do not have a referral hospital available to handle complicated cases, and the relatively low readiness scores in these districts suggests that the availability of CVD services at PHC level is also limited here. Although 96 out of 101 municipalities have a PHC facility available that offers CVD services, the overall readiness scores are so low that patients will seldom be able to receive the required services.

*Box 14: Cardiovascular diseases services: availability and readiness*

Although nearly half of the hospitals and PHC facilities in Libya can provide diagnosis and management of cardiovascular diseases, and 96% of municipalities have at least one facility offering CVD care, the readiness scores of 24% for PHC facilities and 42% for hospitals reflect the existence of a great shortage of well-trained staff and essential medicines for the treatment of CVDs.

### 6.2.2 Breakdown of readiness indicators

The proportions reported in this section may not necessarily correspond to those reported for the readiness scores in the previous section. This is because the number of respondents are often different, given that the data used here may come from a different subset of health facilities or a different section of the survey, or may not reflect all the indicators used to calculate the index scores. The figures in this section can be used as a reference point to assess the validity of the readiness scores, and provide insight into the individual items used for calculating the readiness indices.

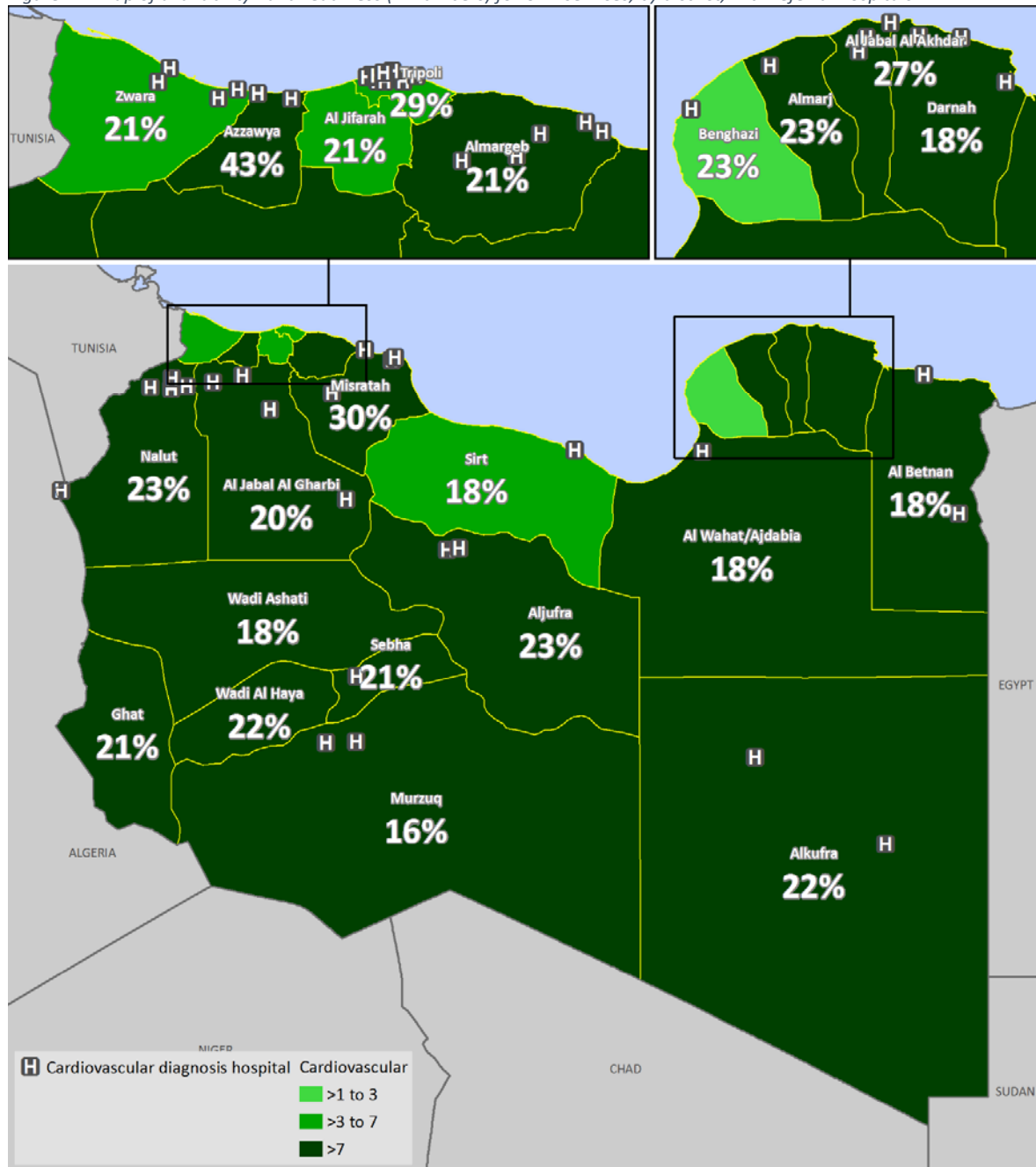
The availability of CVD-specific guidelines and trained staff are low for both hospital and PHC facilities. Only 7% of PHCs and 15% of hospitals have guidelines available, while 6% of PHC facilities and 22% of hospitals have at least one staff member available who has received training on the diagnosis and management of CVDs in the previous two years. Two indicators of the capacity to diagnose CVDs, are the availability of blood pressure apparatus and functioning stethoscopes. These are available in nearly all PHC facilities and hospitals that provided a response to relevant questions in the SARA survey.

Table 61: Availability of guidelines, trained staff and diagnostics for cardiovascular diseases

	PHC facilities		Hospitals	
	<i>N facilities</i>	<i>Proportion available</i>	<i>N facilities</i>	<i>Proportion available</i>
<i>CVD guidelines available</i>	510	7%	55	15%
<i>Staff trained in CVD</i>	510	6%	55	22%
<i>Functioning stethoscope</i>	910	98%	30	87%
<i>Functioning blood pressure apparatus</i>	904	96%	30	93%



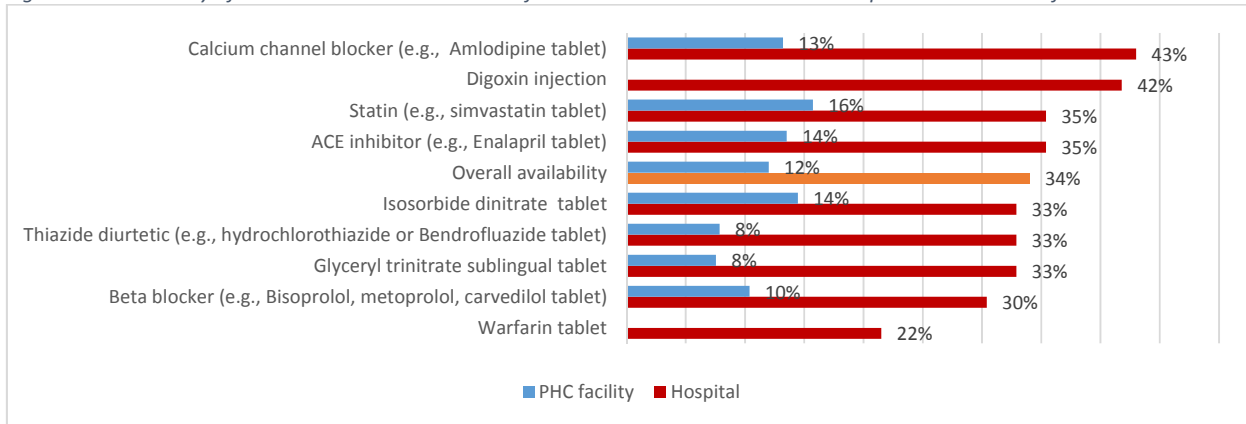
Figure 74: Map of availability\* and readiness (in numbers) for CVD services, by district, with referral hospitals



\* Availability is defined as the ratio of facilities providing a selected service to 100,000 population; service-specific readiness is included in the map as a written percentage; only service-specific referral facilities are mapped

The overall availability of essential medicines for cardiovascular diseases in the 79 hospitals for which data was available was 34%, while it was only 12% for the PHC facilities. The most commonly available medicines in the hospitals were calcium channel blockers (43%) while warfarin tablets were most often unavailable (22%). In the PHC facilities, statins were most commonly available (16%) while thiazide diuretics and glyceryl trinitrate sublingual tablets were available in only 8% of the PHC facilities.

Figure 75: Availability of individual essential medicines for cardiovascular diseases in 79 hospitals and 318 PHC facilities



### 6.3 Chronic respiratory diseases

Chronic respiratory diseases (CRDs) are chronic diseases of the airways and other structures of the lung. Some of the most common chronic respiratory diseases are asthma, chronic obstructive pulmonary disease, occupational lung diseases, and pulmonary hypertension. Although they account for only a relatively small proportion of the overall burden of diseases, CRDs can nevertheless be debilitating, and require long-term supportive care. In Libya, both diagnostic and management services for simple cases are provided through both PHC and hospital facilities, with complicated cases referred to hospitals. Specialist hospitals are available in Tripoli, Sebha, Misratah, and Benghazi. Care through the public sector is free of charge, even for complicated cases, while CRD care through the private sector requires out of pocket payment.

#### 6.3.1 Availability and readiness

The diagnosis and management of CRDs is provided through 523 health facilities, representing 46% of all health facilities in Libya. Most facilities are PHCs (91%), with hospitals making up the remaining 9%.

The readiness index for CRDs is calculated based on the availability of specific tracer items in five domains: (1) functional equipment, (2) diagnostics, (3) medicines, (4) guidelines, and (5) staff trained in CRD diagnosis and management within the past two years. Overall readiness scores are low for both hospital facilities (43%) and PHC facilities (18%). The low scores can primarily be attributed to a low availability of trained staff in both hospital and PHC facilities (22% and 4%, respectively), with further reductions in the overall readiness score in PHC facilities due to a severe lack of medicines (5%) and a limited availability of relevant guidelines (6%). The low score at the hospital level can be further attributed to a general absence of relevant guidelines (20%) and to a lesser extent, a lack of essential medicines for CVDs (43%).

Wadi Ashati, Sebha, Wadi Al Haya and Ghat districts do not have a referral hospital available to handle complicated cases, and the very low readiness scores in these districts suggests that the availability of CRD services at the PHC level is extremely limited. Although 95 out of 101 municipalities have a PHC facility available that offers CRD care, the overall readiness scores are so low that patients will seldom be able to acquire the needed services.

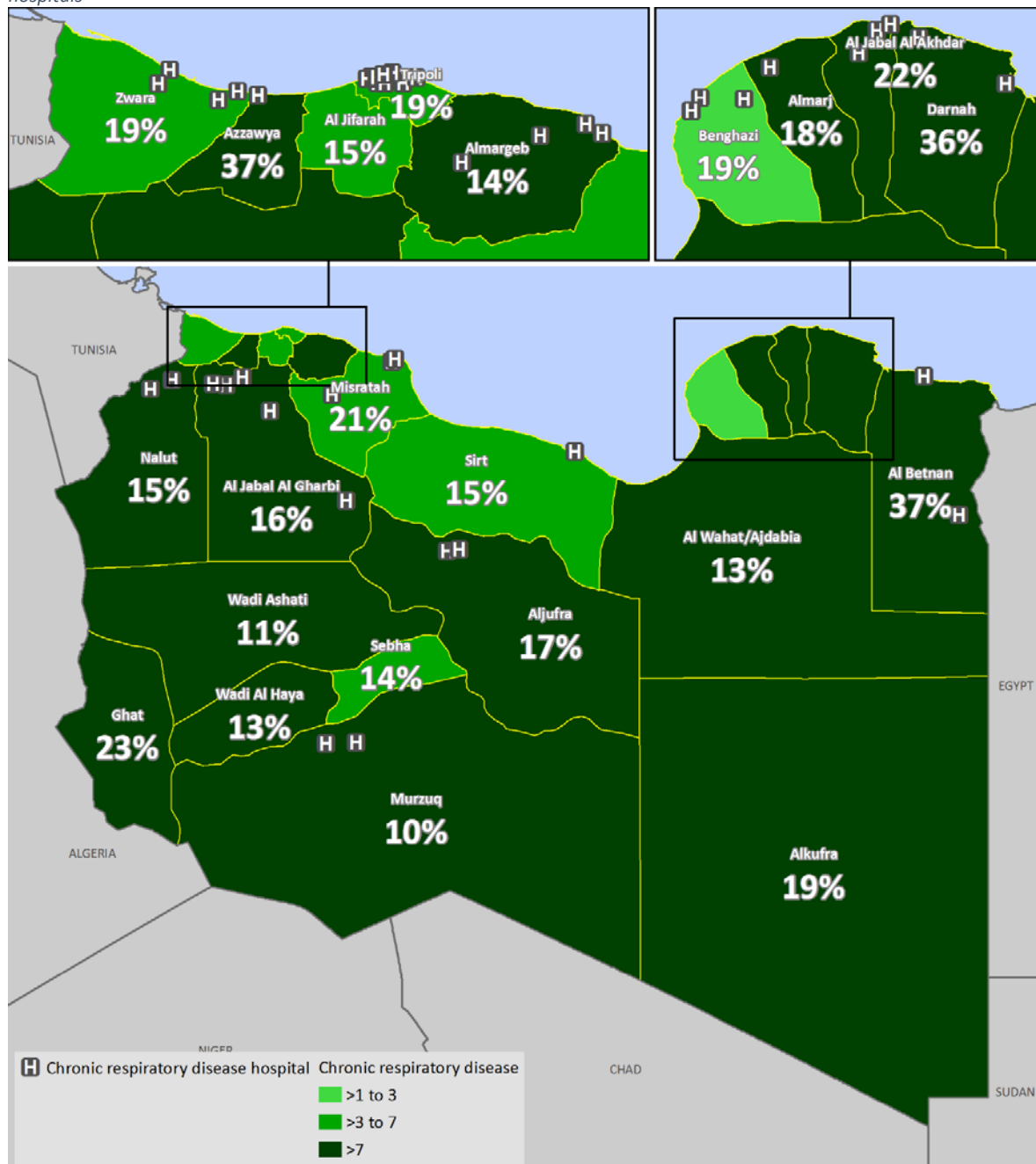
Table 62: Availability and readiness for chronic respiratory diseases services, by facility type and district

	N of facilities offering service	Guidelines chronic respiratory disease diagnosis/ management	Staff trained chronic respiratory disease diagnosis/ management	Equipment scores	Medicines scores	Overall readiness scores	N of facilities offering service	Guidelines chronic respiratory disease diagnosis/ management	Staff trained chronic respiratory disease diagnosis/ management	Equipment scores	Medicines scores	Overall readiness scores	N totals
<i>Al Wahat/Ajdabia</i>	23 (62%)	0%	0%	38%	6%	13%	0 (0%)						23 (59%)
<i>Alkufra</i>	9 (50%)	0%	0%	48%	16%	19%	0 (0%)						9 (45%)
<i>Benghazi</i>	17 (45%)	0%	0%	59%	11%	19%	3 (50%)	0%	67%	89%	53%	52%	20 (46%)
<i>Al Betnan</i>	16 (53%)	6%	6%	33%	6%	37%	2 (67%)	100%	100%	100%	60%	90%	18 (55%)
<i>Al Jabal Al Akhdar</i>	19 (32%)	0%	0%	42%	22%	22%	3 (75%)	33%	0%	67%	27%	32%	22 (35%)
<i>Darnah</i>	23 (82%)	0%	0%	45%	4%	36%	2 (67%)	0%	50%	67%	50%	42%	25 (81%)
<i>Almarj</i>	18 (62%)	0%	0%	54%	2%	18%	2 (50%)	50%	0%	67%	30%	37%	20 (61%)
<i>Sirt</i>	6 (30%)	17%	0%	44%	0%	15%	1 (100%)	0%	0%	67%	100%	42%	7 (33%)
<i>Aljufra</i>	4 (31%)	0%	0%	67%	0%	17%	2 (100%)	0%	0%	67%	90%	39%	6 (40%)
<i>Misratah</i>	39 (58%)	5%	3%	65%	4%	21%	3 (60%)	0%	0%	67%	67%	33%	42 (58%)
<i>Almargeb</i>	60 (55%)	2%	2%	53%	1%	14%	4 (67%)	25%	25%	75%	65%	48%	64 (56%)
<i>Al Jifarah</i>	22 (36%)	0%	0%	52%	3%	15%	0 (0%)						22 (35%)
<i>Tripoli</i>	50 (44%)	0%	6%	56%	8%	19%	9 (64%)	44%	33%	82%	49%	52%	59 (46%)
<i>Azzawya</i>	38 (48%)	55%	32%	54%	6%	37%	1 (50%)	0%	0%	100%	40%	35%	39 (48%)
<i>Zwara</i>	19 (32%)	16%	0%	46%	4%	19%	4 (80%)	0%	0%	75%	55%	33%	23 (36%)
<i>Al Jabal Al Gharbi</i>	42 (36%)	2%	2%	38%	3%	16%	5 (63%)	0%	0%	67%	64%	33%	47 (38%)
<i>Nalut</i>	12 (39%)	0%	0%	58%	0%	15%	2 (40%)	0%	50%	67%	40%	39%	14 (39%)
<i>Wadi Ashati</i>	7 (47%)	0%	0%	43%	0%	11%	0 (0%)						7 (39%)
<i>Sebha</i>	11 (50%)	0%	0%	58%	0%	14%	0 (0%)						11 (46%)
<i>Wadi Al Haya</i>	10 (40%)	0%	0%	53%	0%	13%	0 (0%)						10 (40%)
<i>Murzuq</i>	31 (36%)	0%	0%	39%	0%	10%	2 (100%)	0%	0%	67%	30%	24%	33 (37%)
<i>Ghat</i>	2 (22%)	0%	0%	50%	40%	23%	0 (0%)						2 (22%)
<b>Total</b>	<b>478 (45%)</b>	<b>6%</b>	<b>4%</b>	<b>50%</b>	<b>5%</b>	<b>18%</b>	<b>45 (56%)</b>	<b>20%</b>	<b>22%</b>	<b>75%</b>	<b>54%</b>	<b>43%</b>	<b>523 (46%)</b>

Box 15: Chronic respiratory diseases services: availability and readiness

Diagnosis and management of **chronic respiratory diseases** is available in nearly half of the hospitals and PHC facilities in Libya, with 96% of municipalities having at least one facility offering CRD care. However, the readiness scores of 18% for PHC facilities and 43% for hospitals reflects significant shortages in well-trained staff and essential medicines for the diagnosis and treatment of CRDs.

Figure 76: Map of availability\* and readiness (in numbers) of chronic respiratory disease services, by district, and referral hospitals



\* Availability is defined as the ratio of facilities providing a selected service to 100,000 population; service-specific readiness is included in the map as a written percentage; only service-specific referral facilities are mapped

### 6.3.2 Breakdown of readiness indicators

The proportions reported in this section may not necessarily correspond to those reported for the readiness scores in the previous section. This is because the number of respondents are often different, given that the data used here may come from a different subset of health facilities or a different section of the survey, or may not reflect all the indicators used to calculate the index scores. The figures in this

section can be used as a reference point to assess the validity of the readiness scores, and provide insight into the individual items used for calculating the readiness indices.

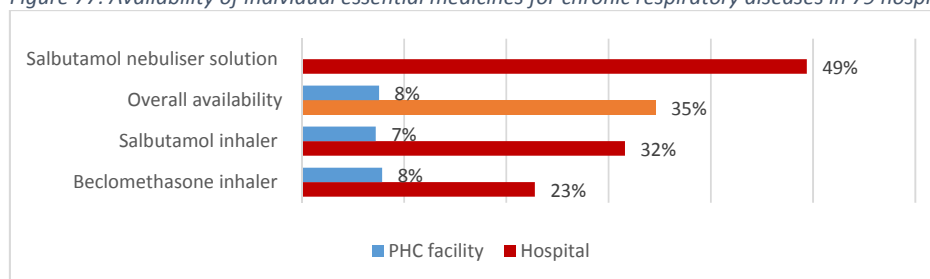
The availability of CRD-specific guidelines and trained staff are low for both hospital and PHC facilities. Only 6% of PHCs and 20% of hospitals have relevant guidelines available, while 4% of PHC facilities and 22% of hospitals have at least one staff member available who has received training on the diagnosis and management of CRDs in the past two years. Two indicators of the capacity to diagnose CVDs, are the availability of functional peak flow meters, and spacers for inhalers. These are available in the majority of PHC facilities (79% and 82%, respectively), while 60% of hospitals have functional peak flow meters available.

Table 63: Availability of guidelines, trained staff and diagnostics for chronic respiratory diseases

	PHC facilities		Hospitals	
	N facilities	Proportion available	N facilities	Proportion available
CRD guidelines available	478	6%	45	20%
Staff trained in CRD	478	4%	45	22%
Functional peak flow meter	478	79%	45	60%
Spacers for inhalers	478	82%	-	-

The overall availability of medicines for CRDs in the 79 hospitals for which data was available was 35%, while only 8% of PHC facilities had basic CRD medicines in stock at time of survey. In hospitals, the salbutamol nebulizer solution was available in nearly half of the facilities (49%), while almost one-quarter of facilities (23%) had beclomethasone inhalers in stock. In PHC facilities, neither salbutamol nor beclomethasone inhalers were generally available (8%).

Figure 77: Availability of individual essential medicines for chronic respiratory diseases in 79 hospitals and 318 PHC facilities



## 6.4 Cervical cancer

Libya is home to 2.3 million women over 15 years of age who are at risk for cervical cancer. The annual number of cervical cancer cases in Libya was reported to be 241 for 2014, with 95 cervical cancer deaths, and a crude incidence rate of 7.4 per 100,000 population per year. The annual mortality rate from cervical cancer in Libya has increased by 33% since 1990, representing an average of 1.5% a year (32). Although Human Papilloma Virus (HPV) vaccination was introduced in 2013, only a tiny cohort of women has been vaccinated, and the overall coverage of this vaccine in the general female population is very low. No cervical cancer screening program is in place. Instead, suspected cases of cervical cancer are generally referred by PHC facilities or private clinics to the nearest hospital for initial diagnosis and, if tested positive, surgical intervention. Further management (radiotherapy, chemotherapy, immunotherapy, and/or hormonal therapy and follow-up) is done in specialist centers in Subrata, Tripoli, Misrata, Benghazi, and Sebha. The NCDC concentrates on health education and early case detection, but their facilities do not offer diagnostic or treatment services.

### 6.4.1 Availability and readiness

Although suspected cases of cervical cancer can be identified by any facility, only 34 PHC facilities and 10 hospitals offer diagnostic services for this disease, accounting for 4% of all health facilities. Treatment for cervical cancer is limited to the eight hospitals offering oncology services that are identified in Table 72, under the heading “Breast Cancer”.

Table 64: Availability and readiness for cervical cancer diagnosis services, by facility type and district

	N (%) of PHCs offering services	Guidelines cervical cancer prevention and control	Staff trained cervical cancer prevention and control	Diagnosis	Equipment	Overall readiness scores	N (%) of hospitals offering services	Guidelines cervical cancer prevention and control	Staff trained cervical cancer prevention and control	Diagnosis	Equipment	Overall readiness scores	Total facilities providing services
				(Acetic acid)	(Speculum)					(Acetic acid)	(Speculum)		
Al Wahat/Ajdabia	1 (3%)	0%	0%	100%	0%	25%	0 (0%)						1 (3%)
Alkufra	1 (6%)	100%	100%	0%	0%	50%	0 (0%)						1 (5%)
Benghazi	2 (5%)	0%	0%	100%	0%	25%	1 (17%)	100%	0%	0%	0%	25%	3 (7%)
Al Betnan	3 (10%)	33%	33%	100%	33%	50%	1 (33%)	100%	0%	100%	100%	75%	4 (12%)
Al Jabal Al Akhdar	2 (3%)	0%	0%	100%	0%	25%	1 (25%)	0%	0%	0%	100%	25%	3 (5%)
Darnah	2 (7%)	0%	0%	100%	0%	25%	0 (0%)						2 (7%)
Almarj	1 (3%)	0%	0%	0%	0%	0%	0 (0%)						1 (3%)
Sirt	0 (0%)						0 (0%)						0 (0%)
Aljufra	0 (0%)						0 (0%)						0 (0%)
Misratah	4 (6%)	0%	0%	100%	0%	25%	1 (20%)	0%	100%	0%	100%	50%	5 (7%)
Almargeb	1 (1%)	0%	0%	100%	0%	25%	1 (17%)	100%	100%	100%	0%	75%	2 (2%)
Al Jifarah	0 (0%)						0 (0%)						0 (0%)
Tripoli	8 (7%)	0%	0%	88%	0%	22%	4 (29%)	25%	25%	0%	100%	38%	12 (9%)
Azawya	5 (6%)	80%	60%	0%	0%	35%	0 (0%)						5 (6%)
Zwara	1 (2%)	0%	0%	100%	0%	25%	1 (20%)	0%	100%	100%	0%	50%	2 (3%)
Al Jabal Al Gharbi	0 (0%)						0 (0%)						0 (0%)
Nalut	0 (0%)						0 (0%)						0 (0%)
Wadi Ashati	0 (0%)						0 (0%)						0 (0%)
Sebha	1 (5%)	0%	0%	100%	0%	25%	0 (0%)						1 (4%)
Wadi Al Haya	1 (4%)	0%	0%	100%	0%	25%	0 (0%)						1 (4%)
Murzuq	1 (1%)	0%	0%	100%	0%	25%	0 (0%)						1 (1%)
Ghat	0 (0%)						0 (0%)						0 (0%)
<b>Total</b>	<b>34 (3%)</b>	<b>18%</b>	<b>15%</b>	<b>77%</b>	<b>3%</b>	<b>28%</b>	<b>10 (13%)</b>	<b>40%</b>	<b>40%</b>	<b>30%</b>	<b>70%</b>	<b>45%</b>	<b>44 (4%)</b>

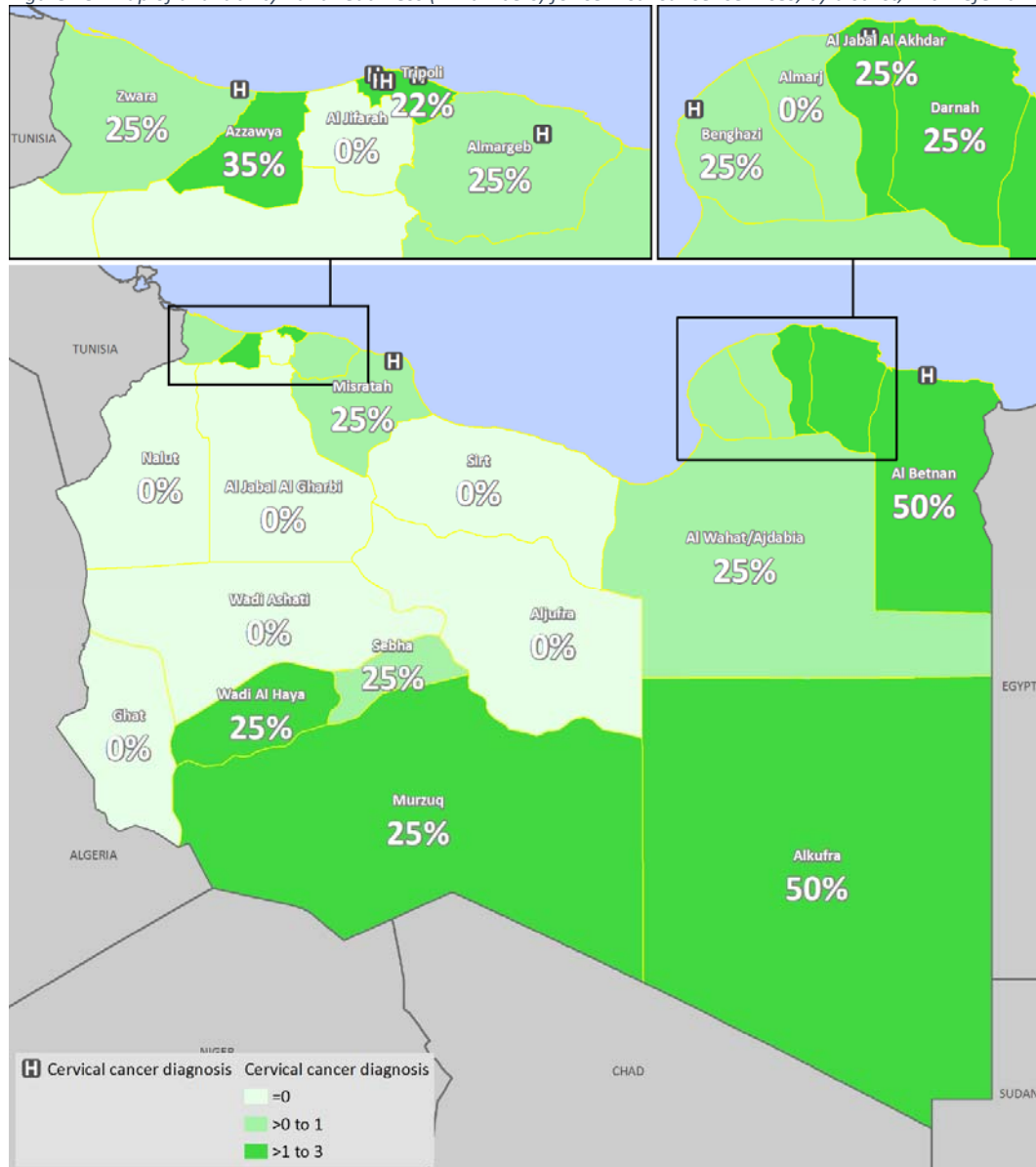
The readiness index for cervical cancer services is calculated based on the availability of specific tracer items in four domains: (1) functional equipment, (2) diagnostics, (3) guidelines and (4) staff trained in cervical cancer prevention and control within the past two years. The availability of cancer medicines is not assessed. Overall readiness scores are low for both hospital facilities (45%) and PHC facilities (28%). The low scores can primarily be attributed to a low availability of trained staff (15%) and guidelines (18%) in the PHC facilities, but surprisingly, functional speculums required for testing were generally not present in these facilities (3%), even though acetic acid for diagnosis was generally available (77%). At the hospital level, acetic acid for diagnosis was often unavailable (30%), while trained staff and guidelines were available in 40% of the facilities. The capacity to offer simple diagnosis for cervical cancer is generally limited, both in terms of availability and readiness.

Seven out of 22 districts do not have any facility available for cervical cancer diagnosis. Referral hospitals that offer confirmatory diagnosis and/or treatment are available in only seven districts. Only 21 out of 101 municipalities have cervical cancer diagnosis available.

**Box 16: Cervical cancer diagnosis: availability and readiness**

The number of facilities offering diagnosis of cervical cancer is limited to only 4% of all public health facilities in Libya. Ten hospitals and 34 PHC facilities report offering diagnostics, with 8 hospitals offering oncology services and large areas of the country lacking services altogether. No national screening program is in place. Readiness of the available services is low, at 28% for PHC facilities and 45% for hospitals. Even the facilities offering cervical cancer diagnosis lack trained staff, equipment and diagnostics, and are often unable to offer adequate services to the population.

Figure 78: Map of availability\* and readiness (in numbers) for cervical cancer services, by district, with referral hospitals



\* Availability is defined as the ratio of facilities providing a selected service to 100,000 population; service-specific readiness is included in the map as a written percentage; only service-specific referral facilities are mapped.



### 6.4.2 Breakdown of readiness indicators

The proportions reported in this section may not necessarily correspond to those reported for the readiness scores in the previous section. This is because the number of respondents are often different, given that the data used here may come from a different subset of health facilities or a different section of the survey, or may not reflect all the indicators used to calculate the index scores. The figures in this section can be used as a reference point to assess the validity of the readiness scores, and also provide insight into the individual items used for calculating the readiness indices.

Guidelines on cervical cancer treatment and follow-up are available in only 18% of PHC facilities and 40% of the hospitals that offer diagnostic services for cervical cancer, with staff receiving corresponding training available in 15% of the PHC facilities and 33% of the hospitals. In terms of the capacity for diagnosis through visual inspection with acetic acid (VIA), 76% of PHC facilities report having functional speculums and acetic acid available, while 30% of hospitals have acetic acid in stock, and 70% report having at least one functional speculum available in the outpatient services.

Table 65: Availability of guidelines, trained staff and diagnostics for cervical cancer

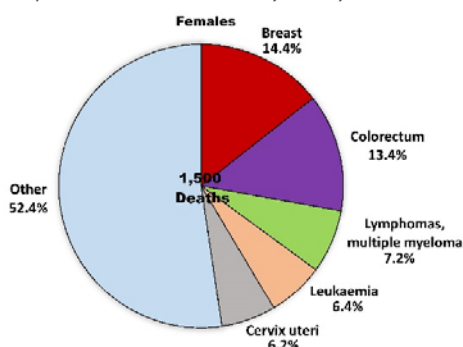
	PHC facilities		Hospitals	
	N facilities	Proportion available	N facilities	Proportion available
Cervical cancer guidelines available	34	18%	10	40%
Staff trained in cervical cancer	34	15%	10	33%
Acetic acid available	34	76%	10	30%
Functional speculum available	34	76%	10	70%

In terms of the availability of other cancer diagnostics services available, of the 14 hospitals in Libya that report having a histopathology department, 12 facilities indicate that they can conduct the Papanicolaou test (or Pap smear), a method of cervical screening used to detect potentially pre-cancerous and cancerous processes in the cervix. All these facilities can read Pap smears onsite and provide results, and reported having all stains and supplies needed for tissue sections for Pap smears available at time of survey. All 14 laboratories reported having the capacity to prepare and examine tissues or samples for diagnosis of cancer patients, and having a functional microtome for slicing tissue section samples available.

### 6.5 Breast cancer

The annual number of breast cancer cases in Libya was reported to be 679 for 2014, with a crude incidence rate of 21 per 100,000 population per year. Breast cancer represented 14% of all cancer deaths in women in 2014 (Figure 79), nearly two-and-a-half times more than the proportional mortality for cervical cancer (33).

Figure 79: Proportional cancer mortality in Libyan women in 2014 (33)





Libya has no breast cancer screening program in place. Suspected cases of breast cancer are referred by the GPs working in the PHC facilities to the nearest hospital for initial diagnosis and surgical intervention. Specialist centers for further management (radiotherapy, chemotherapy, immunotherapy, and hormonal therapy and follow-up) are located in Subrata, Tripoli, Misrata, Benghazi and Sebha.

### 6.5.1 Availability of services

Breast cancer screening services are not a routine element of the SARA survey, therefore no indicators for service-specific availability and readiness are available. The data presented here is a summary of information collected from the addition of a few key questions to the SARA core questionnaire (for PHC facilities only) by the Libyan MoH. No data is available for hospitals.

Initial breast cancer diagnostics in Libya are available at 396 PHC facilities, which represents 70% of the 564 health facilities that responded to this question on the questionnaire or 40% of all PHC facilities. Breast cancer diagnostics through PHC facilities is available in all districts, and 93 out of 101 municipalities report the availability of at least one PHC facility providing breast cancer diagnosis.

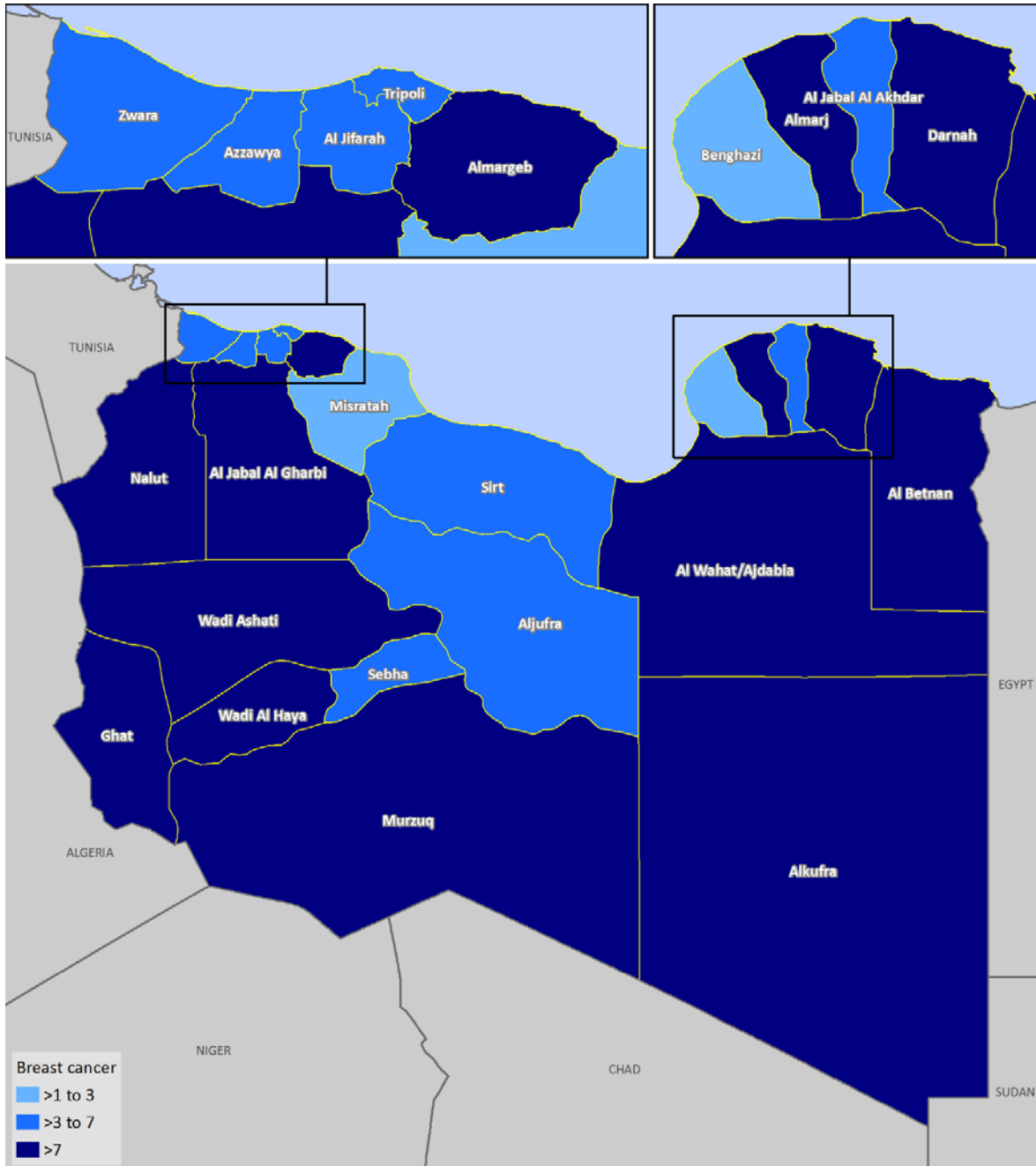
Table 66: Availability of basic breast cancer diagnostic services in PHC facilities, by district

<i>district</i>	<b>N of facilities</b>	<b>N of facilities providing services</b>	<b>% of facilities providing services</b>
<i>Al Wahat/Ajdabia</i>	26	22	85%
<i>Alkufra</i>	11	9	82%
<i>Benghazi</i>	21	17	81%
<i>Al Betnan</i>	16	16	100%
<i>Al Jabal Al Akhdar</i>	33	13	39%
<i>Darnah</i>	23	23	100%
<i>Almarj</i>	21	17	81%
<i>Sirt</i>	8	5	63%
<i>Aljufra</i>	5	4	80%
<i>Misratah</i>	43	18	42%
<i>Almargeb</i>	64	44	69%
<i>Al Jifarah</i>	23	22	96%
<i>Tripoli</i>	82	47	57%
<i>Azzawya</i>	39	17	44%
<i>Zwara</i>	20	16	80%
<i>Al Jabal Al Gharbi</i>	44	37	84%
<i>Nalut</i>	15	11	73%
<i>Wadi Ashati</i>	7	7	100%
<i>Sebha</i>	15	8	53%
<i>Wadi Al Haya</i>	10	10	100%
<i>Murzuq</i>	34	31	91%
<i>Ghat</i>	4	2	50%
<b>Total</b>	<b>564</b>	<b>396</b>	<b>70%</b>

#### *Box 17: Breast cancer services: availability and readiness*

Basic breast cancer screening is widely available in Libya, with 396 PHC facilities reporting the capacity to give an initial diagnosis through medical examination. There are 12 mammography machines available, while a good majority of hospitals can offer a more refined diagnosis through ultrasound (89%) and biopsy (76%). Oncology services are reportedly available in eight hospitals.

Figure 80: Map of availability\* of breast cancer services, by district



\* Availability is defined as the ratio of facilities providing a selected service to 100,000 population

### 6.5.2 Breakdown of readiness indicators

No readiness scores were calculated for breast cancer diagnostics, as no indices were available, and corresponding data was therefore not collected.

Table 67: Availability of guidelines, trained staff, diagnostics and treatment for breast cancer

	PHC facilities		Hospitals	
	<i>N facilities</i>	<i>Proportion available</i>	<i>N facilities</i>	<i>Proportion available</i>
<i>Breast cancer guidelines available</i>	-	-	-	-
<i>Staff trained in breast cancer</i>	-	-	-	-
	<b>Diagnosis</b>			
<i>Only medical exam</i>	396	99%		
<i>Mammogram</i>	396	0.3%	80	14%
<i>Ultrasound</i>	396	4%	80	89%
<i>Biopsy</i>	396	0%	80	76%

A separate analysis of available data on breast cancer diagnostics across all hospitals and those PHC facilities offering breast cancer screening, indicates that most breast cancer diagnosis is done through medical exams in PHC facilities. More specific diagnostic methods include mammograms, which are available in one PHC facility (0.3%) and 11 hospitals (14%). Initial diagnosis with ultrasound is available in 16 PHC facilities (4%) and 71 hospitals (89%), while biopsies can be performed in 61 hospitals (76%). For additional information on cancer diagnostics, see Section 6.4.2.

## 6.6 Mental Health

Mental health is a chronically neglected field in Libya, although it is one of the few Arab countries to have a Mental Health Act. This Act came into effect in 1975, but has never been reviewed and is rarely used. The need for mental health services was always there, but no data is available on the prevalence of common mental health problems such as anxiety and depression, nor on psychiatric diseases. Prior to the onset of the conflict, the suicide rate in Libya was estimated to be 1.8 per 100,000 per year (34), but the current conflict in the country is expected to further increase the proportion of the population in need of acute psychosocial support, and thus the actual rate is expected to be higher. This increased need is possibly also reflected in the increasing trend of substance use among Libya's young people.

As there is no clear mental health policy or mental health legislation, there is also no corresponding budget or means by which to account for expenditure on mental health services, resulting in very limited availability of services. GPs in the PHC facilities have little formal training and/or experience with the diagnosis and treatment of mental health disorders, including anxiety and depression. Little referral takes place, patients usually go directly to one of the two specialist hospitals in Benghazi and Tripoli or to the private sector for diagnosis treatment. There are also six mental health outpatient facilities. Two of these outpatient facilities are located in mental hospitals, two in general hospitals, and two are in polyclinics. A diploma training program for mental health specialists started in 2013 but the conflict prevented the full implementation of the program. There are insufficient trained staff in the areas of mental disorders and disabilities, particularly in substance abuse disorders and in mental disorders among children.

### 6.6.1 Availability of services

Mental health is not one of the service-specific components of the SARA surveys, therefore the data presented here is a summary of responses to standard questions included in the Hospital and Core questionnaires. No detailed analysis is available. Mental health services in Libya are provided by 15 health facilities, which includes two hospitals with inpatient services, six hospitals offering outpatient services,

one mental health clinic, and four PHC facilities. The hospitals generally provide mental health services on an outpatient basis, while three hospitals offer inpatient mental health care. The mental health clinic in Sebha is located in the Sebha hospital but was treated as a separate facility for purposes of this survey. Emergency mental health services are available in three PHC facilities, while care for mental health disorders is available in all four PHC facilities providing mental health services.

Table 68: Availability of mental health services, by facility type and district

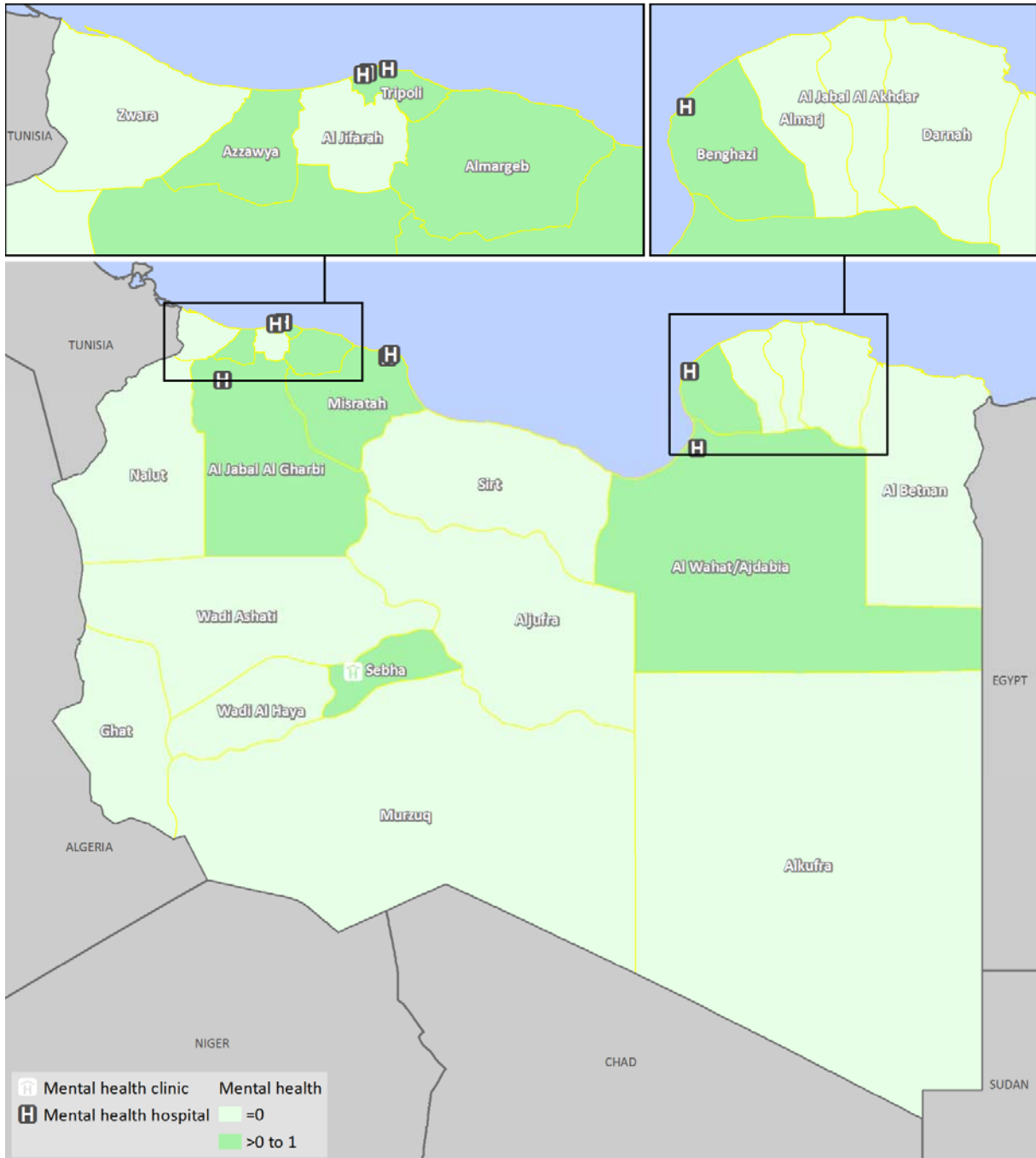
district	N of PHC facilities providing services	% of PHC facilities providing services	N of hospitals w/ outpatient services	N of hospitals w/ both inp't & outp't care	Mental health clinic
Al Wahat/Ajdabia	0		1		
Alkufra	0				
Benghazi	0			1	
Al Betnan	0				
Al Jabal Al Akhdar	0				
Darnah	0				
Almarj	0				
Sirt	0				
Aljufra	0				
Misratah	1	2%	2		
Almargeb	1	2%			
Al Jifarah	0				
Tripoli	0		2	1	
Azzawya	2	5%			
Zwara	0				
Al Jabal Al Gharbi	0		1		
Nalut	0				
Wadi Ashati	0				
Sebha	0				1
Wadi Al Haya	0				
Murzuq	0				
Ghat	0				
Total	4	1%	6	2	1

Only eight districts out of 22 have at least one facility available that provides mental health services. At the PHC level, only four municipalities have services available, indicating that overall access to mental health services will be a challenge for the majority of the population of Libya.

*Box 18: Mental health services: availability and readiness*

Although mental health needs in Libya are likely to be considerable, especially in relation to the current conflict, service delivery is limited to only eight districts. Six hospitals, one mental health clinic, and four PHC facilities are available to cover all the needs, which is grossly insufficient for a population of over six million. Trained staff, guidelines and essential medicines are in short supply in the PHC facilities and hospitals. Mental health service delivery in Libya needs urgent attention.

Figure 81: Map of availability\* of mental health services, by district



\* Availability is defined as the ratio of facilities providing a selected service to 100,000 population; only service-specific referral facilities are mapped

### 6.6.2 Breakdown of readiness indicators

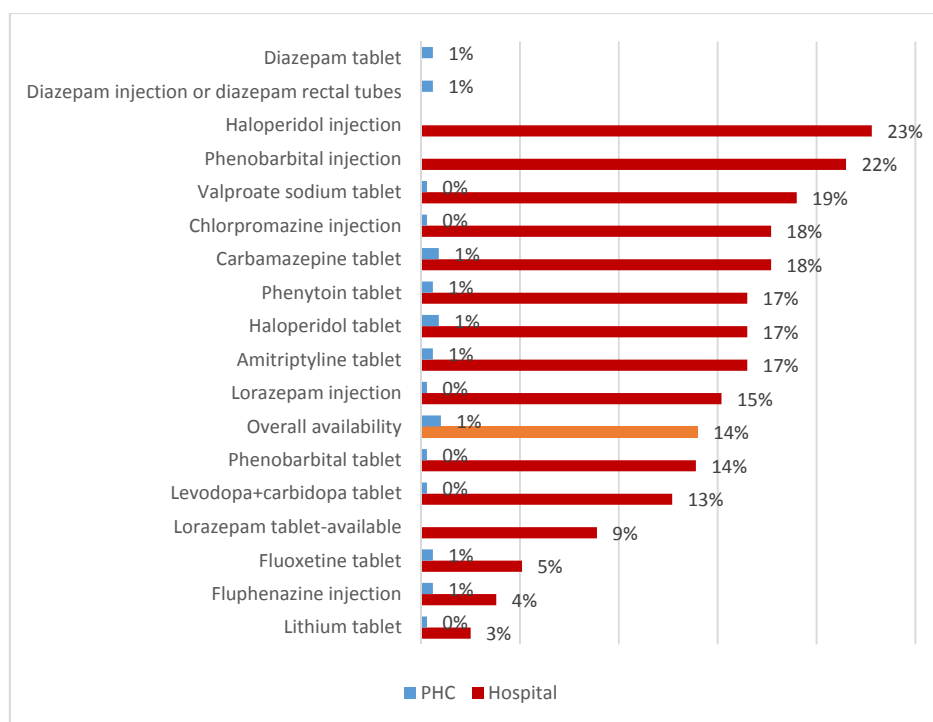
No readiness indices were calculated for mental health service delivery. Nonetheless, there is some service-specific information available. Only six PHC facilities had any mental health guidelines available, which represents 1% of the total number of responses from these facilities, while 12 facilities reported having at least one staff member who had received training in mental health during the past two years.

Table 69: Availability of guidelines, trained staff and diagnostics for mental health

	PHC facilities		Hospitals	
	N facilities	Proportion available	N facilities	Proportion available
Mental health guidelines available	562	1%	-	-
Staff trained in mental health	564	2%	-	-

The overall availability of essential medicines for mental health in the 79 hospitals and 318 PHC facilities which provided responses for the essential medicines survey are 14% in hospitals and 1% in PHC facilities. Haloperidol and phenobarbital injections are the most widely available mental health drugs in the hospital facilities, at 23% and 22% respectively, although this still represents less than a quarter of all hospitals. Fluphenazine injections (4%) and lithium tablets (3%) were the least commonly available mental health medicines in the hospitals. The availability of mental health drugs in PHC facilities is at such low levels that it is safe to conclude that they are essentially unavailable.

Figure 82: Availability of individual essential medicines for mental health in hospitals and PHC facilities



## 6.7 Overview of NCD services through PHC facilities, by municipality

This section provides an overview of NCD services available through the PHC facilities, disaggregated at the municipality level. Data is available for 100 municipalities. The municipality of Alshweirf is not included, as it did not have any functional PHC facilities at the time of survey.

### 6.7.1 Availability and readiness of NCD services

At the municipality level, NCD services are more widely available than any of the other types of services, including RMNCH and communicable disease diagnosis and treatment. There are only three municipalities (Al Jagboub, Arrayayna, and Jadu) that do not have NCD services available through PHC facilities. The average number of services per municipality is four, with cervical cancer screening (21 municipalities) and mental health services (four municipalities) the least commonly available services provided through the PHC facilities.

Overall readiness scores are low across all services and all municipalities. This indicates that although technically the availability of NCD services is high, the actual capacity to deliver them is limited, with limitations primarily consisting of very low numbers of facilities having up-to-date trained staff, and an exceedingly low availability of essential medicines for NCDs. Relevant guidelines were often not available either, except for those for diabetes diagnosis and management, which were available in 80% of facilities offering NCD services.

Table 70: Breakdown of available readiness indicators for individual NCD services in PHC facilities, by municipality

	Total N of PHC facilities	N of PHCs offering diabetes services	Guidelines diabetes diagnosis/management	Staff trained in diabetes	Diabetes diagnostics	Diabetes medicines	Diabetes equipment	Diabetes readiness	N of PHCs offering CVD services	Guidelines CVD diagnosis/management	Staff trained in CVD	CVD equipment	CVD medicines	CVD readiness	N of PHCs offering CRD services	Guidelines CRD diagnosis/management	Staff trained in CRD	CRD equipment	CRD medicines	CRD readiness	N of PHCs offering diagnosis of cerv. cancer	Guidelines cervical cancer mgmt & control	Staff trained in cervical cancer	Diagnostics for cervical cancer	Cervical cancer equipment	Cervical cancer readiness	Breast cancer	Mental health	N of NCD services available
Abusliem	15	15	67%	27%	13%	13%	70%	38%	10	0%	10%	83%	6%	25%	9	0%	0%	37%	40%	19%	1	0%	0%	100%	0%	25%	10	0	5
Ain Zara	12	9	56%	22%	70%	22%	94%	53%	8	0%	38%	92%	0%	32%	7	0%	14%	57%	14%	21%	0	0%	0%	0%	0%	0%	5	0	4
Al Ajaylat	21	6	100%	0%	0%	0%	75%	35%	6	17%	0%	78%	0%	24%	6	17%	0%	44%	0%	15%	0	0%	0%	0%	0%	0%	5	0	4
Al Aziziya	14	6	83%	0%	6%	0%	67%	31%	5	0%	0%	87%	0%	22%	5	0%	0%	47%	0%	12%	0	0%	0%	0%	0%	0%	5	0	4
Al Galaa	4	1	100%	0%	0%	0%	50%	30%	1	0%	0%	67%	0%	17%	1	0%	0%	33%	0%	8%	0	0%	0%	0%	0%	0%	1	0	4
Al Jagboub	1	0	0%	0%	0%	0%	0%	0%	0	0%	0%	0%	0%	0%	0	0%	0%	0%	0%	0%	0	0%	0%	0%	0%	0%	0	0	0
Al Maya	6	1	100%	0%	0%	0%	50%	30%	1	0%	0%	67%	0%	17%	1	0%	0%	33%	0%	8%	0	0%	0%	0%	0%	0%	1	0	4
Al Shate Al Garbe	20	9	100%	0%	0%	0%	44%	29%	9	0%	0%	56%	0%	14%	9	0%	0%	33%	0%	8%	0	0%	0%	0%	0%	0%	9	0	4
Al Shate Al Sharge	15	7	100%	0%	0%	0%	79%	36%	7	0%	0%	67%	0%	17%	7	0%	0%	43%	0%	11%	0	0%	0%	0%	0%	0%	7	0	4
Al Swani	11	2	100%	0%	17%	0%	75%	38%	2	0%	0%	100%	0%	25%	2	0%	0%	67%	0%	17%	0	0%	0%	0%	0%	0%	2	0	4
Alabyar	12	8	100%	0%	17%	0%	75%	38%	8	0%	0%	100%	0%	25%	8	0%	0%	63%	0%	16%	0	0%	0%	0%	0%	0%	8	0	4
Alasabaa	13	4	100%	0%	0%	0%	75%	35%	4	0%	0%	67%	0%	17%	4	0%	0%	33%	0%	8%	0	0%	0%	0%	0%	0%	4	0	4
Albawanees	4	1	100%	0%	0%	0%	50%	30%	2	0%	0%	67%	0%	17%	1	0%	0%	67%	0%	17%	0	0%	0%	0%	0%	0%	1	0	4
Albayda	21	16	63%	6%	38%	33%	56%	39%	15	27%	7%	62%	0%	24%	6	0%	0%	33%	20%	13%	0	0%	0%	0%	0%	0%	0	0	3
Albrayga	5	5	60%	0%	47%	0%	20%	25%	5	0%	0%	33%	0%	8%	4	0%	0%	25%	0%	6%	0	0%	0%	0%	0%	0%	3	0	4
Aldawoon	1	1	100%	0%	33%	0%	0%	27%	1	0%	0%	67%	0%	17%	1	0%	0%	33%	0%	8%	0	0%	0%	0%	0%	0%	1	0	4
Algatroun	3	3	100%	0%	0%	0%	100%	40%	3	0%	0%	78%	0%	19%	3	0%	0%	44%	0%	11%	0	0%	0%	0%	0%	0%	3	0	4
Algaygab	3	1	0%	0%	0%	100%	100%	40%	1	0%	0%	67%	67%	33%	1	0%	0%	67%	100%	42%	0	0%	0%	0%	0%	0%	1	0	4
Alghrayfa	11	5	100%	0%	80%	0%	100%	56%	5	0%	0%	100%	0%	25%	5	0%	0%	60%	0%	15%	1	0%	0%	100%	0%	25%	5	0	5
Alghurda Ashshati	19	7	100%	0%	0%	0%	57%	31%	7	0%	0%	62%	0%	15%	7	0%	0%	38%	0%	10%	0	0%	0%	0%	0%	0%	7	0	4
Alharaba	5	1	100%	0%	0%	0%	50%	30%	1	0%	0%	100%	0%	25%	1	0%	0%	67%	0%	17%	0	0%	0%	0%	0%	0%	1	0	4
Alhawamid	3	3	100%	0%	0%	0%	83%	37%	3	0%	0%	89%	0%	22%	3	0%	0%	56%	0%	14%	0	0%	0%	0%	0%	0%	3	0	4
Aljmail	17	6	83%	17%	11%	0%	67%	36%	4	0%	0%	50%	0%	13%	4	0%	0%	25%	0%	6%	0	0%	0%	0%	0%	0%	4	0	4
Aljufra	13	5	80%	0%	0%	0%	50%	26%	4	0%	0%	67%	0%	17%	4	0%	0%	67%	0%	17%	0	0%	0%	0%	0%	0%	4	0	4
Alkhums	32	26	65%	0%	31%	2%	92%	38%	19	0%	0%	93%	0%	23%	24	0%	0%	57%	1%	14%	0	0%	0%	0%	0%	0%	16	1	5
Alkufra	17	8	100%	0%	50%	15%	81%	49%	9	0%	0%	81%	7%	22%	8	0%	0%	50%	30%	20%	1	100%	100%	0%	0%	50%	8	0	5
Almarj	8	3	100%	0%	0%	0%	83%	37%	5	0%	0%	87%	0%	22%	4	0%	0%	50%	0%	13%	1	0%	0%	0%	0%	0%	4	0	5
Alqubba	6	6	100%	0%	0%	0%	17%	23%	6	0%	0%	50%	0%	13%	6	0%	0%	39%	0%	10%	0	0%	0%	0%	0%	0%	6	0	4
Alsharguiya	11	5	100%	0%	7%	0%	60%	33%	5	0%	0%	60%	0%	15%	5	0%	0%	33%	0%	8%	0	0%	0%	0%	0%	0%	5	0	4
Arrajban	3	3	100%	0%	44%	0%	67%	42%	3	0%	0%	100%	0%	25%	3	0%	0%	67%	0%	17%	0	0%	0%	0%	0%	0%	3	0	4
Arrayayna	4	0	0%	0%	0%	0%	0%	0%	0	0%	0%	0%	0%	0%	0	0%	0%	0%	0%	0%	0	0%	0%	0%	0%	0%	0	0	0
Arrhaibat	5	1	100%	0%	0%	0%	50%	30%	1	0%	0%	67%	0%	17%	1	0%	0%	33%	0%	8%	0	0%	0%	0%	0%	0%	1	0	4
Ashshgega	3	1	100%	0%	0%	0%	50%	30%	1	0%	0%	67%	0%	17%	1	0%	0%	33%	0%	8%	0	0%	0%	0%	0%	0%	1	0	4
Assahel	12	5	0%	20%	20%	52%	100%	38%	4	0%	0%	75%	33%	27%	2	0%	0%	67%	100%	42%	0	0%	0%	0%	0%	0%	2	0	4
Aujala	8	3	100%	0%	33%	0%	83%	43%	3	33%	0%	78%	0%	28%	2	0%	0%	50%	30%	20%	0	0%	0%	0%	0%	0%	2	0	4
Azzahra	16	7	100%	0%	0%	3%	64%	33%	7	0%	0%	71%	6%	19%	7	0%	0%	43%	13%	14%	0	0%	0%	0%	0%	0%	7	0	4
Azzawya	35	24	71%	63%	42%	10%	63%	50%	22	73%	41%	89%	7%	52%	23	78%	43%	57%	13%	48%	3	100%	67%	0%	0%	42%	9	1	6
Azzintan	11	7	57%	0%	52%	6%	43%	32%	7	14%	14%	67%	3%	25%	6	17%	17%	44%	4%	20%	0	0%	0%	0%	0%	0%	1	0	4
Bani Waleed	17	9	67%	22%	56%	7%	83%	47%	9	11%	11%	100%	17%	35%	5	0%	0%	67%	0%	17%	1	0%	0%	100%	0%	25%	6	1	6
Baten Aljabal	6	3	100%	67%	22%	0%	67%	51%	3	33%	0%	100%	0%	33%	3	67%	0%	67%	0%	33%	0	0%	0%	0%	0%	0%	1	0	4



	Total N of PHC facilities	N of PHCs offering diabetes services	Guidelines diabetes diagnosis/management	Staff trained in diabetes	Diabetes diagnostics	Diabetes medicines	Diabetes equipment	Diabetes readiness	N of PHCs offering CVD services	Guidelines CVD diagnosis/management	Staff trained in CVD	CVD equipment	CVD medicines	CVD readiness	N of PHCs offering CRD services	Guidelines CRD diagnosis/management	Staff trained in CRD	CRD equipment	CRD medicines	CRD readiness	N of PHCs offering diagnosis of cerv. cancer	Guidelines cervical cancer mgmt & control	Staff trained in cervical cancer	Diagnostics for cervical cancer	Cervical cancer equipment	Cervical cancer readiness	Breast cancer	Mental health	N of NCD services available
Benghazi	25	16	94%	13%	77%	14%	97%	59%	14	0%	0%	79%	0%	20%	12	0%	0%	58%	20%	20%	2	0%	0%	100%	0%	25%	12	0	5
Bint Bayya	10	4	100%	0%	92%	0%	100%	58%	4	0%	0%	83%	0%	21%	4	0%	0%	42%	0%	10%	0	0%	0%	0%	0%	0%	4	0	4
Bir Alashhab	2	1	100%	0%	0%	0%	50%	30%	1	0%	0%	67%	0%	17%	1	0%	0%	33%	0%	8%	0	0%	0%	0%	0%	0%	1	0	4
Daraj	8	5	100%	0%	40%	0%	80%	44%	5	0%	0%	100%	0%	25%	5	0%	0%	60%	0%	15%	0	0%	0%	0%	0%	0%	5	0	4
Darnah	14	9	89%	0%	22%	11%	61%	37%	9	0%	0%	96%	67%	41%	9	0%	0%	67%	100%	42%	2	0%	0%	100%	0%	25%	9	0	5
Ejdabia	12	12	100%	0%	17%	0%	71%	38%	12	0%	0%	72%	0%	18%	12	0%	0%	42%	10%	13%	1	0%	0%	100%	0%	25%	12	0	5
Ejkherra	2	1	100%	0%	0%	60%	100%	52%	1	100%	0%	100%	17%	54%	0	0%	0%	0%	0%	0%	0	0%	0%	0%	0%	0%	0	0	2
Emsaed	3	1	0%	0%	100%	100%	100%	60%	1	0%	0%	67%	67%	33%	1	0%	0%	67%	100%	42%	0	0%	0%	0%	0%	0%	1	0	4
Espeaa	4	1	100%	0%	100%	0%	100%	60%	1	0%	0%	100%	0%	25%	1	0%	0%	67%	20%	22%	0	0%	0%	0%	0%	0%	1	0	4
Garaboli	18	12	50%	0%	19%	0%	63%	26%	12	0%	0%	94%	0%	24%	11	0%	0%	55%	0%	14%	0	0%	0%	0%	0%	0%	6	0	4
Gasr Akhyar	11	3	100%	33%	89%	7%	67%	59%	4	25%	25%	100%	0%	38%	3	33%	33%	67%	7%	35%	0	0%	0%	0%	0%	0%	2	0	4
Gasr Bin Ghasheer	4	2	100%	0%	0%	0%	75%	35%	2	0%	0%	100%	0%	25%	2	0%	0%	67%	0%	17%	0	0%	0%	0%	0%	0%	2	0	4
Gemienis	8	3	100%	0%	0%	0%	100%	40%	3	0%	0%	78%	0%	19%	3	0%	0%	56%	0%	14%	0	0%	0%	0%	0%	0%	3	0	4
Ghadamis	1	1	100%	0%	33%	0%	100%	47%	1	0%	0%	100%	0%	25%	1	0%	0%	33%	0%	8%	0	0%	0%	0%	0%	0%	1	0	4
Gharb Azzawya	11	5	20%	0%	40%	8%	80%	30%	5	0%	0%	67%	0%	17%	4	0%	0%	58%	0%	15%	2	50%	50%	0%	0%	25%	3	0	5
Ghat	9	4	50%	0%	33%	80%	75%	48%	2	0%	0%	67%	0%	17%	2	0%	0%	50%	40%	23%	0	0%	0%	0%	0%	0%	2	0	4
Ghiryan	51	19	95%	0%	5%	0%	53%	31%	19	5%	0%	63%	0%	17%	18	0%	0%	33%	0%	8%	0	0%	0%	0%	0%	0%	18	0	4
Hai Alandalus	17	13	69%	31%	74%	17%	88%	56%	7	0%	14%	81%	5%	25%	5	0%	0%	53%	16%	17%	1	0%	0%	100%	0%	25%	4	0	5
Jadu	7	0	0%	0%	0%	0%	0%	0%	0	0%	0%	0%	0%	0%	0	0%	0%	0%	0%	0%	0	0%	0%	0%	0%	0%	0	0	0
Jalu	9	4	100%	0%	0%	0%	63%	33%	4	0%	0%	50%	0%	13%	4	0%	0%	33%	0%	8%	0	0%	0%	0%	0%	0%	4	0	4
Janzour	19	9	78%	11%	26%	2%	83%	40%	9	11%	22%	85%	0%	30%	8	0%	0%	58%	0%	15%	1	0%	0%	0%	0%	0%	8	0	5
Jardas Alabeed	5	5	100%	20%	7%	0%	80%	41%	5	20%	0%	67%	0%	22%	4	0%	0%	33%	0%	8%	0	0%	0%	0%	0%	0%	4	0	4
Kabaw	5	2	100%	0%	0%	0%	75%	35%	1	0%	0%	67%	0%	17%	1	0%	0%	67%	0%	17%	0	0%	0%	0%	0%	0%	1	0	4
Khalege Alsedra	8	1	100%	0%	0%	0%	0%	20%	1	0%	0%	33%	0%	8%	1	0%	0%	33%	0%	8%	0	0%	0%	0%	0%	0%	1	0	4
Kikkla	5	1	100%	0%	0%	0%	0%	20%	1	0%	0%	0%	0%	0%	1	0%	0%	0%	0%	0%	0	0%	0%	0%	0%	0%	1	0	4
Labriq	2	2	100%	0%	0%	0%	25%	25%	2	0%	0%	33%	0%	8%	2	0%	0%	17%	0%	4%	0	0%	0%	0%	0%	0%	2	0	4
Marada	1	1	100%	0%	100%	40%	50%	58%	1	0%	0%	100%	0%	25%	1	0%	0%	33%	60%	23%	0	0%	0%	0%	0%	0%	1	0	4
Misrata	25	11	100%	0%	45%	4%	91%	48%	11	0%	0%	85%	0%	21%	11	0%	0%	64%	0%	16%	3	0%	0%	100%	0%	25%	11	0	5
Mizda	3	3	100%	0%	0%	0%	50%	30%	3	0%	0%	67%	0%	17%	3	0%	0%	44%	0%	11%	0	0%	0%	0%	0%	0%	3	0	4
Msallata	13	4	100%	0%	100%	0%	100%	60%	4	0%	0%	100%	0%	25%	4	0%	0%	67%	0%	17%	0	0%	0%	0%	0%	0%	4	0	4
Murzuq	10	4	100%	0%	25%	0%	75%	40%	4	0%	0%	67%	0%	17%	4	0%	0%	42%	0%	10%	1	0%	0%	100%	0%	25%	4	0	5
Nalut	3	2	0%	0%	0%	10%	75%	17%	2	0%	0%	100%	0%	25%	1	0%	0%	67%	0%	17%	0	0%	0%	0%	0%	0%	0	0	3
Nesma	5	1	0%	0%	0%	100%	100%	40%	1	0%	0%	67%	67%	33%	1	0%	0%	67%	100%	42%	0	0%	0%	0%	0%	0%	1	0	4
Rigdaleen	5	1	100%	0%	33%	20%	50%	41%	1	0%	0%	67%	17%	21%	1	0%	0%	67%	80%	37%	0	0%	0%	0%	0%	0%	1	0	4
Sabratha	20	6	83%	0%	0%	10%	75%	34%	5	0%	0%	67%	0%	17%	5	0%	0%	27%	0%	7%	0	0%	0%	0%	0%	0%	4	0	4
Sebha	18	10	80%	0%	30%	0%	70%	36%	12	8%	0%	81%	0%	22%	10	0%	0%	57%	0%	14%	1	0%	0%	100%	0%	25%	7	0	5
Shahhat	26	9	100%	0%	26%	0%	50%	35%	9	0%	0%	70%	0%	18%	8	0%	0%	46%	0%	11%	2	0%	0%	100%	0%	25%	8	0	5
Sidi Assayeh	2	2	100%	0%	0%	0%	50%	30%	2	0%	0%	67%	0%	17%	2	0%	0%	50%	0%	13%	0	0%	0%	0%	0%	0%	2	0	4
Sirt	7	6	100%	0%	22%	0%	58%	36%	3	0%	0%	78%	0%	19%	4	25%	0%	42%	0%	17%	0	0%	0%	0%	0%	0%	3	0	4
Sug Aljumaa	21	11	64%	36%	61%	24%	86%	54%	10	0%	40%	93%	2%	34%	8	0%	13%	63%	14%	22%	0	0%	0%	0%	0%	0%	6	0	4
Sug Alkhamees	5	2	100%	0%	0%	0%	50%	30%	2	0%	0%	100%	0%	25%	2	0%	0%	67%	0%	17%	0	0%	0%	0%	0%	0%	2	0	4

	Total N of PHC facilities	N of PHCs offering diabetes services	Guidelines diabetes diagnosis/management	Staff trained in diabetes	Diabetes diagnostics	Diabetes medicines	Diabetes equipment	Diabetes readiness	N of PHCs offering CVD services	Guidelines CVD diagnosis/management	Staff trained in CVD	CVD equipment	CVD medicines	CVD readiness	N of PHCs offering CRD services	Guidelines CRD diagnosis/management	Staff trained in CRD	CRD equipment	CRD medicines	CRD readiness	N of PHCs offering diagnosis of cerv. cancer	Guidelines cervical cancer mgmt & control	Staff trained in cervical cancer	Diagnostics for cervical cancer	Cervical cancer equipment	Cervical cancer readiness	Breast cancer	Mental health	N of NCD services available
Suloug	5	2	100%	0%	50%	0%	100%	50%	2	0%	0%	83%	0%	21%	2	0%	0%	67%	0%	17%	0	0%	0%	0%	0%	0%	2	0	4
Surman	14	6	83%	33%	89%	7%	100%	62%	6	67%	33%	100%	3%	51%	6	50%	33%	67%	0%	38%	0	0%	0%	0%	0%	0%	1	1	5
Tajoura	18	7	100%	0%	57%	0%	100%	51%	7	0%	0%	100%	0%	25%	7	0%	0%	67%	0%	17%	4	0%	0%	100%	0%	25%	7	0	5
Taraghin	11	2	100%	0%	0%	0%	100%	40%	2	0%	0%	83%	0%	21%	2	0%	0%	50%	0%	13%	0	0%	0%	0%	0%	0%	2	0	4
Tarhuna	34	17	94%	0%	27%	0%	68%	38%	16	0%	0%	67%	0%	17%	17	0%	0%	41%	0%	10%	1	0%	0%	100%	0%	25%	15	0	5
Tazirbu	1	1	100%	0%	100%	0%	100%	60%	1	0%	0%	67%	0%	17%	1	0%	0%	33%	20%	13%	0	0%	0%	0%	0%	0%	1	0	4
Thaher Aljabal	5	2	100%	0%	0%	0%	50%	30%	2	0%	0%	67%	0%	17%	2	0%	0%	33%	0%	8%	0	0%	0%	0%	0%	0%	2	0	4
Tobruk	26	14	100%	7%	0%	0%	46%	31%	14	7%	7%	48%	0%	15%	14	7%	7%	31%	0%	11%	3	33%	33%	100%	33%	50%	14	0	5
Toukra	5	2	50%	0%	0%	50%	75%	35%	1	0%	0%	100%	0%	25%	2	0%	0%	67%	20%	22%	0	0%	0%	0%	0%	0%	1	0	4
Tripoli	13	12	58%	50%	81%	17%	96%	60%	8	0%	13%	71%	0%	21%	6	0%	17%	61%	7%	21%	1	0%	0%	100%	0%	25%	7	0	5
Ubari	4	1	100%	0%	0%	0%	50%	30%	1	0%	0%	100%	0%	25%	1	0%	0%	67%	0%	17%	0	0%	0%	0%	0%	0%	1	0	4
Umm arrazam	8	8	100%	0%	8%	0%	44%	30%	8	0%	0%	50%	0%	13%	8	0%	0%	25%	0%	6%	0	0%	0%	0%	0%	0%	8	0	4
Wadi Etba	13	3	33%	0%	33%	0%	100%	33%	1	0%	0%	100%	0%	25%	1	0%	0%	67%	0%	17%	0	0%	0%	0%	0%	0%	1	0	4
Wazin	1	1	0%	0%	0%	0%	50%	10%	0	0%	0%	0%	0%	0%	0	0%	0%	0%	0%	0%	0	0%	0%	0%	0%	0%	0	0	1
Yefren	5	1	100%	0%	0%	0%	50%	30%	1	0%	0%	67%	0%	17%	1	0%	0%	33%	0%	8%	0	0%	0%	0%	0%	0%	1	0	4
Zamzam	5	1	100%	0%	0%	0%	50%	30%	1	0%	0%	100%	0%	25%	1	0%	0%	67%	0%	17%	0	0%	0%	0%	0%	0%	1	0	4
Ziltun	6	1	100%	0%	0%	0%	50%	30%	1	0%	0%	67%	0%	17%	1	0%	0%	33%	0%	8%	0	0%	0%	0%	0%	0%	1	0	4
Zliten	25	22	5%	5%	77%	5%	82%	35%	22	5%	18%	95%	10%	32%	23	9%	4%	65%	12%	23%	0	0%	0%	0%	0%	0%	1	0	4
Zwara	6	5	100%	0%	20%	0%	90%	42%	4	0%	0%	83%	0%	21%	4	0%	0%	50%	0%	13%	1	0%	0%	100%	0%	25%	4	0	5
<b>Total</b>	<b>1,082</b>	<b>550</b>	<b>80%</b>	<b>9%</b>	<b>32%</b>	<b>7%</b>	<b>72%</b>	<b>40%</b>	<b>510</b>	<b>7%</b>	<b>6%</b>	<b>78%</b>	<b>4%</b>	<b>24%</b>	<b>478</b>	<b>6%</b>	<b>4%</b>	<b>50%</b>	<b>13%</b>	<b>18%</b>	<b>34</b>	<b>18%</b>	<b>15%</b>	<b>76%</b>	<b>3%</b>	<b>28%</b>	<b>396</b>	<b>4</b>	<b>4</b>

### 6.7.2 Breakdown of readiness indicators

In order to provide a quick glance into overall service delivery capacity for NCDs, this section provides a short summary of PHC-specific NCD readiness indicators that were already presented individually in the service-specific narratives. The section focuses on trained staff and the availability of essential medicines.

#### 6.7.2.1 Availability of staff trained in NCD subjects

Overall availability of staff having received training on NCD topics during the past two years in PHC facilities is very low, with less than 15% of the facilities having at least one staff member trained in the diagnosis and management of diabetes, CVDs, CRDs, and cervical cancer. Staff trained in mental health are available in only 2% of facilities, but it must be noted that only four PHC facilities formally offer these services, as opposed to the 564 facilities that provided responses to this question.

Table 71: Proportion of PHC facilities with staff trained in NCD subjects in the past 2 years

Training course	N of PHCs reporting	% of these PHCs with trained staff
Diabetes diagnosis/management	550	9%
Cardiovascular disease diagnosis/management	510	6%
Chronic respiratory disease diagnosis/management	478	4%
Cervical cancer prevention and control	34	15%
Mental Health and Psychosocial Support	564	2%

#### 6.7.2.2 Availability of essential medicines for NCDs

The overall availability of drugs for NCDs in PHC facilities is 14%, indicating that all essential NCD medicines were in short supply in all 318 facilities that contributed data. The most widely available medicine was hydrocortisone injection (24% of facilities), with salbutamol inhalers the least commonly available (7%).

Figure 83: Availability of individual essential medicines for NCDs in PHC facilities

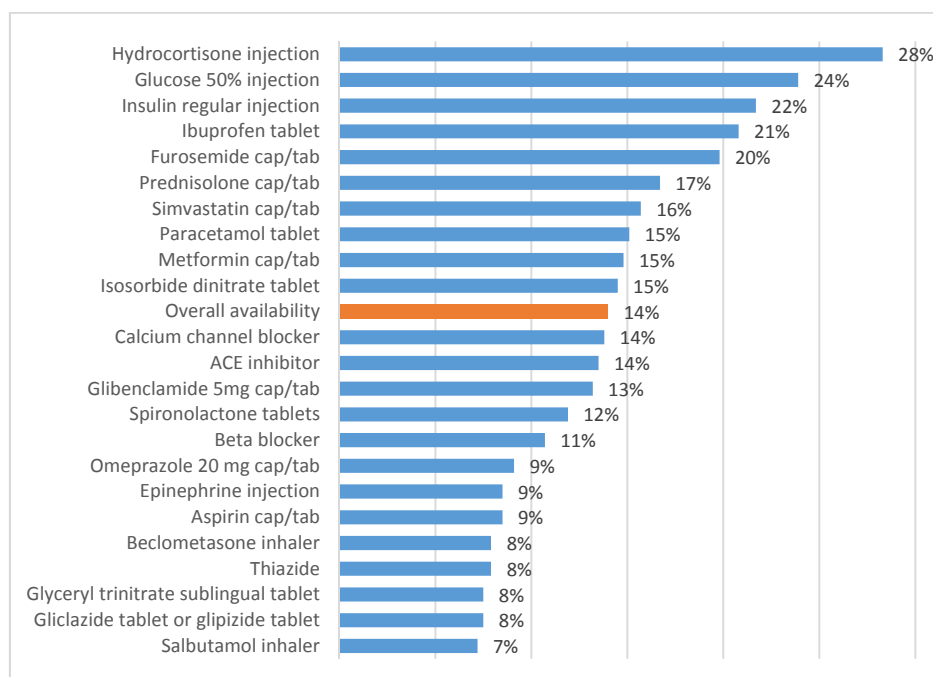


Table 72: Availability and readiness scores for NCD services, by hospital

NCD services	Diagnosis/manage diabetes								Diagnose/manage cardiovascular diseases						Diagnose/manage chronic respiratory diseases						Diagnosis cervical cancer						
	Guidelines diabetes	Staff trained diabetes	Diabetes equipment	Diabetes diagnosis	Diabetes medicines	Available	Readiness	Guidelines CVD	Staff trained CVD	CVD Equipment scores	CVD Medicines Scores	Available	Readiness	Guidelines CRD	Staff trained in CRD	CRD Equipment scores	CRD Medicines scores	Available	Readiness	Guidelines cervical cancer	Staff trained cervical cancer	Diagnosis (Acetic acid)	Equipment (speculum)	Available	Readiness	Breast cancer	Mental Health
Atiya Al Kaseh- Al Kuffra hospital	x	0%	0%	100%	100%	20%	x 44%	0%	0%	67%	0%	x 17%															
Tripoli pediatric hospital	x	100%	100%	100%	100%	40%	x 88%	100%	100%	67%	50%	x 79%	100%	100%	67%	60%	x 82%										x
Zwara Albahree Hospital	x	0%	0%	100%	100%	100%	x 60%	0%	0%	67%	100%	x 42%	0%	0%	33%	60%	x 23%										
Abi Sleem trauma hospital																											
Adri hospital																											
Al –Zawia Hospital	x							0%	0%	67%	50%	x 29%															
Al Abyar Hospital	x	100%	0%	0%	100%	0%	x 40%						100%	0%	67%	0%	x 42%										
Al Afia hospital - Houn	x	0%	0%	100%	100%	20%	x 44%	0%	0%	67%	0%	x 17%	0%	0%	67%	100%	x 42%										
Al Asaabaa hospital																											
Al Aujilat Hospital	x	0%	0%	100%	100%	80%	x 56%	0%	0%	100%	83%	x 46%	0%	0%	67%	100%	x 42%										
Al Bardi Hospital																											
Al Dawoon hospital	x	0%	0%	50%	100%	20%	x 34%	0%	0%	67%	17%	x 21%															
Al Jaghub hospital	x	100%	100%	100%	100%	80%	x 96%	100%	100%	100%	67%	x 92%	100%	100%	100%	80%	x 95%										
Al Jalaa gynecology hospital	x	100%	100%	50%	100%	40%	x 78%	0%	100%	67%	50%	x 54%								0%	100%	0%	100%	x 50%			
Al Jalaa hospital – Benghazi																											
Al Jameel Hospital	x	0%	0%	50%	67%	40%	x 31%	0%	0%	67%	33%	x 25%	0%	0%	67%	20%	x 22%										
Al Kewefia chest diseases hospital	x												0%	100%	100%	80%	x 70%										
Al Khadra hospital	x	0%	0%	100%	100%	20%	x 44%	0%	0%	100%	17%	x 29%	100%	0%	100%	40%	x 60%	0%	0%	0%	100%	x 25%					
Al khums hospital	x	0%	0%	100%	33%	100%	x 47%	0%	0%	67%	100%	x 42%	0%	0%	67%	100%	x 42%										
Al Kuriaat hospital	x	0%	100%	100%	100%	60%	x 72%																				
Almarj Hospital	x	0%	0%	100%	100%	80%	x 56%	0%	0%	100%	83%	x 46%	0%	0%	67%	60%	x 32%										
Al Qarabouli hospital																											
Al Quba Hospital	x	0%	0%	50%	0%	20%	x 14%	0%	0%	100%	33%	x 33%	0%	0%	67%	40%	x 27%										
Al Temimi Hospital	x	0%	100%	50%	100%	100%	x 70%	0%	100%	100%	67%	x 67%	0%	100%	67%	60%	x 57%										
Al Wehda Hospital	x	100%	0%	100%	100%	40%	x 68%	100%	0%	67%	33%	x 50%															
Al Zintan hospital	x	0%	0%	100%	100%	20%	x 44%						0%	0%	67%	20%	x 22%									x	
Ali Omar Askar hospital-Sbeia	x	0%	0%	100%	67%	100%	x 53%																				
Bani waleed hospital	x	0%	0%	100%	100%	100%	x 60%	0%	0%	67%	100%	x 42%	0%	0%	67%	100%	x 42%										
Be'ar Al Austa Milad hospital	x	0%	0%	0%	100%	60%	x 32%	100%	0%	0%	33%	x 33%	0%	0%	0%	60%	x 15%										
Benghazi hospital for peds & surgery	x							0%	0%	100%	0%	x 25%	0%	0%	67%	20%	x 22%								x	x	
Benghazi medical center	x	0%	100%	100%	33%	20%	x 51%	0%	100%	100%	17%	x 54%	0%	100%	100%	60%	x 65%	100%	0%	0%	0%	0%	x 25%	x			
Bergan hospital																											
Brak hospital																											
Burns & plastic surgery hosp, Tripoli	x							0%	0%	33%	50%	x 21%															
Chest diseases hospital, Misratah																											
Diabetes & endocrine hosp - Tripoli	x	0%	100%	50%	100%	100%	x 70%																				
Ghadames hospital	x	0%	100%	100%	100%	60%	x 72%	0%	100%	67%	67%	x 58%															
Gharyan hospital																											
Gmenis hospital																											
Jado Hospital	x	0%	0%	100%	67%	40%	x 41%	0%	0%	33%	17%	x 13%	0%	0%	33%	100%	x 33%										

NCD services	Diagnosis/manage diabetes							Diagnose/manage cardiovascular diseases					Diagnose/manage chronic respiratory diseases					Diagnosis cervical cancer					Breast cancer	Mental Health				
	Guidelines diabetes	Staff trained diabetes	Diabetes equipment	Diabetes diagnosis	Diabetes medicines	Available	Readiness	Guidelines CVD	Staff trained CVD	CVD Equipment scores	CVD Medicines Scores	Available	Readiness	Guidelines CRD	Staff trained in CRD	CRD Equipment scores	CRD Medicines scores	Available	Readiness	Guidelines cervical cancer	Staff trained cervical cancer	Diagnosis (Acetic acid)			Equipment (speculum)	Available	Readiness	
Jalou hospital		0%	0%	0%	0%	0%	0%																					
Jardas Al Abeeid Hospital	x	0%	0%	50%	100%	20%	x 34%																					
Kabaw hospital	x							0%	0%	67%	50%	x 29%																
Misslata hospital	x	100%	100%	100%	100%	40%	x 88%	100%	100%	100%	50%	x 88%	100%	100%	100%	20%	x 80%	100%	100%	100%	0%	x 75%						
Mitiga hospital	x	0%	0%	100%	100%	60%	x 52%	0%	0%	67%	67%	x 33%	0%	0%	67%	60%	x 32%									x	x	
Mizda hospital	x	100%	0%	100%	100%	80%	x 76%	0%	0%	67%	67%	x 33%	0%	0%	67%	80%	x 37%											
Murziq hospital	x	0%	0%	100%	0%	40%	x 28%	0%	0%	67%	17%	x 21%	0%	0%	67%	20%	x 22%											
Nalout hospital	x	0%	100%	100%	100%	60%	x 72%	0%	100%	67%	67%	x 58%	0%	100%	67%	60%	x 57%											
Nat'l Institute Oncology Subrata	x																			0%	100%	100%	0%	x 50%	x			
Omar Al Mokhtar Hospital	x	0%	0%	100%	100%	40%	x 48%	0%	0%	67%	17%	x 21%	0%	0%	67%	40%	x 27%											
Oncology Center Misratah	x	100%	0%	0%	100%	40%	x 48%	0%	0%	0%	0%	x 0%	0%	0%	0%	40%	x 10%	0%	100%	0%	100%	x 50%	x	x				
Ophthalmology hospital - Tripoli																												
Psychiatric Diseases Hospital - Tripoli	x	0%	0%	0%	100%	60%	x 32%	0%	100%	0%	50%	x 38%	0%	0%	0%	20%	x 5%										x	
Sebha Medical Center	x	0%	0%	50%	100%	100%	x 50%	0%	0%	33%	100%	x 33%																
Semno Hospital																												
Shehat Chest Hospital	x												100%	0%	0%	0%	x 25%											
Slouq hospital																												
Sooq Al Khamees hospital - Al khums	x	0%	0%	50%	100%	100%	x 50%	0%	0%	67%	100%	x 42%	0%	0%	33%	100%	x 33%											
Subrata Hospital	x	0%	0%	100%	100%	80%	x 56%	0%	0%	67%	33%	x 25%	0%	0%	100%	40%	x 35%											
Surmann Hospital	x	0%	0%	100%	100%	40%	x 48%	0%	0%	67%	50%	x 29%	0%	0%	100%	40%	x 35%											
Sussa Hospital	x	0%	0%	50%	0%	20%	x 14%	0%	0%	67%	33%	x 25%	0%	0%	33%	40%	x 18%											
Tajurra hospital	x	100%	0%	100%	100%	40%	x 68%	100%	0%	67%	83%	x 63%	100%	0%	67%	60%	x 57%	100%	0%	0%	100%	x 50%						
Tarhuna hospital	x	0%	0%	100%	100%	80%	x 56%	0%	0%	67%	33%	x 25%	0%	0%	33%	40%	x 18%											
Tazarbu hospital	x	0%	0%	100%	100%	0%	x 40%	0%	0%	67%	17%	x 21%																
Tegi hospital	x	0%	0%	100%	67%	20%	x 37%	0%	0%	67%	17%	x 21%	0%	0%	67%	20%	x 22%											
Traghen hospital	x							0%	0%	100%	17%	x 29%	0%	0%	67%	40%	x 27%											
Tripoli central hospital	x	100%	100%	50%	100%	80%	x 86%	0%	100%	67%	83%	x 63%	0%	100%	100%	60%	x 65%									x		
Tripoli medical center	x	100%	0%	100%	100%	80%	x 76%	100%	0%	67%	67%	x 58%	0%	0%	67%	40%	x 27%	0%	0%	0%	100%	x 25%	x					
Tubruq Medical Center	x	100%	100%	100%	100%	60%	x 92%	100%	100%	100%	67%	x 92%	100%	100%	100%	40%	x 85%	100%	0%	100%	100%	x 75%	x					
Tukaraa Hospital																												
Weddan hospital	x	0%	0%	100%	100%	20%	x 44%	0%	0%	67%	0%	x 17%	0%	0%	67%	80%	x 37%											
Yaffren Hospital	x	0%	0%	100%	67%	40%	x 41%	0%	0%	67%	0%	x 17%	0%	0%	67%	60%	x 32%											
Zlitan hospital	x	0%	0%	100%	100%	40%	x 48%	0%	0%	100%	50%	x 38%																
Abi Sitta chest diseases hospital	x	0%	0%	50%	100%	80%	x 46%	0%	0%	67%	33%	x 25%	100%	100%	100%	40%	x 85%											
Al Hraha hospital	x	0%	0%	100%	0%	20%	x 24%	0%	100%	67%	17%	x 46%																
Al Shewarif hospital	x	0%	0%	100%	100%	60%	x 52%	0%	0%	67%	50%	x 29%	0%	0%	67%	60%	x 32%											
Bin Jawad hospital	x	0%	0%	50%	100%	80%	x 46%	0%	0%	100%	67%	x 42%	0%	0%	67%	100%	x 42%											
Emhamd Al Meqrif Hospital	x	100%	0%	100%	100%	40%	x 68%	0%	0%	100%	17%	x 29%															x	
Misratah hospital	x	100%	100%	100%	100%	20%	x 84%	0%	0%	67%	50%	x 29%	0%	0%	67%	60%	x 32%										x	
Thuarra hospital	x							0%	0%	67%	100%	x 42%								0%	0%	0%	100%	x 25%				

## 6.8 Overview of NCD services by hospital facility

Hospitals provide both initial diagnosis and treatment for NCDs as well as specialist care for more complicated cases. Table 72 provides an overview of service-specific availability and readiness data for NCD diagnosis and treatment at the hospital level.

### 6.8.1 Availability and readiness of NCD services

Care for at least one NCD was available from 64 out of 80 hospitals, with the average number of NCDs that are addressed by a single hospital facility at three out of a maximum of six services. These NCDs were usually diabetes, CVDs, and CRDs, with 55, 55 and 45 hospitals offering services for these three diseases, respectively. Only 10 hospitals offered care for cervical cancer, eight for breast cancer (defined here as only those hospitals that offered oncology services), and eight hospitals offered mental health services. No differentiation was made between inpatient and outpatient service provision for any of the NCDs. Readiness for NCD care from hospital services ranged from 5% to a high of 96% for individual services. A few hospitals consistently scored high in terms of readiness. These include Tubruq medical center, Al Jaghub hospital, Tripoli pediatric hospital, and Misslata hospital.

### 6.8.2 Breakdown of readiness indicators

In order to provide a quick glance into overall service delivery capacity for NCDs, this section provides a short summary of hospital-specific NCD readiness indicators that were already presented individually in the service-specific narratives. The section focuses on trained staff and availability of essential medicines.

#### 6.8.2.1 Trained staff

At the hospital level, less than a quarter of the hospitals offering NCD services have staff who have received training on the individual disease-specific services during the past two years. The proportion of hospitals with staff trained in cervical cancer diagnosis and control is slightly higher, at 33% of the 10 hospitals offering these services. Nonetheless, these results indicate that even hospital staff in Libya require updated training in the diagnosis and management of all non-communicable diseases.

Table 73: Proportion of hospitals with staff trained in NCD topics, by training

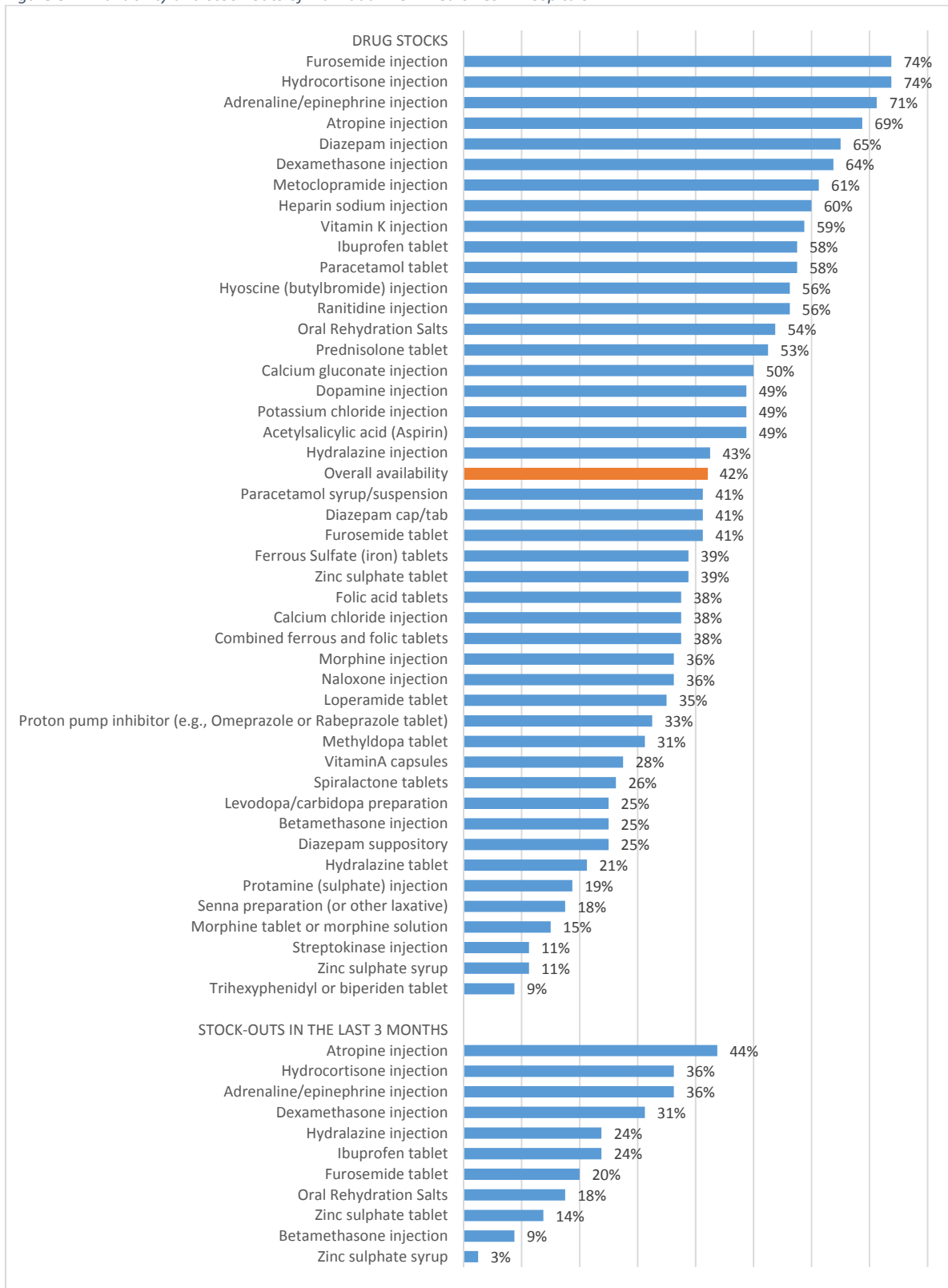
<i>Training course</i>	<b>N of Hospitals offering services</b>	<b>% of these hospitals with trained staff</b>
<i>Diabetes diagnosis/management</i>	55	24%
<i>Cardiovascular disease diagnosis/management</i>	55	22%
<i>Chronic respiratory disease diagnosis/management</i>	45	22%
<i>Cervical cancer prevention and control</i>	10	33%

#### 6.8.2.2 Essential medicines

Even with a more extensive list of selected medicines, the stocks of essential medicines for the treatment of NCDs in hospitals are far greater than for PHC facilities, at an overall availability rate of 42%. The most commonly available medicines include furosemide and hydrocortisone injections in 74% of hospitals. Streptokinase injections, zinc sulphate syrup (11% each) and Trihexphenidyl or biperiden tablets (9%) are the least commonly available medicines.

Data was also collected on the stock-outs of a selected number of 11 essential medicines in the past three months. It is interesting to note that the drugs which are most commonly available in the hospital facilities also had a higher likelihood of having a stock-out reported. Both the availability and the stock-outs of medicines are therefore likely to reflect overall consumption of specific medicines in the hospitals, with those that are most commonly used also having both the highest availability as well as risk of stock-outs.

Figure 84: Availability and stock-outs of individual NCD medicines in hospitals



## 7 Emergency, Surgical Services and Blood Transfusion

The deteriorating security situation in the country has not allowed for a robust assessment of the current needs for emergency care in Libya. However, it can be understood that the number of injured people continues to rise. The percentage of deaths caused by injuries in 2012 was 12% (20). Of this, unintentional injuries accounted for 79% (79% due to road traffic injuries and 4% as a result of falls) and 22% were due to intentional injuries (72% collective violence and legal intervention and 15% as a result of interpersonal violence) (27). Libya has the highest rate of death due to road traffic accidents in the world.

Any PHC facility and hospital can receive trauma cases. Primary management and where necessary, stabilization, is done at PHC facilities, with more complicated cases referred on to the nearest hospital for further treatment. Ambulance services will transport referral cases. All general hospitals can receive and manage all types of trauma cases. More complicated trauma cases in the western part of the country are referred to the specialist trauma center in Tripoli (Abu Selim Hospital) or the Trauma Department of Tripoli Central Hospital. In the eastern part of the country they are referred to Al Jalaa hospital and Benghazi Medical Center.

Table 74: Availability and readiness of emergency, surgical and blood transfusion services provided by type of facility

	General overview (% of 1149 total facilities)	Hospitals (% of all 80 hospitals)	Hospital Readiness score	PHC facilities (% of 1069 PHC facilities)	PHC Readiness score	Other facilities
Emergency services	67 (0.06%)	67 (84%)	47%			47 ambulance service centers
Minor Surgery	244 (21%)	72 (90%)	32%	172 (16%)	24%	
Major surgery	47 (0.04%)	47 (59%)	52%			
Blood transfusion	57 (5%)	53 (66%)	60%	4 (0.04%)	35%	5 blood banks

The overall availability of emergency services, major surgery and blood transfusions is low, with only a small proportion of facilities offering these services across Libya. The availability of minor surgery is a bit more extensive, with these services also available in 172 PHC facilities across the country, resulting in a 21% availability of these services across all 1,149 functional health facilities in Libya. Additional services are available through 47 ambulance service centers and five blood banks.

### 7.1 Emergency services

In many hospitals, the first point of contact for patient care tends to be the hospital emergency service. Patients with trauma and other medical emergencies such as cardio-vascular accidents and obstetric emergencies arrive here, and initial diagnosis and care is provided here, before the patient is either transferred onto a hospital ward or sent home to recover.

#### 7.1.1 Availability and readiness

A total of 67 hospitals (84%) offer emergency services. The majority of hospitals (97%) provide emergency services 24 hours per day, seven days per week, with services mostly located in an earmarked emergency room (76%), and 22% of hospitals offering emergency services in the same location as non-emergency services. Two districts, Wadi Al Haya and Ghat, do not have hospitals that offer emergency services.

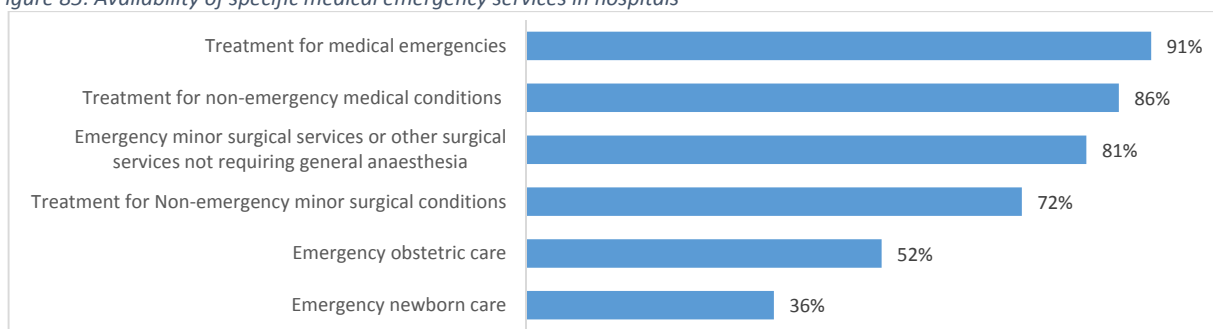


Table 75: Emergency services and procedures availability through hospitals, by type and district

	N hospitals offering emergency services	Setting			Specific emergency services available						Specific emergency procedures available							
		Special emergency room or service area	Same service settings as non-emergency outpatient services	Other	Treatment for medical emergencies	Emergency minor surgical services/ other surgical services not requiring general anesthesia	Emergency obstetric care	Emergency newborn care	Treatment for non-emergency medical conditions when general outpatient curative services are closed	Treatment for non-emergency minor surgical conditions when general outpatient curative services are closed	Overall service availability	Chest tube insertion	Cricothyroidotomy	Tracheostomy	Resuscitation (establish airway)	First-aid management for severe hemorrhage	Acute burn management	Overall emergency procedures availability
Al Wahat/Ajdabia	2	100%	0%	0%	100%	100%	50%	50%	50%	50%	67%	100%	100%	100%	100%	100%	100%	100%
Alkufra	2	100%	0%	0%	100%	100%	50%	0%	100%	100%	75%	100%	100%	100%	100%	50%	100%	92%
Benghazi	4	75%	25%	0%	100%	100%	50%	75%	75%	75%	79%	100%	75%	75%	100%	100%	100%	92%
Al Betnan	2	100%	0%	0%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Al Jabal Al Akhdar	3	67%	33%	0%	100%	100%	67%	67%	100%	67%	83%	33%	0%	33%	67%	100%	100%	56%
Darnah	3	33%	67%	0%	33%	100%	100%	33%	100%	100%	78%	100%	33%	0%	100%	100%	100%	72%
Almarj	3	67%	0%	33%	100%	33%	33%	33%	100%	33%	56%	33%	33%	33%	67%	100%	100%	61%
Sirt	1	100%	0%	0%	100%	100%	100%	0%	100%	100%	83%	100%	0%	0%	100%	100%	100%	67%
Aljufra	2	100%	0%	0%	100%	100%	50%	100%	50%	100%	83%	100%	50%	50%	100%	100%	100%	83%
Misratah	3	100%	0%	0%	100%	100%	100%	100%	100%	100%	100%	100%	67%	67%	100%	100%	100%	89%
Almargeb	6	83%	17%	0%	100%	83%	67%	50%	50%	50%	67%	67%	17%	17%	100%	100%	67%	61%
Al Jifarah	1	100%	0%	0%	100%	0%	0%	0%	0%	0%	17%	0%	0%	100%	100%	100%	0%	50%
Tripoli	10	70%	30%	0%	70%	60%	30%	20%	60%	50%	48%	70%	40%	70%	80%	90%	50%	67%
Azzawya	2	50%	50%	0%	100%	100%	50%	50%	100%	100%	83%	100%	50%	50%	100%	100%	100%	83%
Zwara	4	75%	25%	0%	100%	100%	75%	75%	100%	100%	92%	100%	25%	25%	100%	100%	100%	75%
Al Jabal Al Gharbi	8	63%	38%	0%	88%	63%	25%	13%	100%	75%	60%	75%	0%	25%	100%	88%	88%	63%
Nalut	5	100%	0%	0%	100%	100%	20%	0%	100%	100%	70%	80%	40%	60%	100%	100%	100%	80%
Wadi Ashati	3	67%	33%	0%	100%	67%	67%	33%	67%	67%	67%	67%	0%	0%	67%	100%	67%	50%
Sebha	1	0%	100%	0%	100%	100%	100%	0%	100%	0%	67%	100%	100%	100%	100%	100%	100%	100%
Wadi Al Haya	0																	
Murzuq	2	100%	0%	0%	100%	100%	100%	0%	100%	100%	83%	100%	50%	0%	100%	100%	100%	75%
Ghat	0																	
<b>Total</b>	<b>67</b>	<b>76%</b>	<b>22%</b>	<b>2%</b>	<b>91%</b>	<b>86%</b>	<b>54%</b>	<b>39%</b>	<b>82%</b>	<b>73%</b>	<b>70%</b>	<b>79%</b>	<b>37%</b>	<b>46%</b>	<b>93%</b>	<b>97%</b>	<b>84%</b>	<b>73%</b>

The mean availability of the specific emergency services in hospitals is 70%. The majority of hospitals offer treatment for medical emergencies (91%) and non-emergency medical conditions (86%). Emergency obstetric (52%) care and emergency newborn care (36%) are less widely available. At the district level, Al Jifarah provides only 17% of services, while Tripoli hospitals have only 48% of services available. Al Betnan and Misratah districts have 100% of these services available through their hospitals. The figures for mean availability of services summarized in Table 75 and Figure 86: Availability of specific emergency procedures in hospitals differ slightly, as the calculations for mean availability were done using a slightly different methodology (mean of district scores vs average across the individual hospitals).

Figure 85: Availability of specific medical emergency services in hospitals



The mean total availability of six basic emergency procedures is 73%. Cricothyroidotomy was least common (39%) while first aid management for severe hemorrhage (92%) was the most frequently reported emergency procedure. Again figures are slightly different from the totals in the main table due to different methods of calculating the availability scores.

Figure 86: Availability of specific emergency procedures in hospitals

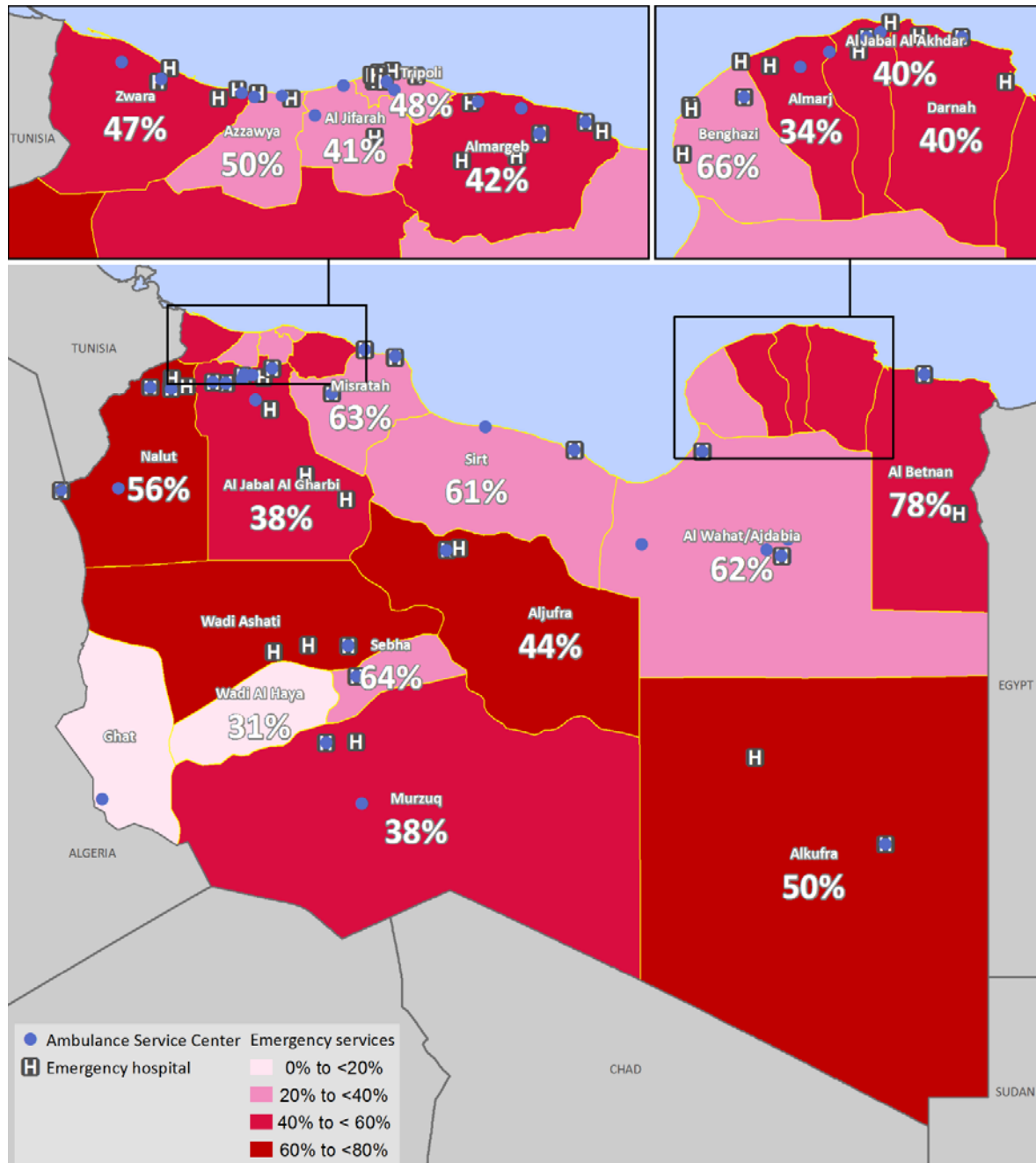


Table 76: Public hospitals readiness index for emergency services by district

	N of hospitals offering emergency services	Guidelines on caring for the emergency patient	Training in emergency services in the last two years	Diagnostics scores	Medicines scores	Equipment scores	Overall 24-hours staff	Overall readiness score
Al Wahat/Ajdabia	2	50%	50%	64%	31%	93%	81%	62%
Alkufra	2	50%	50%	50%	38%	68%	44%	50%
Benghazi	4	25%	50%	71%	88%	73%	91%	66%
Al Betnan	2	100%	0%	71%	100%	100%	94%	78%
Al Jabal Al Akhdar	3	33%	0%	24%	58%	43%	83%	40%
Darnah	3	33%	0%	10%	67%	52%	75%	40%
Almarj	3	0%	0%	19%	71%	60%	54%	34%
Sirt	1	100%	0%	43%	38%	100%	88%	61%
Aljufra	2	0%	50%	43%	38%	61%	75%	44%
Misratah	3	0%	33%	76%	96%	79%	92%	63%
Almargeb	6	17%	0%	41%	65%	50%	77%	42%
Al Jifarah	1	0%	0%	0%	100%	57%	88%	41%
Tripoli	10	40%	30%	27%	64%	51%	73%	48%
Azzawya	2	0%	50%	21%	75%	68%	88%	50%
Zwara	4	0%	0%	36%	72%	82%	92%	47%
Al Jabal Al Gharbi	8	0%	0%	38%	69%	63%	58%	38%
Nalut	5	20%	20%	51%	65%	81%	95%	56%
Wadi Ashati	3	0%	0%	29%	46%	48%	63%	31%
Sebha	1	0%	100%	86%	75%	36%	88%	64%
Wadi Al Haya	0							
Murzuq	2	0%	0%	29%	75%	57%	69%	38%
Ghat	0							
<b>Total</b>	<b>67</b>	<b>21%</b>	<b>18%</b>	<b>40%</b>	<b>67%</b>	<b>64%</b>	<b>76%</b>	<b>48%</b>

The overall readiness index for emergency services is calculated based on availability of tracer items in six categories: (1) functional equipment, (2) diagnostics, (3) medicines, (4) guidelines, and (5) trainings on emergency services and (6) 24-hour staffing. The overall readiness of the hospitals for the provision of emergency services was 48%. This relatively low score can largely be explained by the low availability of trained staff (18%), guidelines (21%), and diagnostics (40%). This is consistent across districts, with Wadi Ashati as the lowest scoring district (31%) and Al Betnan receiving the highest score at 78%.

Figure 87: Map of availability\* and readiness of emergency services in hospitals, by district, and ambulance service centers



\* Availability is defined as the ratio of facilities providing a selected service to 100,000 population; service-specific readiness is included in the map as a written percentage; only service-specific referral facilities are mapped.

*Box 19: Emergency services: availability and readiness*

Emergency services in Libya are primarily provided through 67 hospitals and cover all districts except Wadi Al Haya and Ghat. Treatment for medical emergencies is most widely available (91% of facilities), while emergency newborn care is limited (36%). Readiness scores are low, at 48%, with weak areas primarily consisting of the limited availability of guidelines (21%), trained staff (18%) and diagnostic services (40%). Access to the hospitals is supported by 47 ambulance centers, which are available in 19 out of 22 districts, with an overall availability of 0.7 centers per 100,000 population.

## 7.1.2 Breakdown of availability and readiness indicators

The proportions reported in this section may not necessarily correspond to those reported for the readiness scores in the previous section. This is because the number of respondents are often different, given that the data used here may come from a different subset of health facilities or a different section of the survey, or may not reflect all the indicators used to calculate the index scores. The figures in this section can be used as a reference point to assess the validity of the readiness scores, and also provide insight into the individual items used for calculating the readiness indices.

### 7.1.2.1 Infrastructure for emergency services

Triage systems are present in 40% of hospitals, with specific triage protocols for children available in 10% of hospitals, and for pregnant women in 19%. Emergency services can count on 24-hour laboratory support in 81% of hospitals, while 24-hour dispensing pharmacies can be found in 49% of the locations, and 24-hour imaging services in 75%. Electricity is available in 95% of the hospital emergency facilities.

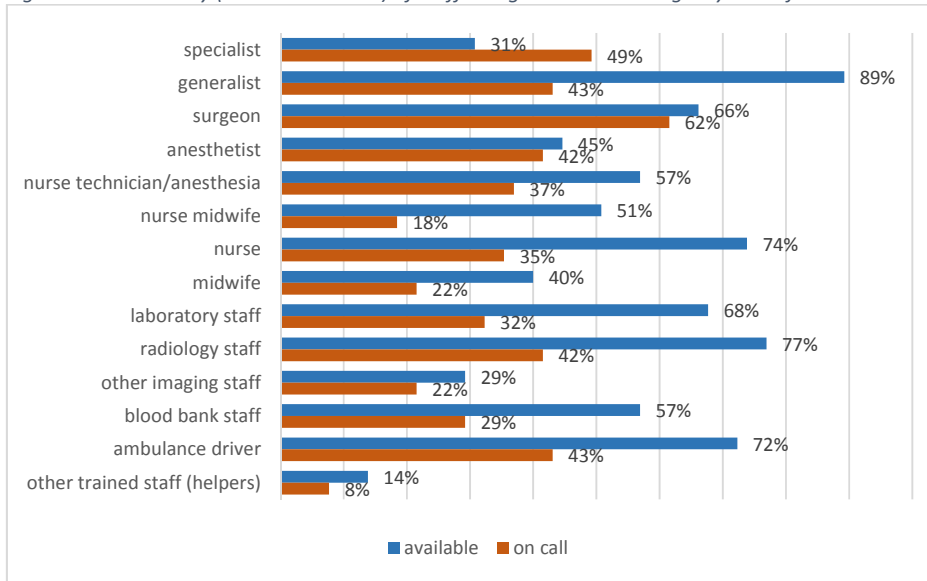
Table 77: Overview of infrastructure and support services for 67 hospital emergency services

Category	Description	% of hospitals
Triage	System present	40%
	Protocol available for <5s	10%
	Protocol available for pregnant women	19%
24-hour support services available	Laboratory	81%
	Dispensing pharmacy	49%
	Imaging	75%
Electricity available	In emergency room/area	95%

### 7.1.2.2 Staffing and guidelines

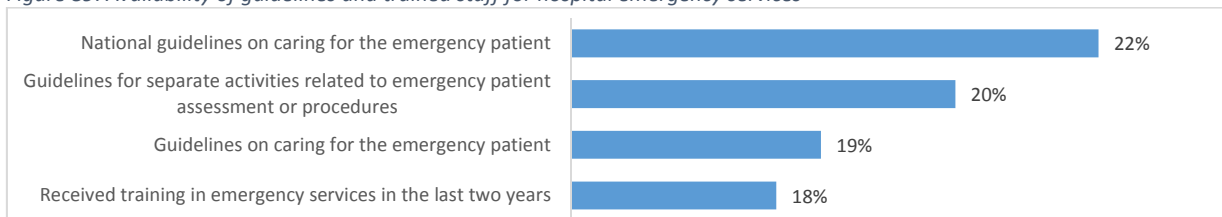
The majority of hospital emergency services (89%) have a generalist medical doctor available 24 hours a day, with 43% having an (additional) generalist on-call. Specialists are less readily available, with 31% of hospitals having a specialist available full-time, with on-call specialists available in 49% of facilities. Support staff (helpers) are the least available, at 14% availability and 8% on-call.

Figure 88: Availability (on-site or on-call) of staff categories in 65 emergency room facilities



National guidelines on caring for the emergency patient are available in 22% of the hospitals, while 19% reported to have facility-specific guidelines available on caring for the emergency patient. A mere 18% of hospitals reported having staff available who have received training in emergency services in the last two years.

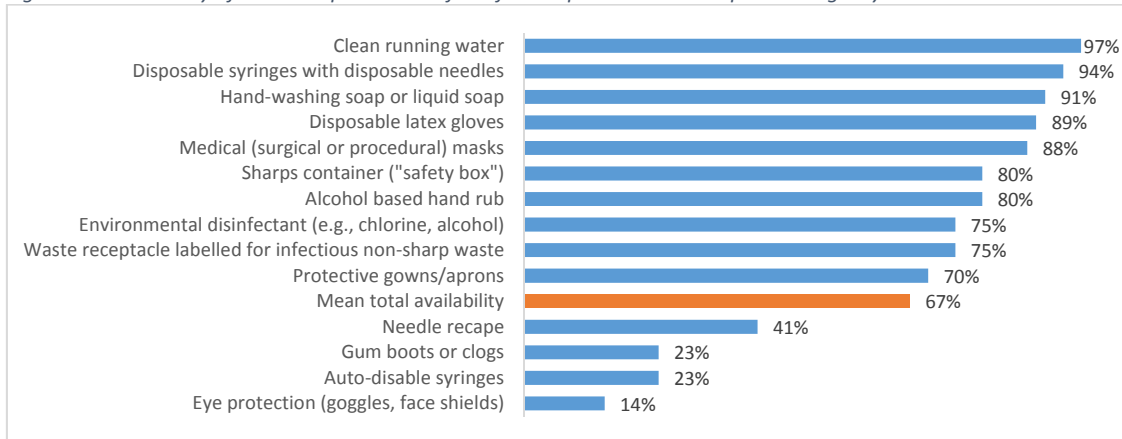
Figure 89: Availability of guidelines and trained staff for hospital emergency services



### 7.1.2.3 Standard precautions for infection prevention and control in emergency rooms

The mean total availability of all components of standard precautions for infection prevention and control is 67%, with clear running water being almost universally available (97%) while eye protection (goggles, face shield) is the least commonly available precaution for infection prevention and control.

Figure 90: Availability of standard precautions for infection prevention in hospital emergency rooms

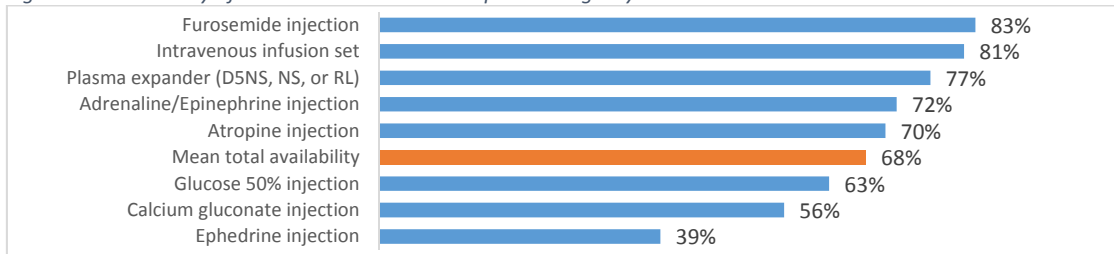


#### 7.1.2.4 Essential medicines

Out of the 65 facilities which provide 24-hour emergency services, 33 have a dispensing pharmacy available, of which 24 (73%) are located in the emergency service area itself, and the remainder located elsewhere in the hospital facility.

All emergency services have a drug stock available on-site, with 87% of facilities having at least one easily movable emergency cart present with stocks of necessary drugs. The mean total availability of eight basic medicines used for emergency services was 68%, with furosemide being the most widely available drug (83%) and ephedrine injection the least commonly available (39%).

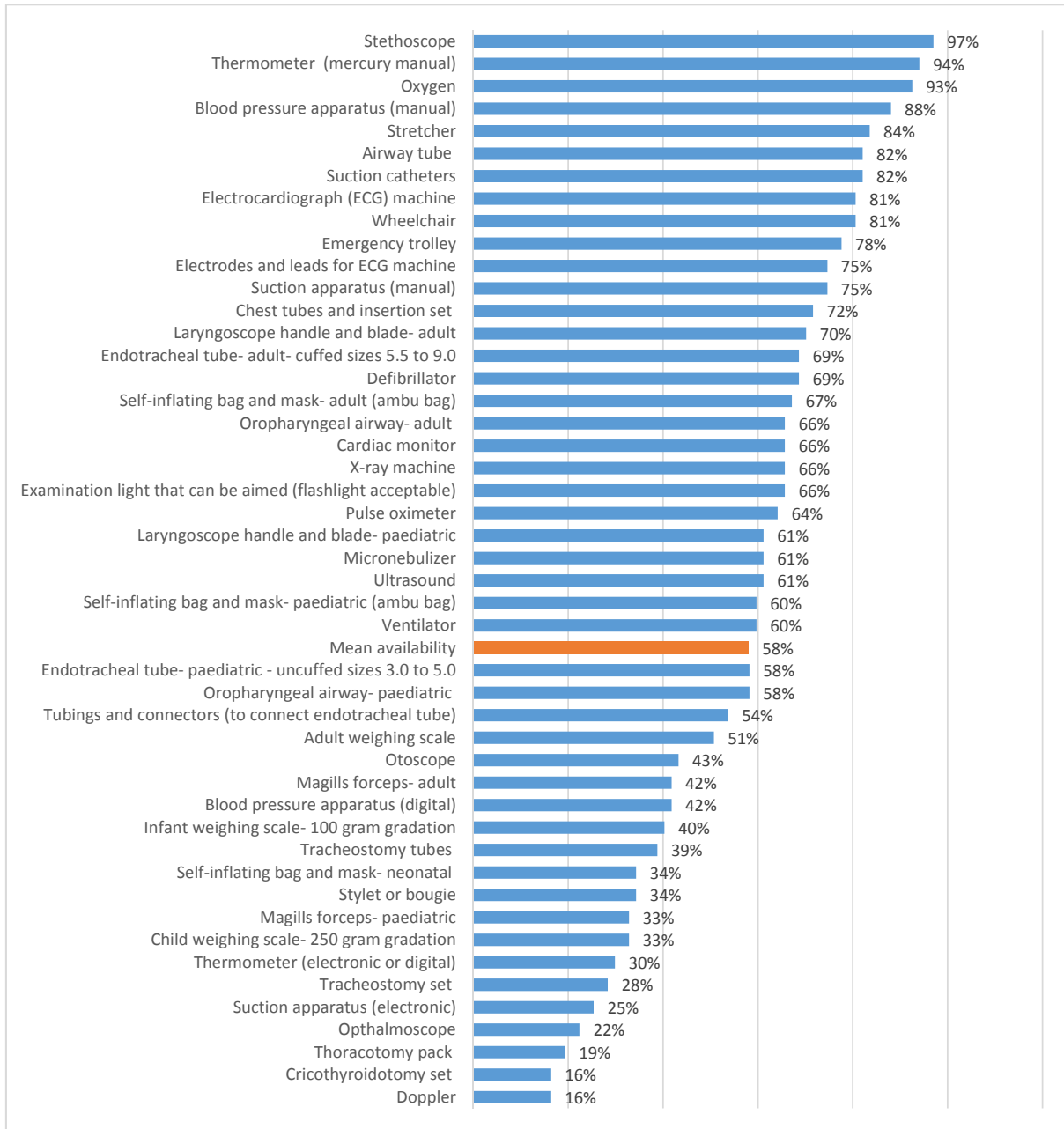
Figure 91: Availability of essential medicines in hospital emergency services



#### 7.1.2.5 Equipment

The mean availability of 47 pieces of medical equipment and materials for hospital emergency services was 58% when calculated across all pieces. The most commonly available materials were stethoscopes (97%) and manual thermometers (94%), while cricothyroidotomy sets and Doppler machines were the least commonly available materials at 16%.

Figure 92: Availability of medical equipment and materials for hospital emergency services

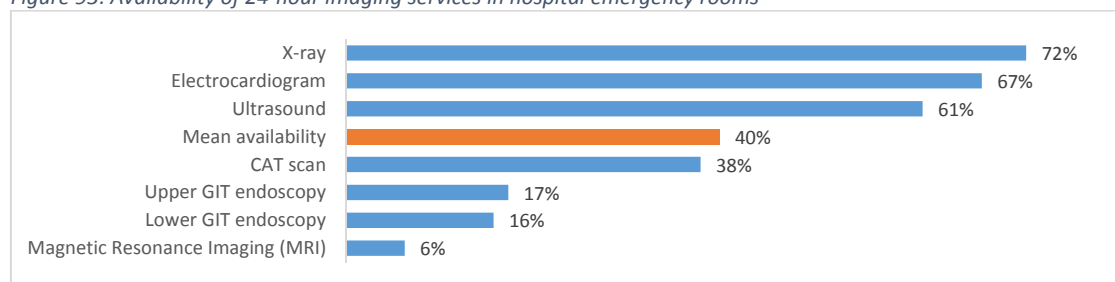


#### 7.1.2.6 Laboratory and other diagnostics

Twenty-four hour laboratory services are available in 54 of the hospitals offering emergency services, with 22% of these labs being located in the emergency area, and 48% with services located in another area of the hospital. Depending on the test, 9% of facilities can offer testing in both the emergency room as well as in another lab facility in the hospital, and the remaining 20% having no services available.

Imaging services are available in 40% of emergency facilities, with X-ray being the most common at 72%, followed by electrocardiogram at 67%. Magnetic Resonance Imaging (6%) is scarcely available.

Figure 93: Availability of 24-hour imaging services in hospital emergency rooms



### 7.1.3 Ambulance services

There are 28 hospitals that employ ambulance drivers, which indicate that they also have ambulances available to transport patients. These hospital ambulances are used for both referral and emergency response.

There are 47 separate Ambulance Service Centers. These centers are available in most districts with the exception of Ghat, where the facility is currently closed, and Benghazi and Wadi Al Haya, where no ambulance centers exist. Nalut district has the highest ratio of ambulance centers per population, at 4.8 per 100,000 population. On average, there are 0.7 ambulance service centers per 100,000 population.

Table 78: Number of ambulance centers per 100,000 population, by district

District	Number of Ambulance Service Centers	N of Ambulance Centers per 100,000 population
Al Jabal Al Akhdar	3	1.2
Al Jabal Al Gharbi	6	1.7
Al Jifarah	1	0.2
Aljufra	1	1.7
Alkufra	2	3.7
Almargeb	4	0.8
Almarj	2	0.9
Al Wahat/Ajdabia	5	2.5
Wadi Ashati	1	1.1
Azzawya	4	1.2
Benghazi	0	0.0
Darnah	1	0.5
Ghat	0	0.0
Misratah	3	0.5
Murzuq	1	1.1
Nalut	5	4.8
Sebha	1	0.6
Sirt	1	0.6
Al Betnan	1	0.5
Tripoli	3	0.3
Wadi Al Haya	0	0.0
Zwara	2	0.6
<b>Total</b>	<b>47</b>	<b>0.7</b>

## 7.2 Minor surgery

Minor surgery is surgery that can be conducted under local anesthesia, and does not require a sterile surgical theatre or a specialist to conduct it. These services are available through both PHC and hospital facilities in Libya. Some, such as fracture repairs and suturing, are emergency services. Other services, such as male circumcision, can be scheduled depending on the availability of staff and equipment.



### 7.2.1 Availability and readiness

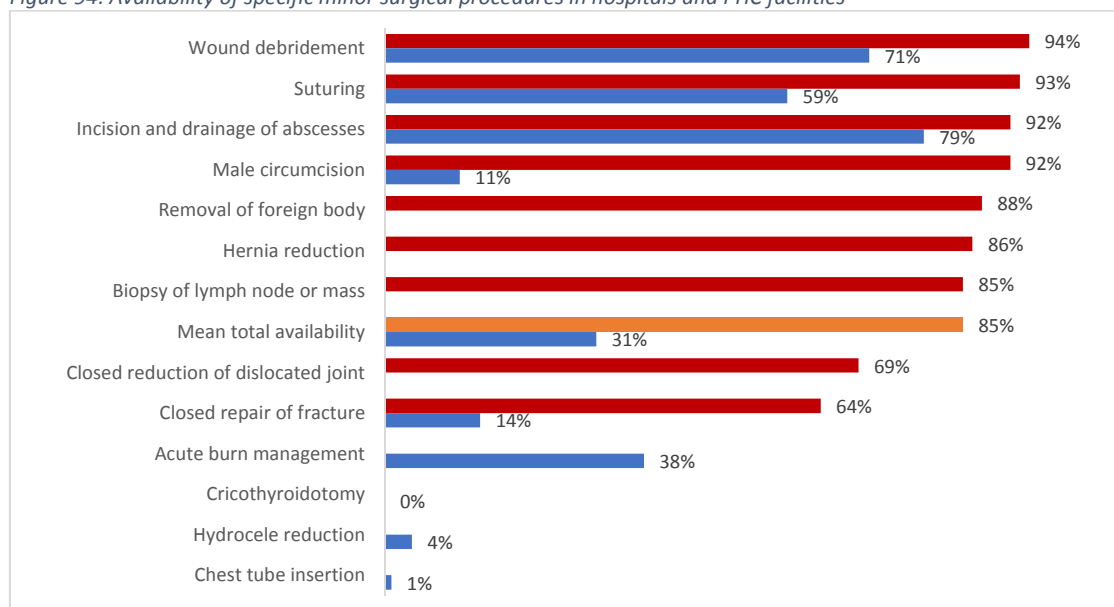
A total of 244 health facilities offer minor surgical services, with 70% of the services offered through PHC facilities and 30% through the hospitals. Every district has at least one facility available that offers minor surgery, whether a PHC facility or a hospital. Aljufra and Al Jifarah only offer minor surgery through hospital facilities, while Wadi Al Haya and Ghat districts offer minor surgery only through PHC facilities.

Table 79: Availability of minor surgical procedures by facility type and district

	N of PHCs offering minor surgery	Incision and drainage of abscesses	Wound debridement	Acute burn management	Suturing	Closed repair of fracture	Cricothyroidotomy	Male circumcision	Hydrocele reduction	Chest tube insertion	Overall availability scores	N of hospitals offering minor surgery	Incision and drainage of abscesses	Wound debridement	Suturing	Closed repair of fracture	Closed reduction of dislocated joint	Male circumcision	Hernia reduction	Biopsy of lymph node or mass	Removal of foreign body	Overall availability scores	
Al Wahat/Ajdabia	4	100%	100%	100%	100%	50%	0%	75%	0%	0%	58%	2	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Alkufra	11	36%	36%	27%	100%	9%	0%	0%	0%	0%	23%	2	100%	100%	100%	50%	50%	100%	100%	100%	100%	100%	89%
Benghazi	4	100%	100%	25%	100%	0%	0%	25%	0%	0%	39%	5	60%	80%	80%	60%	60%	100%	100%	100%	100%	100%	82%
Al Betnan	2	100%	100%	100%	100%	50%	0%	0%	0%	0%	50%	3	100%	100%	100%	67%	100%	100%	100%	100%	100%	100%	96%
Al Jabal Al Akhdar	11	91%	55%	55%	91%	27%	0%	18%	0%	0%	37%	3	100%	100%	100%	33%	67%	100%	100%	100%	100%	100%	89%
Darnah	1	100%	100%	100%	100%	100%	0%	0%	0%	0%	56%	3	100%	100%	100%	67%	100%	100%	100%	100%	100%	100%	96%
Almarj	3	100%	33%	33%	67%	0%	0%	67%	0%	0%	33%	3	67%	100%	100%	33%	33%	67%	33%	33%	33%	33%	56%
Sirt	5	100%	80%	80%	80%	20%	0%	0%	0%	0%	40%	1	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Aljufra	-	-	-	-	-	-	-	-	-	-	-	2	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Misratah	25	80%	20%	16%	32%	20%	0%	8%	4%	0%	20%	5	100%	100%	80%	60%	60%	60%	60%	60%	60%	60%	71%
Almargeb	25	64%	88%	12%	24%	12%	0%	0%	0%	0%	22%	6	83%	83%	83%	50%	67%	100%	100%	83%	100%	83%	
Al Jifarah	-	-	-	-	-	-	-	-	-	-	-	1	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Tripoli	13	77%	100%	23%	77%	0%	0%	15%	0%	0%	33%	9	89%	89%	100%	56%	56%	78%	78%	78%	78%	78%	78%
Azzawya	35	97%	80%	69%	40%	6%	0%	3%	3%	0%	33%	2	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Zwara	2	50%	100%	50%	100%	0%	0%	0%	0%	0%	33%	5	100%	100%	100%	100%	100%	80%	80%	80%	80%	80%	91%
Al Jabal Al Gharbi	5	80%	40%	40%	80%	60%	0%	0%	20%	20%	38%	8	100%	100%	100%	50%	50%	100%	75%	88%	88%	88%	83%
Nalut	1	100%	100%	0%	100%	0%	0%	0%	0%	0%	33%	5	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Wadi Ashati	1	100%	100%	0%	100%	0%	0%	0%	0%	0%	33%	3	100%	100%	67%	33%	33%	100%	100%	67%	100%	67%	78%
Sebha	15	87%	93%	33%	87%	13%	0%	20%	13%	0%	39%	2	50%	50%	50%	50%	50%	100%	50%	50%	50%	50%	56%
Wadi Al Haya	1	100%	100%	100%	100%	0%	0%	100%	100%	0%	67%	0	-	-	-	-	-	-	-	-	-	-	-
Murzuq	2	0%	50%	0%	50%	0%	0%	50%	0%	0%	17%	2	100%	100%	100%	50%	50%	100%	100%	100%	100%	100%	89%
Ghat	6	17%	100%	0%	33%	0%	0%	17%	0%	0%	19%	0	-	-	-	-	-	-	-	-	-	-	-
Total	172	79%	71%	38%	59%	14%	0%	11%	4%	1%	31%	72	92%	94%	93%	64%	69%	92%	86%	85%	88%	85%	

Minor surgical procedures are offered through 90% of all hospitals and 16% of all PHC facilities. The mean total availability of nine basic surgical procedures through the hospitals is 85%, with closed repair of fractures being the least common at 64% of the 72 hospitals offering minor surgery, and wound debridement being the most common, at 94% of hospitals. In PHC facilities, the mean total availability of nine minor surgery services is 31%, with the incision and drainage of abscesses being most commonly available at 79% of 172 PHC facilities, and cricothyroidotomy not being available in any PHC facility.

Figure 94: Availability of specific minor surgical procedures in hospitals and PHC facilities



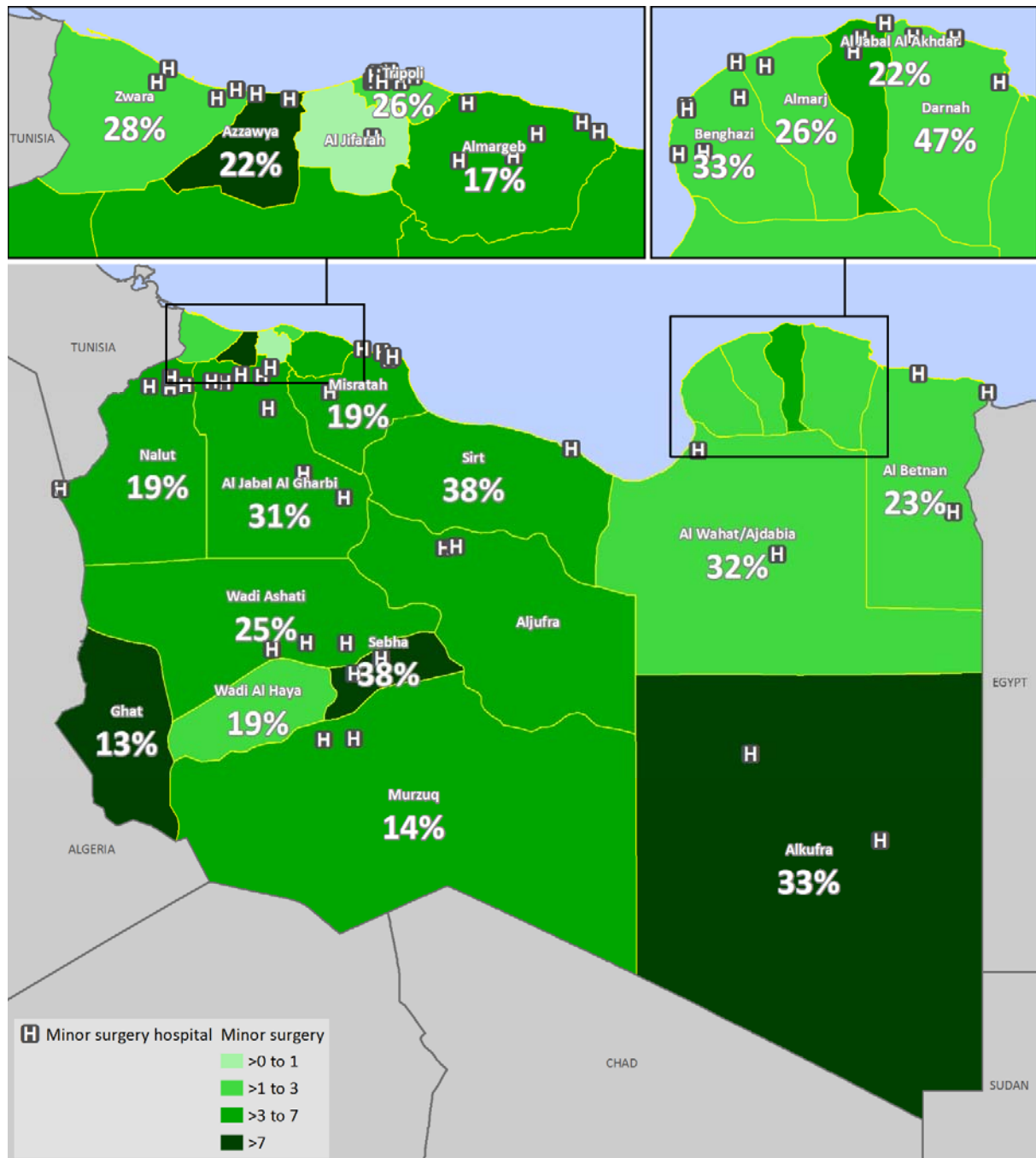
The overall readiness index for minor surgical procedures is calculated based on the availability tracer items in four domains. These include (1) functional equipment, (2) medicines, (3) guidelines and (4) staff trained on the Integrated Management for Emergency & Essential Surgical Care (IMEESC). The overall readiness of the PHC facilities for the provision of minor surgical services was 24%, with a hospital readiness score of 32%.

Table 80: Readiness of minor surgical services by facility type and district

	N of PHCs offering minor surgery	Guidelines IMEESC	Staff trained IMEESC	Equipment scores	Medicine scores	Overall readiness scores	N of hospitals offering minor surgery	Guidelines on IMEESC	Training on IMEESC	Equipment scores	Medicine scores	Overall readiness scores
<i>Al Wahat/Ajdabia</i>	4	0%	0%	53%	75%	32%	2	50%	50%	94%	63%	64%
<i>Alkufra</i>	11	0%	0%	45%	86%	33%	2	50%	0%	72%	25%	37%
<i>Benghazi</i>	4	25%	25%	25%	56%	33%	5	0%	20%	62%	75%	39%
<i>Al Betnan</i>	2	0%	0%	44%	50%	23%	3	33%	0%	59%	33%	32%
<i>Al Jabal Al Akhdar</i>	11	0%	0%	40%	50%	22%	3	0%	0%	41%	58%	25%
<i>Darnah</i>	1	0%	0%	88%	100%	47%	3	33%	0%	74%	17%	31%
<i>Almarj</i>	3	0%	0%	29%	75%	26%	3	0%	0%	63%	33%	24%
<i>Sirt</i>	5	20%	20%	45%	65%	38%	1	0%	0%	100%	25%	31%
<i>Aljufra</i>	0						2	0%	0%	72%	38%	27%
<i>Misratah</i>	25	8%	4%	42%	24%	19%	5	20%	0%	67%	70%	39%
<i>Almargeb</i>	25	4%	4%	43%	16%	17%	6	17%	17%	56%	42%	33%
<i>Al Jifarah</i>	0						1	0%	100%	67%	100%	67%
<i>Tripoli</i>	13	0%	23%	41%	39%	26%	9	22%	0%	51%	47%	30%
<i>Azzawya</i>	35	3%	3%	43%	39%	22%	2	0%	0%	61%	50%	28%
<i>Zwara</i>	2	0%	0%	50%	63%	28%	5	0%	0%	80%	60%	35%
<i>Al Jabal Al Gharbi</i>	5	20%	0%	45%	60%	31%	8	0%	0%	63%	56%	30%
<i>Nalut</i>	1	0%	0%	50%	25%	19%	5	0%	0%	80%	55%	34%
<i>Wadi Ashati</i>	1	0%	0%	75%	25%	25%	3	0%	0%	52%	0%	13%
<i>Sebha</i>	15	33%	13%	50%	53%	38%	2	0%	0%	28%	0%	7%
<i>Wadi Al Haya</i>	1	0%	0%	75%	0%	19%						
<i>Murzuq</i>	2	0%	0%	31%	25%	14%	2	50%	0%	67%	38%	39%
<i>Ghat</i>	6	0%	0%	13%	38%	13%						
<b>Total</b>	<b>172</b>	<b>7%</b>	<b>6%</b>	<b>42%</b>	<b>42%</b>	<b>24%</b>	<b>72</b>	<b>13%</b>	<b>6%</b>	<b>63%</b>	<b>48%</b>	<b>32%</b>

The overall readiness scores for both PHC facilities and hospitals are worryingly low at both national and district level, essentially indicating that these services cannot really be properly provided by most PHC facilities and hospitals. The primary reasons for this are a lack of relevant guidelines and recently trained staff, with overall scores below 15% for both hospital and PHC facilities, and a low availability of essential medicines, with mean scores of 42% for PHC facilities and 48% for hospitals.

Figure 95: Map of availability\* and readiness of minor surgery services in PHCs and hospitals, by district



\* Availability is defined as the ratio of facilities providing a selected service to 100,000 population; service-specific readiness is included in the map as a written percentage; only service-specific referral facilities are mapped

*Box 20: Minor surgery services: availability and readiness*

There are 244 health facilities that offer **minor surgery** (172 PHC facilities and 72 hospitals), but the readiness scores for both types of facilities are low (24% and 32% respectively). Although hospitals consistently outperform the PHC facilities in terms of readiness scores, 67 out of 72 hospitals still score below 50% for minor surgery readiness. A concerted effort is needed to address shortcomings in training, the availability of guidelines, and the availability of essential medicines. That the achievement of a good score is possible is demonstrated by Emhamd Al Meqrif Hospital in Ejdabya and Misslata hospital, with respective readiness scores of 100% and 97%.

## 7.2.2 Breakdown of readiness indicators

The proportions reported in this section may not necessarily correspond to those reported for the readiness scores in the previous section. This is because the number of respondents are often different, given that the data used here may come from a different subset of health facilities or a different section of the survey, or may not reflect all the indicators used to calculate the index scores. The figures in this section can be used as a reference point to assess the validity of the readiness scores, and also provide insight into the individual items used for calculating the readiness indices.

### 7.2.2.1 Trained staff and guidelines

The overall availability of trained staff and guidelines on surgery is low for both PHC and hospital facilities, with 6% staff trained in IMEESC, with guidelines available in 7% of PHC facilities and 13% of hospitals.

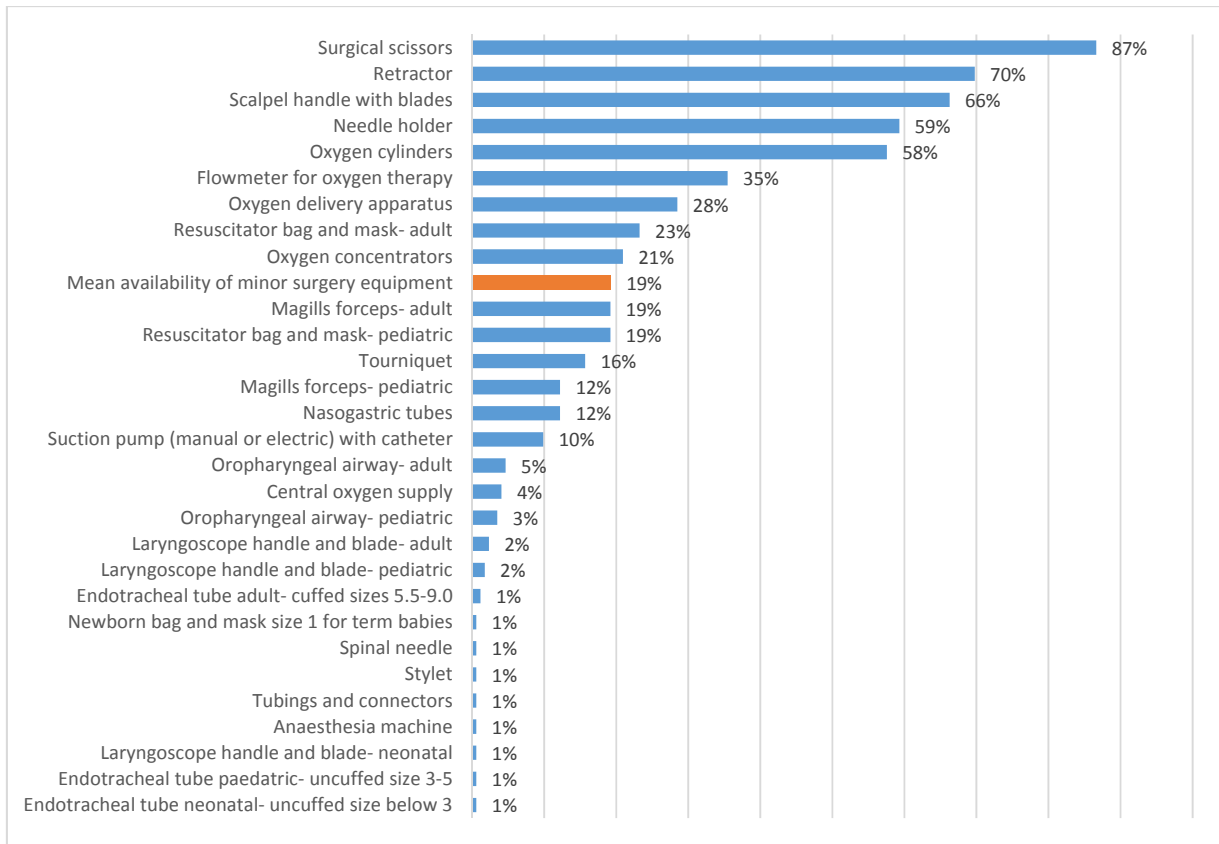
*Table 81: Availability and guidelines of trained staff and guidelines on surgery in hospitals and PHC facilities*

	N of PHCs surveyed	% of PHCs with availability	N of hospitals surveyed	% of hospitals with availability
Training in IMEESC	172	6%	72	6%
Training in surgery	172	13%	72	85%
Training in anesthesia	172	13%	72	83%
IMEESC guidelines available	172	7%	72	13%

### 7.2.2.2 Equipment

The data on the availability of equipment for minor surgery services at the hospital level was collected for only nine hospitals. This data was not felt to be sufficiently representative, so was therefore not disaggregated further. For the calculation of readiness indicators for minor and major surgery in hospital facilities, data from the CEmONC section of the hospital survey was used as a proxy, and this data has already been presented in Chapter 4. The data below refers only to the availability of functional surgical equipment in PHC facilities. In PHC facilities, the mean availability of 28 pieces of equipment as well as oxygen in the 172 facilities was a meager 19%. Surgical scissors were the most widely available at 87% of PHC facilities, with endotracheal tubes the least commonly available, in only 1% of facilities.

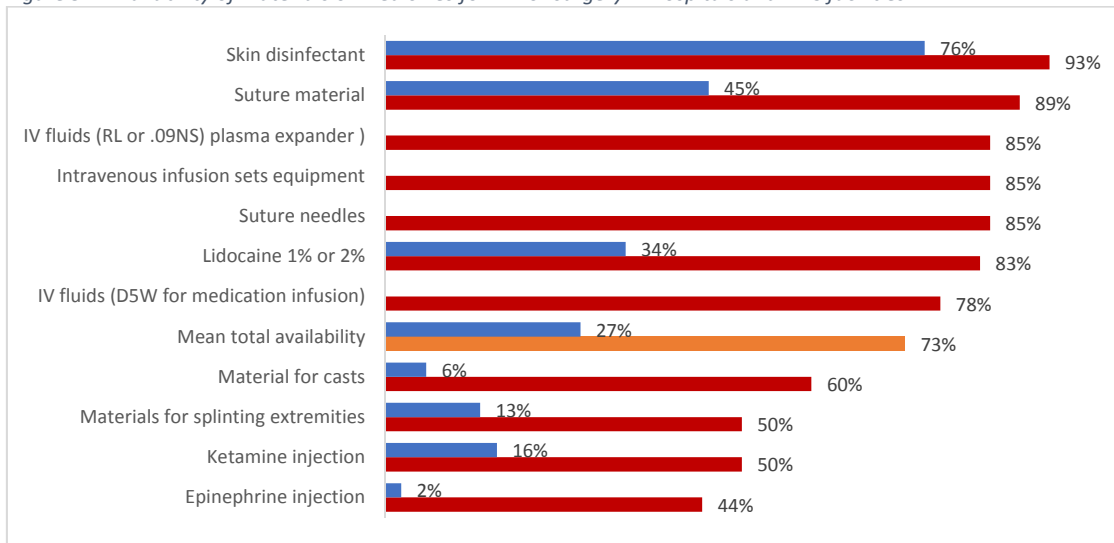
Figure 96: Availability of functional equipment for minor surgery in PHC facilities



### 7.2.2.3 Essential medicines and medical materials

Result shows that the mean total availability of 11 basic medicines and medical materials for minor surgery in the 72 hospitals is 73%. A smaller selection of medicines/materials was made here for the 172 PHC facilities (seven items) with a mean availability of 27%. Amongst both the hospitals and PHC facilities, Epinephrine was the least commonly available (44% and 2%, respectively) while skin disinfectant was the most frequently available item (93% and 76%).

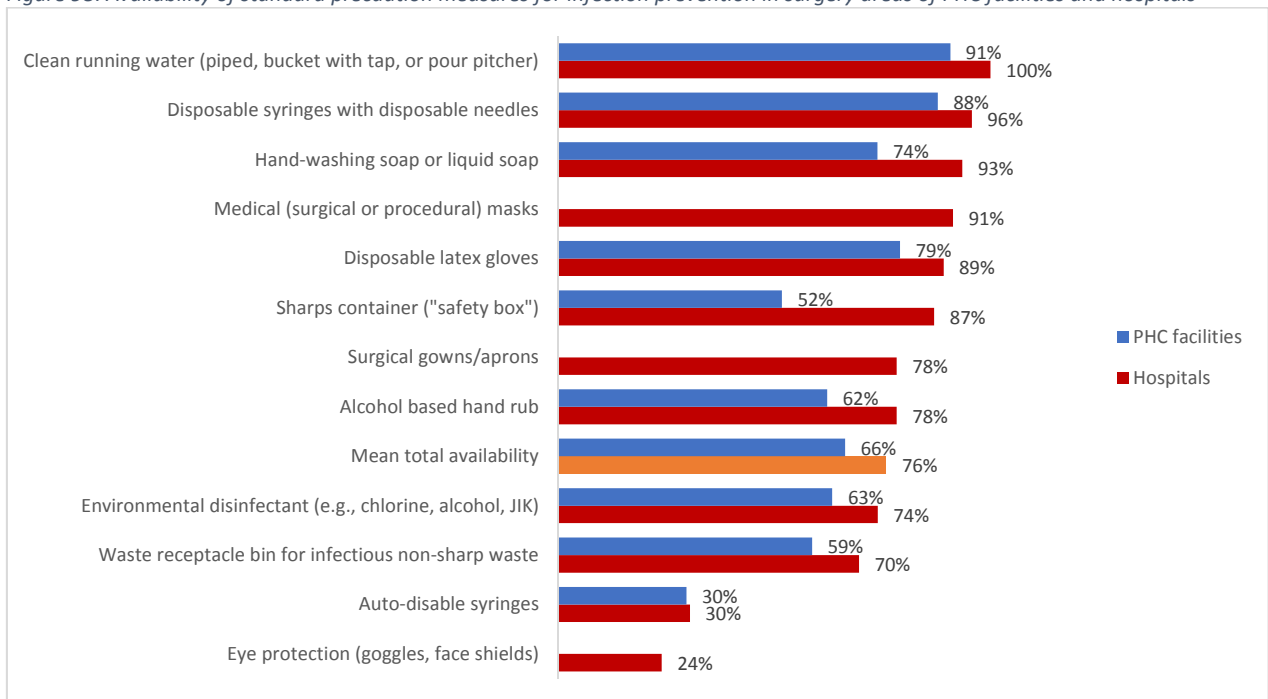
Figure 97: Availability of materials or medicines for minor surgery in hospitals and PHC facilities



#### 7.2.2.4 Standard Precautions for infection prevention

The mean total availability of 12 items required for standard precautions for infection prevention in hospitals is 76%, while it is lower for PHC facilities (nine items) at 66%. In hospitals, eye protection is the least commonly available (24%) while clean running water is available in the surgical service area of all the facilities. In PHC facilities, 91% of the surgical areas have clean running water, while auto-disable syringes are available at the fewest facilities (30%). Overall, the availability of items to facilitate infection prevention is fair for both PHC and hospital facilities, although improvement is needed in some areas.

Figure 98: Availability of standard precaution measures for infection prevention in surgery areas of PHC facilities and hospitals



### 7.3 Major Surgery

Major surgery is available only in hospital facilities, and is generally done by specialist surgeons. This section provides an overview of availability and readiness of hospitals to provide major surgery in the context of Libyan hospitals.

#### 7.3.1 Availability and readiness

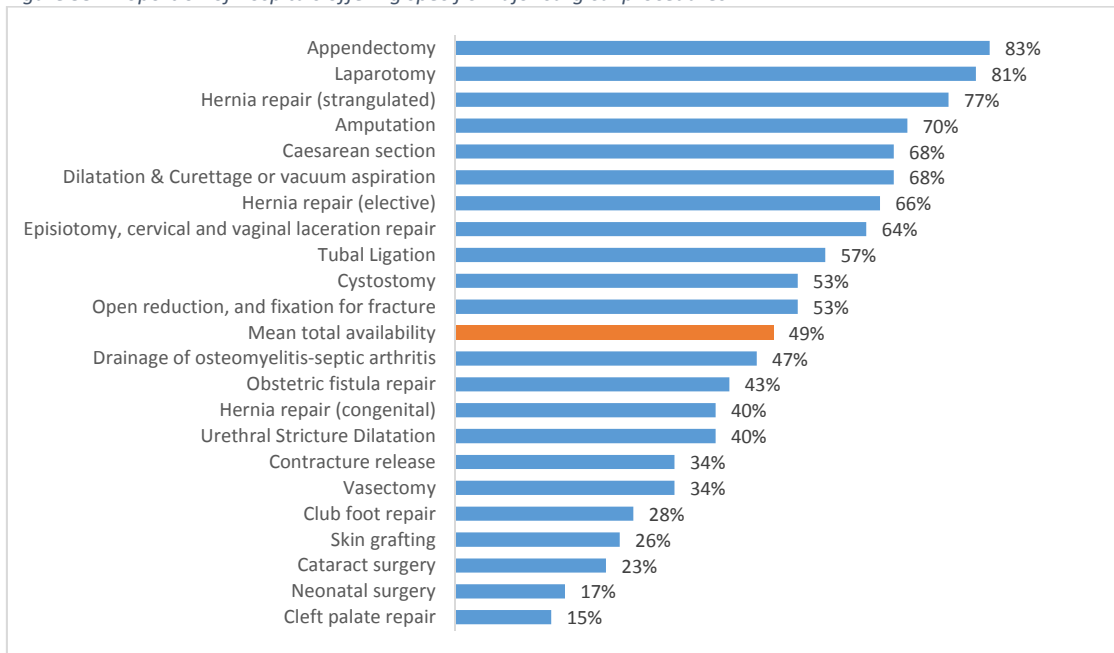
A total of 47 (59%) of the hospitals offer major surgery services. No surgical services are available in four districts. These are Sirt, Aljufra, Wadi Al Haya, and Ghat with the latter two not having any functional hospitals at time of survey. Two districts can offer less than half of 22 selected major surgeries, these being Murzuq and Wadi Ashati. The hospitals in five districts can offer all of the 22 selected major surgeries between them, although not all surgeries are available in all hospitals in these districts.

Table 82: Availability and readiness of major surgical services through hospitals, by district

	N of hospitals offering major surgery	Tubal Ligation	Vasectomy	Cystostomy	Urethral Stricture Dilatation	Dilatation & Curettage or vacuum aspiration	Episiotomy, cervical and vaginal laceration repair	Obstetric fistula repair	Caesarean section	Amputation	Appendectomy	Cataract surgery	Cleft palate repair	Club foot repair	Contracture release	Skin grafting	Drainage of osteomyelitis-septic arthritis	Hernia repair (strangulated)	Hernia repair (elective)	Hernia repair (congenital)	Laparotomy	Neonatal surgery	Open reduction, and fixation for fracture	N of types of surgery available (out of 22)	
<i>Al Wahat/Ajdabia</i>	1	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	22
<i>Alkufra</i>	2	100%	50%	50%	50%	50%	50%	50%	100%	100%	100%	100%	50%	100%	100%	50%	100%	100%	50%	100%	100%	50%	100%	50%	18
<i>Benghazi</i>	3	33%	33%	33%	33%	33%	33%	33%	33%	100%	100%	33%	67%	67%	67%	67%	33%	100%	100%	100%	100%	100%	67%	67%	22
<i>Al Betnan</i>	1	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	22
<i>Al Jabal Al Akhdar</i>	1	100%	100%		100%	100%	100%	100%	100%	100%	100%		100%	100%			100%	100%	100%	100%	100%	100%	100%	100%	18
<i>Darnah</i>	3		33%	33%		100%		67%	67%	67%						33%	33%	67%	67%		67%				11
<i>Almarj</i>	1	100%	100%	100%		100%	100%	100%	100%	100%	100%	100%		100%	100%		100%	100%	100%	100%	100%	100%		100%	18
<i>Sirt</i>	0																								0
<i>Aljufra</i>	0																								0
<i>Misratah</i>	4	100%	25%	50%	50%	100%	75%	75%	75%	100%	100%	25%	25%		75%	50%	100%	100%	100%	50%	100%		100%		20
<i>Almargeb</i>	3	100%	33%	67%	67%	100%	100%	33%	100%	100%	100%	33%	33%	33%	67%	33%	67%	100%	100%	67%	100%	33%	67%		22
<i>Al Jifarah</i>	1		100%	100%						100%	100%					100%		100%	100%	100%	100%		100%		11
<i>Tripoli</i>	9	44%	22%	44%	56%	44%	44%	44%	44%	78%	67%	33%	11%	33%	22%	11%	44%	56%	56%	33%	67%	33%	56%		22
<i>Azzawya</i>	2				50%	50%		50%	50%	50%	50%				50%		50%	50%			50%		50%		11
<i>Zwara</i>	5	40%	40%	60%	20%	100%	80%	60%	60%	60%	60%		20%		40%	20%	60%	40%	40%	40%	100%		40%		18
<i>Al Jabal Al Gharbi</i>	5	40%	40%	80%	40%	100%	80%	40%	100%	40%	100%						40%	80%	80%	20%	80%		40%		16
<i>Nalut</i>	3	100%	67%	67%		100%	100%	33%	100%		100%		33%				100%	33%		100%		33%			13
<i>Wadi Ashati</i>	1									100%	100%														2
<i>Sebha</i>	1	100%				100%		100%	100%	100%	100%	100%		100%		100%	100%	100%			100%		100%		13
<i>Wadi Al Haya</i>	0																								0
<i>Murzuq</i>	1	100%				100%		100%		100%								100%	100%	100%					7
<i>Ghat</i>	0																								0
<b>Total</b>	<b>47</b>																								<b>13</b>

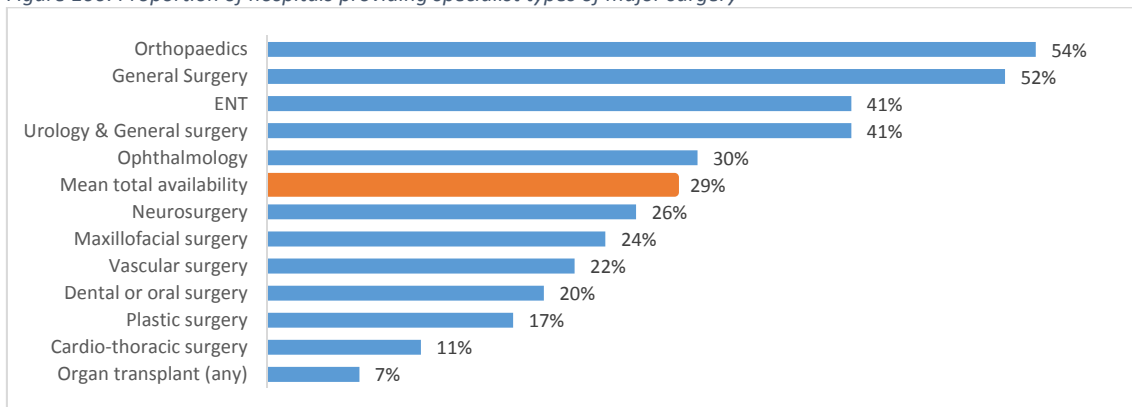
Of the different types of major surgery, cleft palate repair and neonatal surgery are the least widely available (15% and 17% mean availability, respectively, across the 47 hospitals), while laparotomies (81%) and appendectomies (83%) are the most widely available.

Figure 99: Proportion of hospitals offering specific major surgical procedures



In terms of specialized types of surgery, orthopedic surgery is the specialization most widely available, in 54% of the 47 hospitals offering major surgery, while organ transplantation is available in only 7% of these hospitals. The mean total availability of the various types of specialist surgery is 29%, which appears relatively low, but it should be kept in mind that the demand for specific types of specialist surgery also varies considerably, as organ transplantation is not a common procedure.

Figure 100: Proportion of hospitals providing specialist types of major surgery



The overall readiness index for major surgery in hospital facilities is calculated based on the availability of tracer items in six domains: (1) functional equipment, (2) medicines, (3) guidelines, (4) staff trained in surgery, (5) 24-hour staff trained in surgery, and (6) staff trained in anesthesia. The overall readiness score for major surgery in the 47 hospitals was 52%. Of the 18 districts that had major surgery available, eight districts had readiness scores below 50%, generally due to a lack of trained staff and medicines. Guidelines and recently trained staff on IMEESC were



available only at a very low proportion of hospitals, at 19% and 9%, respectively. Although the availability of trained surgeons and anesthetists was reasonably good at 85% and 83% respectively, the mean availability of essential medicines was poor overall, at 51%.

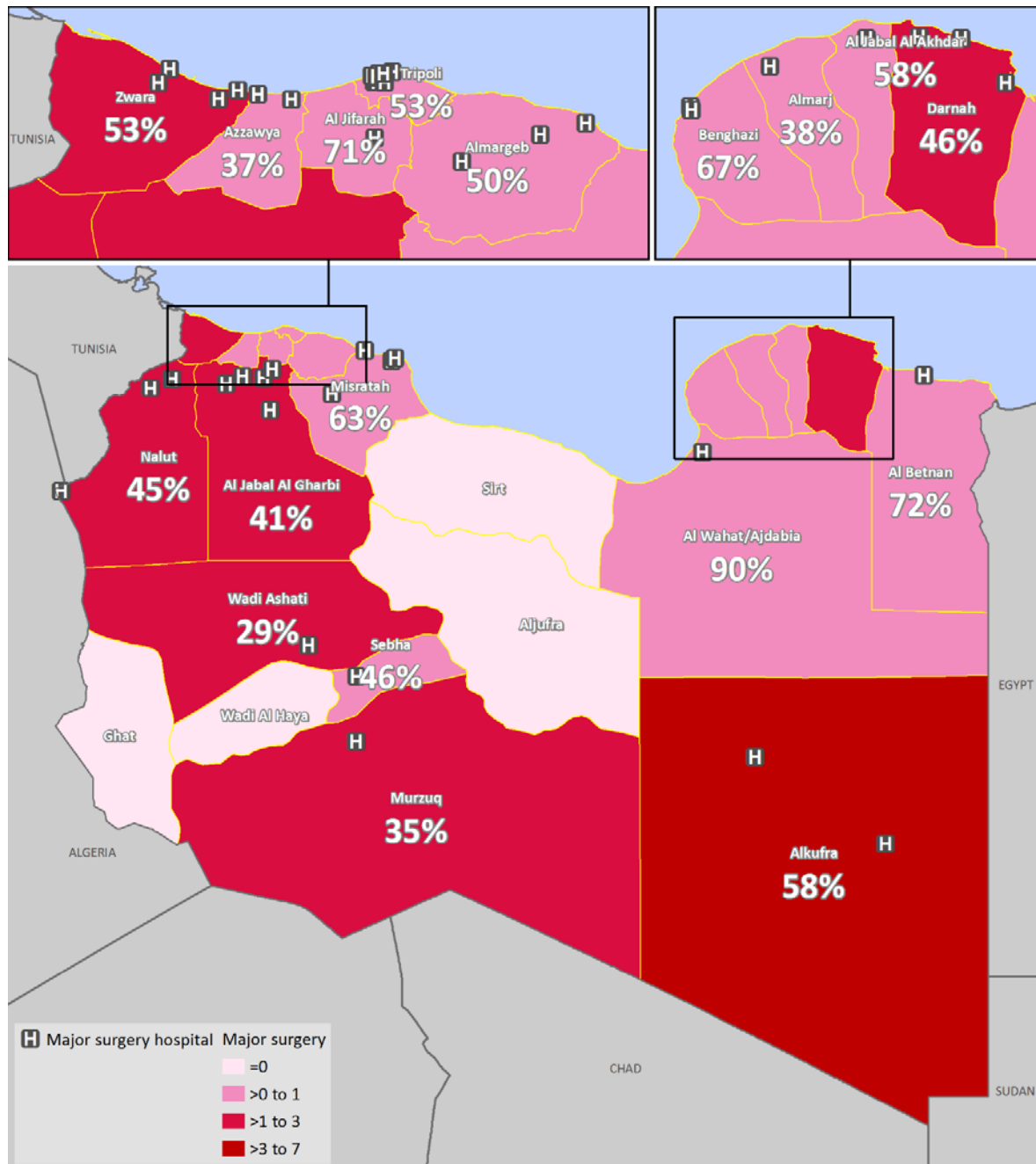
*Box 21: Major surgery services: availability and readiness*

There are 47 hospitals which mostly provide orthopedic and general surgery, although there is also a capacity to do organ transplants and cardio-thoracic surgery. Four districts (Sirt, Aljufra, Wadi al Haya, and Ghat) do not have major surgical services available, while eight districts have readiness scores below 50%. The overall readiness score is 52%, indicating that action is needed to improve services, specifically in terms of staff training, guidelines, and the availability of essential medicines.

Table 83: Readiness for major surgery services, by district

	N of hospitals offering major surgery	Guidelines IMEESC	Training in IMEESC in the last two years	24 hours Staff trained in general surgery	24 hours Staff trained in anesthesia	Equipment scores	Medicine scores	Overall readiness scores
Al Wahat/Ajdabia	1	100%	100%	100%	100%	50%	89%	90%
Alkufra	2	50%	0%	100%	100%	88%	11%	58%
Benghazi	3	0%	33%	100%	100%	83%	85%	67%
Al Betnan	1	100%	0%	100%	100%	75%	56%	72%
Al Jabal Al Akhdar	1	0%	0%	100%	100%	50%	100%	58%
Darnah	3	33%	0%	100%	67%	67%	7%	46%
Almarj	1	0%	0%	100%	0%	75%	56%	38%
Sirt	0							
Aljufra	0							
Misratah	4	25%	0%	100%	100%	69%	83%	63%
Almargeb	3	33%	33%	67%	67%	58%	44%	50%
Al Jifarah	1	0%	100%	100%	100%	25%	100%	71%
Tripoli	9	22%	0%	89%	100%	58%	46%	53%
Azzawya	2	0%	0%	50%	50%	75%	44%	37%
Zwara	5	0%	0%	100%	100%	65%	53%	53%
Al Jabal Al Gharbi	5	0%	0%	60%	80%	55%	49%	41%
Nalut	3	0%	0%	67%	67%	75%	63%	45%
Wadi Ashati	1	0%	0%	100%	0%	75%	0%	29%
Sebha	1	0%	0%	100%	100%	75%	0%	46%
Wadi Al Haya	0							
Murzuq	1	100%	0%	0%	0%	75%	33%	35%
Ghat	0							
<b>Total</b>	<b>47</b>	<b>19%</b>	<b>9%</b>	<b>85%</b>	<b>83%</b>	<b>65%</b>	<b>51%</b>	<b>52%</b>

Figure 101: Map of availability\* and readiness of major surgery services in hospitals, by district



\* Availability is defined as the ratio of facilities providing a selected service to 100,000 population; service-specific readiness is included in the map as a written percentage; only service-specific referral facilities are mapped

### 7.3.2 Breakdown of readiness indicators

The proportions reported in this section may not necessarily correspond to those reported for the readiness scores in the previous section. This is because the number of respondents are often different, given that the data used here may come from a different subset of health facilities or a different section of the survey, or may not reflect all the indicators used to calculate the index scores. The figures in this

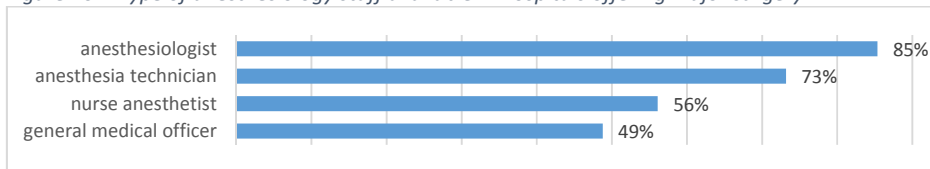
section can be used as a reference point to assess the validity of the readiness scores, and also provide insight into the individual items used for calculating the readiness indices.

The availability of trained staff and guidelines, medicines, and standard precautions have already been described in Section 7.2.2, while the data on the availability of equipment for major surgery is too scarce to be sufficiently representative. The proxy data used to calculate readiness indices for equipment for major surgery are described in Section 4.3.2. The only additional data presented in this section is the availability of staff and essential medicines for anesthesia.

### 7.3.2.1 Anesthesia staff

Out of the 47 hospitals offering major surgery, 27 (57%) have 24-hour onsite availability of anesthesia staff, while 12 hospitals (26%) have on-call anesthesia staff outside regular working hours. Eight hospitals report not having 24-hour coverage of anesthesia staff. The majority of staff providing anesthesia services were trained as anesthesiologists (85%), while general medical officers assist with anesthesia services in 49% of the facilities (Figure 102).

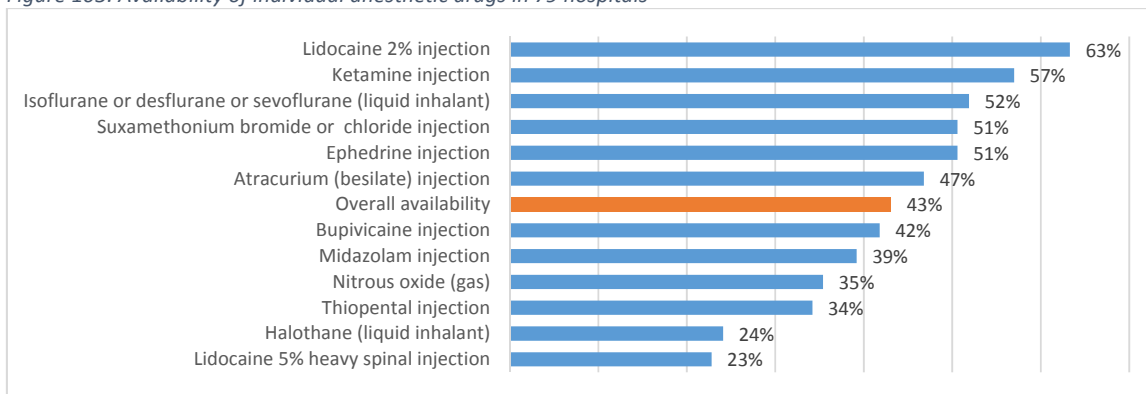
Figure 102: Type of anesthesiology staff available in hospitals offering major surgery



### 7.3.2.2 Essential medicines for major surgery (anesthesia & IV fluids)

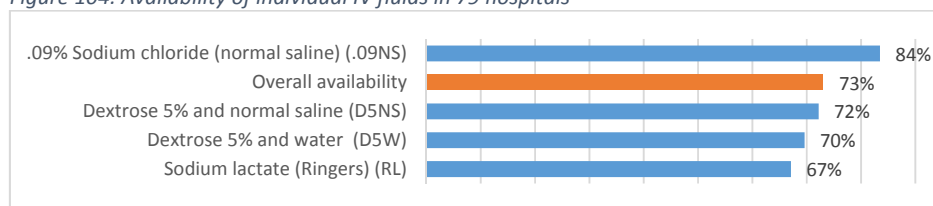
This data is taken from a complete assessment of 79 hospitals, which includes the 47 hospitals that offer major surgery. The mean overall availability of anesthesia medicines is 43%, with lidocaine 2% injections the most commonly available in 63% of hospitals, followed by ketamine in 57%, while halothane liquid inhalant (24%) and lidocaine 5% heavy spinal injection (23%) are the least widely available.

Figure 103: Availability of individual anesthetic drugs in 79 hospitals



Mean intravenous (IV) fluid availability in the 79 hospitals that were part of the essential medicines assessment was 73%, with 0.9% Normal Saline solution the most widely available at 84%, and Ringers Lactate the least widely available, in 67% of hospitals.

Figure 104: Availability of individual IV fluids in 79 hospitals



## 7.4 Blood transfusion

Blood transfusion contributes to saving millions of lives every year, improves life expectancy and the quality of life of patients suffering from life-threatening conditions, and supports complex medical and surgical procedures. In Libya, all hospitals can receive, investigate, and provide safe blood for transfusion. There are two central blood banks, one in Tripoli and one in Benghazi, although these two blood banks work in slightly different ways. In Benghazi the central blood bank is responsible for all the collection, investigation and provision of safe blood to any hospital in the Benghazi area, while the new central blood bank in Tripoli is also responsible for collection, investigation, and provision of safe blood to hospitals in the city, but in Tripoli the hospitals also continue collecting and testing blood for transfusion independently. There are four additional blood banks. The one in Albayda is closed, while the ones in Sebha, Misrata, and Azzawya are functional, but operate at a smaller scale than the ones in Tripoli and Benghazi.

### 7.4.1 Availability and readiness

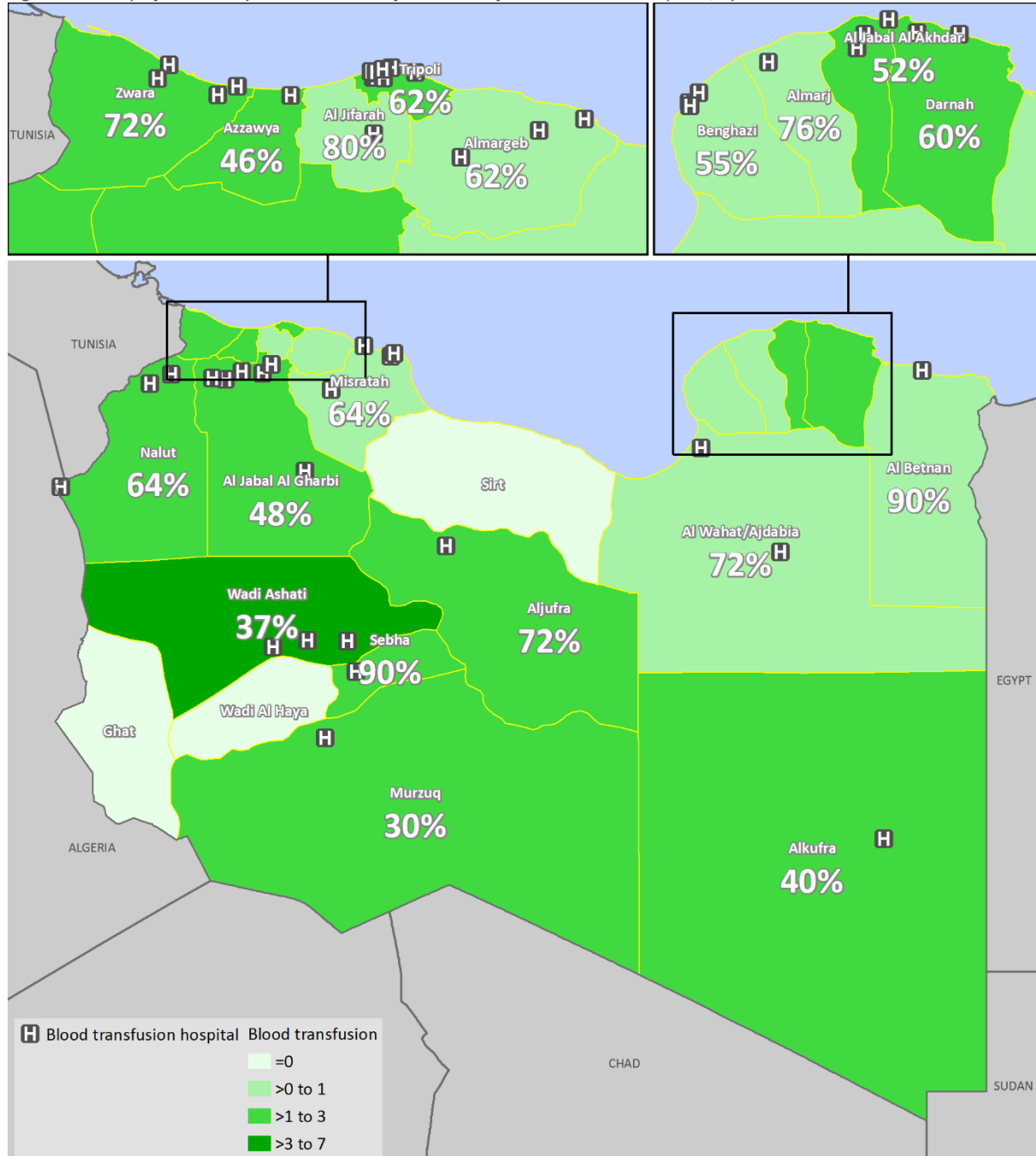
A total of 57 hospitals and PHC facilities offer blood transfusion services, with 7% of the blood transfusion services offered through four PHCs and 93% offered through 53 hospitals.

Table 84: Availability and readiness of blood transfusion services by facility type and district

	N of facilities offering blood transfusion	Guidelines safe blood transfusion practices scores	Staff trained safe blood transfusion practices scores	Equipment (Refrigerator) scores	Overall Diagnosis scores	Overall medicine scores	Overall scores	N of facilities offering blood transfusion	Guidelines safe blood transfusion practices scores	Staff trained safe blood transfusion practices scores	Equipment (Refrigerator) scores	Overall Diagnosis scores	Overall medicine scores	Overall scores	N other facilities offering blood transfusion
Al Wahat/Ajdabia	0							2	100%	0%	100%	60%	100%	72%	
Alkufra	0							1	0%	0%	100%	0%	100%	40%	
Benghazi	0							4	25%	50%	100%	50%	50%	55%	2
Al Betnan	0							1	100%	100%	100%	100%	50%	90%	
Al Jabal Al Akhdar	0							3	33%	0%	100%	60%	67%	52%	
Darnah	0							2	50%	0%	100%	50%	100%	60%	1
Almarj	0							1	0%	100%	100%	80%	100%	76%	
Sirt	0							0							
Aljufra	0							1	100%	0%	100%	60%	100%	72%	
Misratah	1	0%	0%	0%	80%	0%	16%	4	50%	50%	100%	55%	63%	64%	
Almargeb	0							3	100%	33%	100%	27%	50%	62%	1
Al Jifarah	0							1	100%	0%	100%	100%	100%	80%	
Tripoli	0							10	70%	20%	100%	56%	65%	62%	3
Azzawya	1	0%	0%	100%	40%	50%	38%	1	0%	0%	100%	80%	50%	46%	3
Zwara	0							5	80%	40%	100%	72%	70%	72%	1
Al Jabal Al Gharbi	1	0%	0%	0%	80%	0%	16%	6	0%	17%	100%	33%	92%	48%	1
Nalut	0							3	33%	67%	100%	53%	67%	64%	
Wadi Ashati	0							3	33%	33%	67%	0%	50%	37%	1
Sebha	1	100%	100%	100%	0%	50%	70%	1	100%	100%	100%	100%	50%	90%	2
Wadi Al Haya	0							0							
Murzuq	0							1	0%	0%	100%	0%	50%	30%	
Ghat	0							0							
<b>Total</b>	<b>4</b>	<b>25%</b>	<b>25%</b>	<b>50%</b>	<b>50%</b>	<b>25%</b>	<b>35%</b>	<b>53</b>	<b>51%</b>	<b>30%</b>	<b>98%</b>	<b>51%</b>	<b>70%</b>	<b>60%</b>	<b>15</b>

An additional 15 facilities also reported offering blood transfusion services: 11 dialysis centers (out of 26 functional dialysis centers), one CDC & immunology center, and three blood banks (out of five functional blood banks). These other facilities have not been included in the readiness calculations as data was scattered, but some findings will be presented for these locations in Section 7.4.2.

Figure 105: Map of availability\* and readiness of blood transfusion services in hospitals, by district



\* Availability is defined as the ratio of facilities providing a selected service to 100,000 population; service-specific readiness is included in the map as a written percentage; only service-specific referral facilities are mapped

Three districts (Sirt, Wadi Al Haya, and Ghat) do not have blood transfusion services available, while three districts (Alkufra, Azzawya, and Murzuq) each have only a single hospital with blood transfusion services available with a readiness score below 50%, indicating a poor availability of blood transfusion services in these districts. The PHC facility offering blood transfusion services in Azzawya has a readiness score of only 38%, and thus does not significantly help strengthen the capacity for service provision in this district.

The overall readiness index for blood transfusion is calculated based on the availability of tracer items in five domains: (1) functional equipment, (2) medicines, (3) diagnostics, (4) guidelines, and (5) staff having received recent training on blood transfusion. The overall readiness of the primary health care facilities on blood transfusion services was 35%, with an overall readiness of 60% at the hospital level. The low score for the hospital can primarily be attributed to a lack of staff having received training in blood transfusion practices within the past two years, with, to a lesser extent, low scores in the availability of guidelines and diagnostic capacity at 51% each. In the case of the blood transfusion readiness for the PHCs, the scores were low across all five domains.

*Box 22: Blood transfusion services: availability and readiness*

Seventy-two facilities report offering blood transfusion services. These consist of four PHC facilities, 53 hospitals, and 15 other facilities, which includes three blood banks and 11 dialysis centers. Sirt, Wadi al Haya and Ghat do not have blood transfusion services available at the district level. Readiness scores for blood transfusion are very low for PHC facilities (35%) and higher for hospitals (60%), but indicate that there is a need for the improvement of the services, specifically in terms of staff training, guidelines, and the availability of diagnostics.

#### 7.4.2 Breakdown of readiness indicators

The proportions reported in this section may not necessarily correspond to those reported for the readiness scores in the previous section. This is because the number of respondents are often different, given that the data used here may come from a different subset of health facilities or a different section of the survey, or may not reflect all the indicators used to calculate the index scores. The figures in this section can be used as a reference point to assess the validity of the readiness scores, and also provide insight into the individual items used for calculating the readiness indices.

##### 7.4.2.1 Interruptions in availability of blood, sources of receiving blood and screening status

Overall, 57% of hospitals and 25% of PHC facilities reported receiving blood from the blood banks. Interruptions in the availability of blood during the three months prior to the survey occurred in 43% of hospitals, 75% of PHC facilities and 60% of other facilities, which is quite considerable. Blood collection from donors took place in two PHC facilities (50%), a quarter of the hospitals, and one-third of the other facilities. Screening for HIV, Hepatitis B, and Hepatitis C was done quite consistently, in at least 92% of all facilities, while screening for syphilis was done consistently in only 23% of hospitals and 50% of other facilities, although it was consistently performed in the two PHC facilities collecting and screening blood.

Table 85: Overview of blood availability, source of blood, and screening practices, by facility type

	Total N PHC facilities with data		Total N of Hospitals with data		N other facilities	% of other facilities
		% of PHC		% of hospitals		
Receive blood from blood bank	4	25%	53	57%	15	80% (as 3 facilities are blood banks)
Interruptions in availability of blood in the last 3 months	4	75%	53	43%	15	60%
Collecting blood from donors at facility	4	50%	53	25%	15	33%
Screening for HIV	2	100%	13	100%	12	92%
Screening for syphilis	2	100%	13	23%	12	50%
Screening for Hepatitis B	2	100%	13	92%	12	92%
Screening for Hepatitis C	2	100%	13	92%	12	92%

#### 7.4.2.2 Equipment

The survey shows that 98% of the hospitals, all of the PHC facilities, and 67% of the other facilities offering blood transfusion services have a functional refrigerator. The fridge is used exclusively for blood in 89% of the hospitals. Temperature records in the PHC facilities are kept carefully, while both the hospitals and other facilities often lack temperature charts (47% and 67% availability, respectively), and temperature is not consistently recorded in these facilities (88% and 90%, respectively).

Table 86: Overview of functional equipment available for blood transfusion, by facility type

	Total N PHC facilities with data		Total N of Hospitals with data		N other facilities	% of other facilities
		% of PHC		% of hospitals		
Functional refrigerator	4	100%	53	98%	15	67%
Fridge used exclusively for blood			53	89%		
Thermometer			53	81%		
Temperature charts	4	100%	43	47%	15	67%
Temp recorded at least once in past 24 hours	4	100%	16	88%	10	90%

#### 7.4.2.3 Trained staff and guidelines

Guidelines for safe blood transfusion are not universally available in the facilities, with 25% availability in PHC facilities, 51% in hospitals, and 67% in other facilities. Similarly, staff that received up-to-date training on safe blood transfusion practices during the past two years are available in less than half of the facilities, suggesting that there is considerable work to be done in terms of guidelines and training for this service domain.

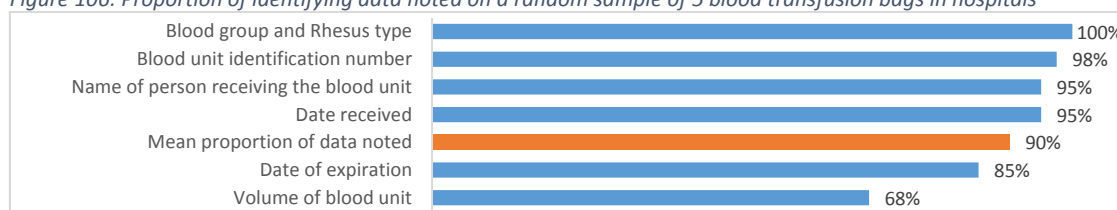
Table 87: Overview of the availability of blood transfusion guidelines and trained staff, by facility type

	Total N PHC facilities with data		Total N of Hospitals with data		N other facilities	% of other facilities
		% of PHC		% of hospitals		
Guidelines for safe blood transfusion available	4	25%	53	51%	15	67%
SOPs for safe blood transfusion available			53	45%		
Dedicated staff for blood transfusion services			53	62%		
Staff trained in safe blood transfusion in past 2 years	4	25%	53	30%	15	47%

#### 7.4.2.4 Quality of record keeping

Data on the quality of record keeping for blood transfusions was collected only for the hospitals. A random sample of five packs received during the prior three months was selected, and the available data recorded for 41 hospitals. The mean total availability of data for blood transfusion packs is 90%, indicating that the majority of essential data was recorded. All the hospitals kept a record of blood group and rhesus type, but performed less well on recording the date of expiration (85%) and the volume of the blood unit (68%).

Figure 106: Proportion of identifying data noted on a random sample of 5 blood transfusion bags in hospitals



#### 7.4.3 Volume of blood used and discarded

The table below presents data based on a review of blood transfusion records of 39 hospitals that could be accessed at time of survey. Although it is not comprehensive, as data on number of units received and number of units discarded were not available for all hospitals, it gives a general indication of the availability, use and waste in blood transfusion services. Of the mean of 447 units received per hospital in three months, 377 units (84%) are transfused, of which 51% goes to women, and 20% goes to children. The approximate rate for the discarding of blood units across all hospitals is 15%.

Table 88: Utilization volume of blood transfusion services in hospitals

	N hospitals providing data	Mean N units / hospital	Total N units/ 3 months
Number of units received	38	447	16,992
Total number of units transfused	39	377	14,718
Number of units transfused to women	38	192	7,283
Number of units transfused to children	38	75	2,857
Number of units discarded	37	69	2,554

### 7.5 Surgical and ICU wards

There are 69 hospitals with adult medical or surgical wards, or wards that are combined adult and pediatric wards. Standard patient care guidelines for routine post-surgical care that are specific to adult medical or surgical wards, or wards that are combined adult and pediatric wards are available in 25% of the hospitals, while 14% of the hospitals reported having standard patient care guidelines not specific to adult/pediatric medical or surgical wards.

Table 89: Summary of Surgical and ICU bed capacity in hospitals

	N hospitals	Total beds	Average N of beds	Range
Emergency holding/observation beds	58	416	7	2 - 30
Surgical ward (adult)	40	1847	46	7 - 171
Combined medical/surgical ward (adult)	19	566	30	10 - 60
Pediatric ward	34	1421	42	6 - 226
Intensive care units (other than neonatal ICU)	50	498	10	2 - 30



## 7.6 Minor surgery and blood transfusion services in PHCs by municipality

As emergency services and major surgery are offered only by hospitals, the data included in this section only refers to minor surgical services and blood transfusion services that are provided through the PHC facilities. Among municipalities that have minor surgery services available, the average number of surgical interventions available is four out of a possible nine types. Readiness scores are low overall, with the highest score at municipality level at 50%, with six scoring 47%. The municipality of Tobruk has a readiness score of 0% for the minor surgery serviced offered through its PHC facility. The very low scores are largely due to the absence of staff trained in IMEESC in most municipalities, in addition to the absence of guidelines.

Only four PHC facilities in four municipalities report providing blood transfusion services, with the highest readiness score at 60% for the PHC facility in Albawanees.

Table 90: Availability and readiness for minor surgical services and blood transfusion in PHC facilities, by municipality

	Minor surgical services															Blood transfusion		
	Incision, drainage of abscesses	Wound debridement	Acute burn management	Suturing	Closed repair of fracture	Cricothyroid-otomy	Male circumcision	Hydrocele reduction	Chest tube insertion	N of minor surgery types available	N facilities offering minor surgery	Guidelines IMEESC	Staff trained IMEESC	Equipment scores	Medicines scores	Readiness	N facilities	Readiness
Abusliem	1	2	0	1	0	0	0	0	0	3	2	0%	0%	13%	38%	13%	0	
Ain Zara	2	2	1	1	0	0	0	0	0	4	2	0%	0%	50%	13%	16%	0	
Al Ajaylat	0	0	0	0	0	0	0	0	0	0	0						0	
Al Aziziya	0	0	0	0	0	0	0	0	0	0	0						0	
Al Galaa	0	0	0	0	0	0	0	0	0	0	0						0	
Al Jaghboub	0	0	0	0	0	0	0	0	0	0	0						0	
Al Maya	0	0	0	0	0	0	0	0	0	0	0						0	
Al Shate Al Garbe	0	0	0	0	0	0	1	0	0	1	1	0%	0%	38%	0%	9%	0	
Al Shate Al Sharge	1	1	0	1	0	0	0	0	0	3	1	0%	0%	75%	25%	25%	0	
Al Swani	0	0	0	0	0	0	0	0	0	0	0						0	
Alabyar	0	0	0	0	0	0	0	0	0	0	0						0	
Alasabaa	1	1	1	1	1	0	0	0	0	5	1	0%	0%	88%	100%	47%	0	
Albawanees	2	2	2	2	0	0	0	0	0	4	2	50%	0%	38%	50%	34%	1	60%
Albayda	5	0	4	5	0	0	1	0	0	4	5	0%	0%	28%	50%	19%	0	
Albrayga	0	0	0	0	0	0	0	0	0	0	0						0	
Aldawoon	1	0	0	0	0	0	0	0	0	1	1	0%	0%	25%	0%	6%	0	
Algatroun	0	0	0	0	0	0	0	0	0	0	0						0	
Algaygab	1	1	1	1	1	0	0	0	0	5	1	0%	0%	88%	100%	47%	0	
Alghrayfa	1	1	1	1	0	0	1	1	0	6	1	0%	0%	75%	0%	19%	0	
Algurgha Ashshati	0	1	0	1	0	0	0	0	0	2	1	0%	0%	25%	50%	19%	0	
Alharaba	0	0	0	0	0	0	0	0	0	0	0						0	
Alhawamid	0	0	0	0	0	0	0	0	0	0	0						0	
Aljmail	0	0	0	0	0	0	0	0	0	0	0						0	
Aljufra	0	0	0	0	0	0	0	0	0	0	0						0	
Alkhums	5	11	0	4	2	0	0	0	0	4	12	8%	0%	51%	21%	20%	0	
Alkufra	4	4	3	10	1	0	0	0	0	5	10	0%	0%	48%	85%	33%	0	
Almarj	2	1	1	1	0	0	1	0	0	5	2	0%	0%	19%	63%	20%	0	
Alqubba	0	0	0	0	0	0	0	0	0	0	0						0	
Alsharguiya	0	0	0	0	0	0	0	0	0	0	0						0	
Arrajban	0	0	0	0	0	0	0	0	0	0	0						0	
Arrayayna	0	0	0	0	0	0	0	0	0	0	0						0	
Arrhaibat	0	0	0	0	0	0	0	0	0	0	0						0	
Ashshgega	0	0	0	0	0	0	0	0	0	0	0						0	
Assahel	1	1	1	1	1	0	0	0	0	5	1	0%	0%	88%	100%	47%	0	
Aujala	2	2	2	2	1	0	2	0	0	6	2	0%	0%	56%	75%	33%	0	
Azzahra	0	0	0	0	0	0	0	0	0	0	0						0	

	Minor surgical services																Blood transfusion	
	Incision, drainage of abscesses	Wound debridement	Acute burn management	Suturing	Closed repair of fracture	Cricothyroidotomy	Male circumcision	Hydrocele reduction	Chest tube insertion	N of minor surgery types available	N facilities offering minor surgery	Guidelines IMEESC	Staff trained IMEESC	Equipment scores	Medicines scores	Readiness	N facilities	Readiness
Azzawya	22	17	15	10	2	0	1	0	0	6	23	4%	4%	46%	39%	23%	1	48%
Azzintan	3	1	1	3	2	0	0	1	1	7	4	25%	0%	34%	50%	27%	1	26%
Bani Waleed	3	3	2	3	2	0	2	1	0	7	3	33%	0%	63%	58%	39%	0	
Baten Aljabal	1	1	1	1	0	0	0	0	0	4	1	0%	0%	38%	25%	16%	0	
Benghazi	3	3	1	3	0	0	0	0	0	4	3	33%	33%	21%	50%	34%	0	
Bint Bayya	0	0	0	0	0	0	0	0	0	0	0						0	
Bir Alashhab	0	0	0	0	0	0	0	0	0	0	0						0	
Daraj	0	0	0	0	0	0	0	0	0	0	0						0	
Derna	1	1	1	1	1	0	0	0	0	5	1	0%	0%	88%	100%	47%	0	
Ejdabia	0	0	0	0	0	0	0	0	0	0	0						0	
Ejkherra	1	1	1	1	0	0	1	0	0	5	1	0%	0%	38%	75%	28%	0	
Emsaed	1	1	1	1	1	0	0	0	0	5	1	0%	0%	88%	100%	47%	0	
Espeaa	0	0	0	0	0	0	0	0	0	0	0						0	
Garaballi	1	2	0	0	0	0	0	0	0	2	2	0%	0%	31%	0%	8%	0	
Gasr Akhyar	0	0	0	0	0	0	0	0	0	0	0						0	
Gasr Bin Ghasheer	0	0	0	0	0	0	0	0	0	0	0						0	
Gemienis	0	0	0	0	0	0	0	0	0	0	0						0	
Ghadamis	0	0	0	0	0	0	0	0	0	0	0						0	
Gharb Azzawya	2	1	0	1	0	0	0	0	0	3	2	0%	0%	31%	63%	23%	0	
Ghat	1	6	0	2	0	0	1	0	0	4	6	0%	0%	13%	38%	13%	0	
Ghiryani	0	0	0	0	0	0	0	0	0	0	0						0	
Hai Alandalus	0	0	0	0	0	0	0	0	0	0	0						0	
Jadu	0	0	0	0	0	0	0	0	0	0	0						0	
Jalu	1	1	1	1	1	0	0	0	0	5	1	0%	0%	63%	75%	34%	0	
Janzour	3	4	2	4	0	0	0	0	0	4	4	0%	50%	44%	19%	28%	0	
Jardas Alabeed	0	0	0	0	0	0	0	0	0	0	0						0	
Kabaw	0	0	0	0	0	0	0	0	0	0	0						0	
Khalege Alsedra	2	2	2	1	0	0	0	0	0	4	2	50%	50%	25%	50%	44%	0	
Kikkla	0	0	0	0	0	0	0	0	0	0	0						0	
Labriq	0	0	0	0	0	0	0	0	0	0	0						0	
Marada	0	0	0	0	0	0	0	0	0	0	0						0	
Misrata	1	1	1	1	1	0	0	0	0	5	1	0%	0%	88%	100%	47%	0	
Mizda	0	0	0	0	0	0	0	0	0	0	0						0	
Msallata	0	0	0	0	0	0	0	0	0	0	0						0	
Murzuq	0	0	0	0	0	0	0	0	0	0	0						0	
Nalut	1	1	0	1	0	0	0	0	0	3	1	0%	0%	50%	25%	19%	0	
Nesma	0	0	0	0	0	0	0	0	0	0	0						0	
Rigdaleen	0	0	0	0	0	0	0	0	0	0	0						0	
Sabratha	1	1	0	1	0	0	0	1	0	4	1	0%	0%	38%	75%	28%	0	
Sebha	11	12	3	11	2	0	3	2	0	7	13	31%	15%	52%	54%	38%	0	
Shahhat	3	4	0	3	1	0	1	0	0	5	4	0%	0%	31%	25%	14%	0	
Sidi Assayeh	0	0	0	0	0	0	0	0	0	0	0						0	
Sirt	3	2	2	3	1	0	0	0	0	5	3	0%	0%	58%	75%	33%	0	
Sug Aljumaa	4	4	0	4	0	0	2	0	0	4	4	0%	0%	47%	69%	29%	0	
Sug Alkhamees	0	0	0	0	0	0	0	0	0	0	0						0	
Suloug	1	1	0	1	0	0	1	0	0	4	1	0%	0%	38%	75%	28%	0	
Surman	9	9	9	2	0	0	0	0	0	4	9	0%	0%	38%	28%	16%	0	
Tajoura	0	0	0	0	0	0	0	0	0	0	0						0	
Taraghin	0	0	0	0	0	0	0	0	0	0	0						0	
Tarhuna	9	9	3	2	1	0	0	0	0	5	10	0%	10%	38%	15%	16%	0	
Tazirbu	0	0	0	1	0	0	0	0	0	1	1	0%	0%	25%	100%	31%	0	
Thaher Aljabal	0	0	0	0	0	0	0	0	0	0	0						0	
Tobruk	1	1	1	1	0	0	0	0	0	4	1	0%	0%	0%	0%	0%	0	
Toukra	1	0	0	1	0	0	1	0	0	3	1	0%	0%	50%	100%	38%	0	

	Minor surgical services															Blood transfusion		
	Incision, drainage of abscesses	Wound debridement	Acute burn management	Suturing	Closed repair of fracture	Cricothyroidotomy	Male circumcision	Hydrocele reduction	Chest tube insertion	N of minor surgery types available	N facilities offering minor surgery	Guidelines IMEESC	Staff trained IMEESC	Equipment scores	Medicines scores	Readiness	N facilities	Readiness
Tripoli	0	1	0	0	0	0	0	0	0	1	1	0%	100%	50%	50%	50%	0	
Ubari	0	0	0	0	0	0	0	0	0	0	0						0	
Umm arrazam	0	0	0	0	0	0	0	0	0	0	0						0	
Wadi Etba	0	0	0	0	0	0	0	0	0	0	0						0	
Wazin	0	0	0	0	0	0	0	0	0	0	0						0	
Yefren	0	0	0	0	0	0	0	0	0	0	0						0	
Zamzam	0	0	0	0	0	0	0	0	0	0	0						0	
Ziltun	0	0	0	0	0	0	0	0	0	0	0						0	
Zliten	16	1	1	4	2	0	0	0	0	5	21	5%	5%	36%	15%	15%	1	26%
Zwara	0	1	0	1	0	0	0	0	0	2	1	0%	0%	63%	100%	41%	0	
<b>Total</b>	<b>135</b>	<b>122</b>	<b>65</b>	<b>101</b>	<b>24</b>	<b>0</b>	<b>19</b>	<b>6</b>	<b>1</b>	<b>2</b>	<b>172</b>	<b>7%</b>	<b>6%</b>	<b>42%</b>	<b>42%</b>	<b>24%</b>	<b>4</b>	<b>35%</b>

### 7.6.1 Breakdown of readiness indicators

A review of the availability of staff trained to provide safe care during minor surgery and blood transfusion indicates that there is considerable need for refresher training, with the overall availability of trained staff generally falling below 25% for all services.

Table 91: Overview of staff trained for surgical and blood transfusion interventions in PHC facilities

Training course	N of PHCs offering services	% of these PHCs with trained staff
Integrated Management for Emergency & Essential Surgical Care (IMEESC)	172	6%
Surgery	172	13%
Anesthesia	172	13%
Safe blood transfusion practices	4	25%

## 7.7 Emergency, Surgical and Blood transfusion services by hospital

At the hospital level, all four types of services are available, and disaggregated data at hospital level has been summarized in Table 94: Availability and readiness for emergency services and minor surgery, by hospital. Of the 67 hospitals offering emergency services, four have a readiness score of 80% or more. These are Benghazi Pediatrics & Surgery hospital (80%), Tubruq Medical Center (83%), Al Khadra hospital (85%), and Nalout hospital (86%). With a mean readiness score of 47%, it is not surprising that 39 out of 67 hospitals had a readiness score for emergency services below 50%, which was the selected cut-off indicator to define “minimum functionality”. This is largely due to an overall lack of guidelines and staff with up-to-date training. The lowest readiness score was 7%, but as this was for the ophthalmology hospital, which due to its specialization does not offer a wide variety of emergency interventions, this low score can be explained.

For minor surgery, two hospitals obtained near-perfect scores. These were Emhamd Al Meqrif Hospital in Ejdabiya (100%), and Misslata hospital (97%). On the whole the readiness indices for minor surgery were quite poor, however, with 67 out of 72 hospitals scoring below 50% and an overall mean readiness index of 32%. This indicates that considerable work needs to be done in order to ensure that the readiness of minor surgery services is upgraded across nearly all hospitals, with areas of focus being trained staff, and the availability of and familiarity with relevant guidelines. The improvement of supplies of essential medicines for minor surgery also needs to be addressed.

For major surgery, the situation is slightly better, with the same two hospitals achieving the highest readiness indices. Of the 47 hospitals offering major surgery, 15 achieved scores below 50%, with a higher overall readiness index of 55%. This was in part due to the fact that the number of key domains in the readiness index included the 24-hour availability of staff for surgery and anesthesia, which boosted scores. The availability of guidelines and staff with up-to-date training remained low, along with the availability of medicines for major surgery.

Table 92: Overview of hospitals with staff trained in emergency, surgery and blood transfusion in the last 2 years

<i>training course</i>	<b>N of Hospitals offering services</b>	<b>% of these hospitals with trained staff</b>
<i>Integrated Management for Emergency &amp; Essential Surgical Care (IMEESC)</i>	47	9%
<i>Emergency services provision</i>	67	18%
<i>Safe blood transfusion practices</i>	53	30%

The amount of types of surgery offered by various hospitals ranges from only general or orthopedic surgery in seven hospitals, to the 11 types of specialist surgery offered in Al Khums hospital.

Table 93: Availability of surgical services, by specialist type and hospital

	Dental or oral surgery	Cardio-thoracic surgery	Maxillofacial surgery	Neurosurgery	Ophthalmology	Organ transplant (any)	Orthopedics	Plastic surgery	Urology	Vascular surgery	ENT	General Surgery	N of types of specialist surgery
Zwara Albahree Hospital							X		X		X	X	4
Abi Sleem trauma hospital				X			X						2
Al-Zawia Hospital				X			X		X		X	X	5
Al Aujilat Hospital										X	X		2
Al Jalaa hospital – Benghazi	X		X	X	X		X	X		X		X	8
Al Jameel Hospital							X		X			X	3
Al Khadra hospital							X		X	X	X	X	5
Al khums hospital	X	X	X	X	X		X	X	X	X	X	X	11
Almarj Hospital			X		X		X		X		X	X	6
Al Quba Hospital												X	1
Al Wehda Hospital	X				X			X	X		X	X	6
Ali Omar Askar hospital	X		X	X			X						4
Bani waleed hospital							X						1
Benghazi hosp peds & surgery												X	1
Benghazi medical center		X		X	X		X	X	X	X	X	X	9
Burns & plastic surgery hospital - Tripoli	X		X					X					3
Misslata hospital							X		X		X	X	4
Mitiga hospital	X						X		X	X	X	X	6
Mizda hospital							X						1
Nalout hospital					X		X				X	X	4
Nat'l Institute for Oncology			X						X			X	3
Oncology Center Misratah	X		X	X	X		X	X	X	X	X	X	10
Ophthalmology hosp- Tripoli					X								1
Subrata Hospital							X		X			X	3
Surmann Hospital					X						X		2
Tarhuna hospital							X						1
Tripoli central hospital				X		X	X		X		X	X	6
Tripoli medical center	X	X	X	X	X		X		X	X	X	X	10
Tubruq Medical Center		X	X	X	X		X	X	X		X	X	9
Zlitan hospital							X						1
Abi Sitta chest diseases hospital		X					X		X	X	X	X	6
Emhamd Al Meqrif Hospital Ejdabiya	X		X		X		X	X	X	X	X	X	9
Misratah hospital			X	X	X		X		X	X	X	X	8
Thuarra hospital		X					X		X	X	X	X	6

Table 94: Availability and readiness for emergency services and minor surgery, by hospital

	Emergency services													Minor surgery services																
	Chest tube insertion	Cricothyroidotomy	Tracheostomy	Resuscitation (establish airway)	First-aid management for severe hemorrhage	Acute burn management	Other services	Facility ever provide any emergency services	Overall 24-hours staff	National guidelines on caring for the emergency patient	Received training in emergency services in the last two years	Overall equipment scores	Overall medicine scores	Overall diagnostics scores	Emergency services readiness	Incision and drainage of abscesses	Wound debridement	Suturing	Closed repair of fracture	Closed reduction of dislocated joint	Male circumcision	Hernia reduction	Biopsy of lymph node or mass	Removal of foreign body	Minor surgical services offered	Guidelines IMEESC available today	Training in IMEESC in the last two years	Materials scores	Medicines scores	Minor surgery readiness
Atiya Al Kaseh-Al Kuffra hos	x	x	x	x	x	x		x	25%	0%	100%	50%	50%	57%	47%	x	x	x	x	x	x	x	x	x	x	0%	0%	67%	75%	35%
Tripoli pediatric hospital	x			x	x		x	x	75%	0%	100%	86%	100%	29%	65%															
Zwara Albahree Hospital	x			x	x	x		x	100%	0%	0%	93%	100%	57%	58%	x	x	x	x	x	x	x	x	x	x	0%	0%	89%	100%	47%
Abi Sleem trauma hospital	x	x	x	x	x		x	x	88%	100%	0%	57%	75%	0%	53%	x	x	x	x	x	x	x	x	x	x	0%	0%	56%	0%	14%
Adri hospital					x			x	25%	0%	0%	21%	25%	0%	12%	x	x	x			x	x	x	x	x	0%	0%	11%	0%	3%
Al-Zawia Hospital	x	x	x	x	x	x		x	88%	0%	100%	57%	88%	43%	63%	x	x	x	x	x	x	x	x	x	x	0%	0%	56%	50%	26%
Al Abyar Hospital				x	x	x		x	25%	0%	0%	29%	50%	0%	17%	x	x	x			x	x	x	x	x	0%	0%	33%	0%	8%
Al Afia hospital - Houn	x	x	x	x	x	x		x	75%	0%	100%	64%	25%	43%	51%	x	x	x	x	x	x	x	x	x	x	0%	0%	78%	100%	44%
Al Asaabaa hospital	x		x	x	x	x		x	25%	0%	0%	64%	63%	29%	30%	x	x	x	x	x	x	x	x	x	x	0%	0%	56%	75%	33%
Al Aujilat Hospital	x			x	x	x		x	0%	0%	0%	93%	38%	0%	22%	x	x	x	x	x	x	x	x	x	x	0%	0%	78%	100%	44%
Al Bardi Hospital																x	x	x	x	x	x	x	x	x	x	0%	0%	0%	75%	19%
Al Dawoon hospital	x			x	x	x		x	75%	0%	0%	57%	50%	43%	38%						x	x	x	x	x	0%	0%	67%	25%	23%
Al Jaghub hospital	x	x	x	x	x	x		x	88%	100%	0%	100%	100%	43%	72%	x	x	x		x	x	x	x	x	x	0%	0%	89%	100%	47%
Al Jalaa gynecology hospital			x		x			x	25%	0%	0%	21%	25%	0%	12%															
Al Jalaa hospital – Benghazi	x	x	x	x	x	x		x	88%	0%	100%	86%	100%	57%	72%	x	x	x	x	x	x	x	x	x	x	0%	0%	78%	100%	44%
Al Jameel Hospital	x			x	x	x		x	88%	0%	0%	79%	50%	29%	41%	x	x	x	x	x	x	x	x	x	x	0%	0%	78%	25%	26%
Al Kewefia chest dis. hosp																														
Al Khadra hospital	x	x	x	x	x	x		x	100%	100%	100%	79%	88%	43%	85%	x	x	x	x	x	x	x	x	x	x	0%	0%	78%	75%	38%
Al khums hospital	x	x	x	x	x	x		x	100%	100%	0%	36%	50%	57%	57%	x	x	x	x	x	x	x	x	x	x	0%	0%	67%	0%	17%
Al Kuriaat hospital				x	x	x		x	75%	0%	0%	71%	75%	29%	42%	x	x	x			x				x	0%	0%	78%	0%	19%
Almarj Hospital	x	x	x	x	x	x		x	88%	0%	0%	79%	100%	57%	54%	x	x	x	x	x	x	x	x	x	x	0%	0%	78%	75%	38%
Al Qarabouli hospital	x			x	x	x		x	75%	0%	0%	71%	75%	0%	37%	x	x	x			x	x	x	x	x	0%	0%	78%	100%	44%
Al Quba Hospital	x			x	x	x		x	88%	100%	0%	43%	75%	0%	51%	x	x	x	x	x	x	x	x	x	x	100%	0%	89%	0%	47%
Al Temimi Hospital	x	x		x	x	x		x	75%	0%	0%	86%	88%	29%	46%	x	x	x		x	x	x	x	x	x	0%	0%	89%	100%	47%
Al Wehda Hospital	x			x	x	x	x	x	63%	0%	0%	29%	38%	0%	21%	x	x	x	x	x	x	x	x	x	x	0%	0%	44%	0%	11%
Al Zintan hospital	x		x	x	x	x		x	75%	0%	0%	57%	50%	57%	40%	x	x	x			x	x	x	x	x	0%	0%	78%	0%	19%
Ali Omar Askar hospital			x	x	x			x	88%	0%	0%	57%	100%	0%	41%	x	x	x	x	x	x	x	x	x	x	0%	100%	67%	0%	42%
Bani waleed hospital	x			x	x	x		x	100%	0%	0%	71%	100%	57%	55%	x	x	x	x	x	x	x	x	x	x	0%	0%	67%	75%	35%
Be'ar Al Austa Milad hosp																x	x	x							x	0%	0%	0%	0%	0%
Benghazi hosp peds&surgery	x	x	x	x	x	x		x	100%	100%	0%	93%	100%	86%	80%	x	x	x	x	x	x	x	x	x	x	0%	0%	89%	100%	47%
Benghazi medical center	x	x	x	x	x	x		x	100%	0%	100%	57%	100%	100%	76%	x	x	x	x	x	x	x	x	x	x	0%	100%	78%	100%	69%
Bergan hospital	x			x	x	x		x	88%	0%	0%	64%	63%	43%	43%	x	x	x	x	x	x	x	x	x	x	0%	0%	78%	50%	32%
Brak hospital	x			x	x	x		x	75%	0%	0%	57%	50%	43%	38%	x	x				x	x		x	x	0%	0%	67%	0%	17%
Burns & plastic surgery hosp			x	x	x	x		x	63%	100%	100%	36%	38%	57%	65%	x	x	x			x	x	x	x	x	0%	0%	56%	50%	26%
Chest dis. Hosp. Misratah																x	x								x	0%	0%	0%	0%	0%
Diabetes & endocrine hosp																														
Ghadames hospital	x	x	x	x	x	x		x	100%	0%	0%	71%	75%	71%	53%	x	x	x	x	x	x	x	x	x	x	0%	0%	67%	75%	35%
Gharyan hospital	x			x	x	x		x	63%	0%	0%	71%	75%	57%	44%	x	x	x	x	x	x	x	x	x	x	0%	0%	67%	75%	35%
Gmenis hospital	x			x	x	x		x	75%	0%	0%	57%	50%	43%	38%						x	x	x	x	x	0%	0%	67%	50%	29%
Jado Hospital	x			x	x	x	x	x	63%	0%	0%	57%	75%	43%	40%	x	x	x	x	x	x	x	x	x	x	0%	0%	56%	75%	33%
Jalou hospital	x	x	x	x	x	x		x	75%	0%	0%	93%	63%	43%	46%	x	x	x	x	x	x	x	x	x	x	0%	0%	89%	25%	28%

	Emergency services													Minor surgery services																			
	Chest tube insertion	Cricothyroidotomy	Tracheostomy	Resuscitation (establish airway)	First-aid management for severe hemorrhage	Acute burn management	Other services	Facility ever provide any emergency services	Overall 24-hours staff	National guidelines on caring for the emergency patient	Received training in emergency services in the last two years	Overall equipment scores	Overall medicine scores	Overall diagnostics scores	Emergency services readiness	Incision and drainage of abscesses	Wound debridement	Suturing	Closed repair of fracture	Closed reduction of dislocated joint	Male circumcision	Hernia reduction	Biopsy of lymph node or mass	Removal of foreign body	Minor surgical services offered	Guidelines IMEESC available today	Training in IMEESC in the last two years	Materials scores	Medicines scores	Minor surgery readiness			
Jardas Al Abeed Hospital																																	
Kabaw hospital	x		x	x	x	x		x	100%	0%	0%	93%	63%	43%	50%	x	x	x	x	x	x	x	x	x	x	0%	0%	89%	100%	47%			
Misslata hospital				x	x	x		x	100%	0%	0%	79%	88%	57%	54%	x	x	x	x	x	x	x	x	x	x	100%	100%	89%	100%	97%			
Mitiga hospital	x	x	x	x	x			x	100%	0%	0%	43%	88%	43%	46%	x	x	x	x	x	x	x	x	x	x	0%	0%	56%	25%	20%			
Mizda hospital	x			x	x	x	x	x	50%	0%	0%	71%	88%	43%	42%	x	x	x			x	x	x	x	x	0%	0%	67%	0%	17%			
Murziq hospital	x			x	x	x		x	50%	0%	0%	57%	75%	14%	33%	x	x	x	x	x	x	x	x	x	x	0%	0%	78%	75%	38%			
Nalout hospital	x	x	x	x	x	x	x	x	100%	100%	100%	86%	75%	57%	86%	x	x	x	x	x	x	x	x	x	x	0%	0%	67%	75%	35%			
Nat'I Inst Oncology Subrata																x	x	x	x	x					x	0%	0%	100%	50%	38%			
Omar Al Mokhtar Hospital					x	x		x	75%	0%	0%	64%	50%	0%	32%	x	x	x			x	x	x	x	x	0%	0%	44%	75%	30%			
Oncology Center Misrathi																x	x	x							x	0%	0%	100%	100%	50%			
Ophthalmology hosp Tripoli							x	x	25%	0%	0%	14%	0%	0%	7%			x							x	0%	0%	78%	0%	19%			
Psych Diseases Hosp Tripoli																																	
Sebha Medical Center	x	x	x	x	x	x		x	88%	0%	100%	36%	75%	86%	64%	x	x	x	x	x	x	x	x	x	x	0%	0%	56%	100%	39%			
Semno Hospital																						x			x	0%	0%	0%	100%	25%			
Shehat Chest Hospital																																	
Slouq hospital																	x	x				x	x	x	x	x	0%	0%	0%	50%	13%		
Sooq Al Khamees hospital				x	x			x	25%	0%	0%	21%	25%	0%	12%	x	x	x		x	x	x	x	x	x	x	0%	0%	11%	0%	3%		
Subrata Hospital	x	x	x	x	x	x		x	88%	0%	0%	64%	100%	57%	51%	x	x	x	x	x	x	x	x	x	x	x	0%	0%	56%	75%	33%		
Surmann Hospital	x			x	x	x		x	0%	0%	0%	79%	63%	0%	24%	x	x	x	x	x	x	x	x	x	x	x	0%	0%	67%	0%	17%		
Sussa Hospital				x	x	x		x	75%	100%	0%	21%	63%	0%	43%	x	x	x		x	x	x	x	x	x	0%	0%	33%	0%	8%			
Tajurra hospital	x		x	x	x	x		x	50%	100%	0%	64%	75%	0%	48%	x	x	x			x	x	x	x	x	0%	0%	56%	0%	14%			
Tarhuna hospital	x			x	x			x	88%	0%	0%	36%	100%	86%	51%	x	x	x	x	x	x	x	x	x	x	0%	0%	22%	0%	6%			
Tazarbu hospital	x	x	x	x	x			x	63%	100%	0%	86%	25%	43%	53%	x	x	x			x	x	x	x	x	x	100%	0%	78%	75%	63%		
Tegi hospital	x			x	x	x		x	88%	0%	0%	86%	75%	43%	49%	x	x	x	x	x	x	x	x	x	x	0%	0%	89%	100%	47%			
Traghen hospital	x	x		x	x	x	x	x	88%	0%	0%	57%	75%	43%	44%	x	x	x			x	x	x	x	x	x	0%	0%	56%	75%	33%		
Tripoli central hospital	x	x	x	x	x	x		x	100%	0%	0%	50%	88%	57%	49%	x	x	x	x	x	x	x	x	x	x	x	0%	0%	33%	25%	15%		
Tripoli medical center	x			x	x	x		x	100%	0%	0%	64%	63%	43%	45%	x	x	x	x	x	x	x	x	x	x	x	0%	0%	44%	100%	36%		
Tubruq Medical Center	x	x	x	x	x	x		x	100%	100%	0%	100%	100%	100%	83%	x	x	x	x	x	x	x	x	x	x	x	0%	0%	89%	100%	47%		
Tukaraa hospital					x	x		x	50%	0%	0%	71%	63%	0%	31%		x	x				x			x	0%	0%	78%	50%	32%			
Weddan hospital	x			x	x	x		x	75%	0%	0%	57%	50%	43%	38%	x	x	x	x	x	x	x	x	x	x	x	0%	0%	67%	50%	29%		
Yaffren hospital	x			x	x	x	x	x	100%	0%	0%	79%	100%	43%	54%	x	x	x	x	x	x	x	x	x	x	x	0%	0%	67%	75%	35%		
Zlitan hospital	x	x	x	x	x	x		x	100%	0%	0%	93%	88%	86%	61%	x	x	x	x	x	x	x	x	x	x	x	0%	0%	100%	75%	44%		
Abi Sitta chest diseases hosp																																	
Al Hraba hospital				x	x	x		x	88%	0%	0%	71%	38%	43%	40%	x	x	x	x	x	x	x	x	x	x	x	0%	0%	89%	75%	41%		
Al Shewarif hospital				x				x	13%	0%	0%	29%	25%	0%	11%	x	x	x			x		x	x	x	x	0%	0%	33%	0%	8%		
Bin Jawad hospital	x			x	x	x		x	88%	100%	0%	100%	38%	43%	61%	x	x	x	x	x	x	x	x	x	x	x	0%	0%	100%	50%	38%		
Emhamd Al Meqrif hospital	x	x	x	x	x	x		x	88%	100%	100%	93%	0%	86%	78%	x	x	x	x	x	x	x	x	x	x	x	100%	100%	100%	100%	100%		
Misratha hospital	x	x	x	x	x	x		x	75%	0%	100%	71%	100%	86%	72%	x	x	x	x	x	x	x	x	x	x	x	0%	0%	67%	100%	42%		
Thuarra hospital	x		x	x	x	x		x	100%	0%	0%	43%	63%	71%	46%	x	x	x	x	x	x	x	x	x	x	x	0%	0%	44%	100%	36%		
<b>Total</b>	<b>53</b>	<b>25</b>	<b>31</b>	<b>62</b>	<b>65</b>	<b>56</b>	<b>9</b>	<b>67</b>	<b>74%</b>	<b>21%</b>	<b>18%</b>	<b>64%</b>	<b>67%</b>	<b>40%</b>	<b>47%</b>	<b>66</b>	<b>68</b>	<b>67</b>	<b>46</b>	<b>50</b>	<b>66</b>	<b>62</b>	<b>61</b>	<b>63</b>	<b>72</b>	<b>6%</b>	<b>6%</b>	<b>63%</b>	<b>55%</b>	<b>32%</b>			

Table 95: Availability and readiness for major surgery and blood transfusion services, by hospital

	Major Surgery																	Blood Transfusion.																				
	Tubal Ligation	Vasectomy	Cystostomy	Urethral Stricture Dilatation	Dilatation & Curettage or vacuum aspiration	Episiotomy, cervical and vaginal laceration repair	Obstetric fistula repair	Caesarean section	Amputation	Appendectomy	Cataract surgery	Cleft palate repair	Club foot repair	Contracture release	Skin grafting	Drainage of osteomyelitis-septic arthritis	Hernia repair (strangulated)	Hernia repair (elective)	Hernia repair (congenital)	Laparotomy	Neonatal surgery	Open reduction, and fixation for fracture	Any surgical procedures other than those minor	24 hours Staff trained in general surgery	24 hours Staff trained in anesthesia	Guidelines IMEESC available today	Training in IMEESC in the last two years	Equipment scores	Medicines scores	Other (major) surgery readiness	Blood transfusion available	Guidelines safe blood transfusion practices	Staff trained safe blood transfusion practices	Equipment	Diagnostics score	Medicines/materials scores	Blood transfusion readiness	
Atiya Al Kaseh-Al Kuffra hos	x				x	x	x	x	x						x	x	x					x	100%	100%	0%	0%	100%	11%	52%	x	0%	0%	100%	0%	50%	30%		
Tripoli pediatric hospital																							x	100%	100%	0%	0%	100%	78%	63%	x	100%	100%	100%	80%	100%	56%	
Zwara Albahree Hospital	x	x	x	x	x	x	x	x	x								x	x	x	x		x	x	100%	100%	0%	0%	100%	78%	63%	x	100%	100%	100%	80%	100%	96%	
Abi Sleem trauma hospital									x	x													x	100%	100%	0%	0%	100%	22%	54%	x	0%	0%	100%	0%	0%	20%	
Adri hospital																															x	0%	0%	0%	0%	100%	20%	
Al –Zawia Hospital					x	x	x	x	x					x		x	x			x		x	x	100%	100%	0%	0%	100%	78%	63%	x	0%	0%	100%	80%	100%	56%	
Al Abyar Hospital																															x	100%	0%	100%	60%	50%	62%	
Al Afia hospital - Houn																																						
Al Asaabaa hospital	x		x		x	x		x		x						x	x	x		x			x	0%	100%	0%	0%	50%	44%	32%	x	0%	0%	100%	0%	50%	30%	
Al Aujilat Hospital	x		x		x	x							x							x			x	100%	100%	0%	0%	75%	44%	53%	x	100%	100%	100%	80%	100%	96%	
Al Bardi Hospital																																						
Al Dawoon hospital																																						
Al Jaghub hospital																																						
Al Jalaa gynecology hospital	x				x	x	x	x												x			x	100%	100%	0%	0%	50%	56%	51%	x	0%	0%	100%	80%	100%	56%	
Al Jalaa hospital – Benghazi									x	x													x	x	100%	100%	0%	0%	100%	89%	65%	x	0%	100%	100%	80%	100%	76%
Al Jameel Hospital					x	x		x		x											x		x	100%	100%	0%	0%	100%	56%	59%	x	0%	0%	100%	0%	100%	40%	
Al Kewefia chest dis. hosp																															x	0%	0%	100%	0%	0%	20%	
Al Khadra hospital	x	x	x	x	x	x	x	x	x														x	100%	100%	100%	0%	100%	44%	74%	x	0%	0%	100%	100%	50%	50%	
Al khums hospital	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	0%	0%	0%	0%	50%	100%	25%	x	100%	100%	100%	0%	100%	80%	
Al Kuriaat hospital																															x	0%	0%	100%	0%	50%	30%	
Almarj Hospital	x	x	x		x	x	x	x	x	x	x												x	100%	0%	0%	0%	100%	56%	43%	x	0%	100%	100%	80%	50%	66%	
Al Qarabouli hospital																																						
Al Quba Hospital					x		x	x	x															x	100%	100%	100%	0%	100%	0%	67%	x	0%	0%	100%	0%	50%	30%
Al Temimi Hospital																								x	100%	0%	0%	0%	50%	22%	29%							
Al Wehda Hospital			x	x		x		x	x	x													x	x	100%	100%	0%	0%	75%	0%	46%	x	0%	0%	100%	100%	50%	50%
Al Zintan hospital			x		x			x	x	x													x	x	100%	100%	0%	0%	100%	0%	50%	x	0%	0%	100%	60%	50%	42%
Ali Omar Askar hospital			x	x									x										x	100%	100%	0%	100%	50%	100%	75%	x	100%	0%	100%	100%	50%	70%	
Bani waleed hospital	x				x	x		x	x	x													x	100%	100%	0%	0%	100%	100%	67%	x	0%	0%	100%	20%	100%	44%	
Be'ar Al Austa Milad hosp																																						
Benghazi hosp peds&surgery										x	x												x	100%	100%	0%	0%	75%	89%	61%	x	100%	0%	100%	100%	100%	80%	
Benghazi medical center	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x								x	100%	100%	0%	100%	100%	78%	80%	x	0%	0%	100%	20%	100%	44%	
Bergan hospital										x	x													x	100%	0%	0%	0%	100%	0%	33%	x	0%	100%	100%	0%	100%	60%
Brak hospital																															x	100%	0%	100%	0%	100%	60%	
Burns & plastic surgery hosp			x																					x	100%	100%	100%	0%	100%	78%	80%	x	0%	0%	100%	80%	50%	46%
Chest dis. Hosp. Misratah																																						
Diabetes & endocrine hosp																																						
Ghadames hospital	x				x	x		x		x													x	100%	100%	0%	0%	100%	67%	61%	x	0%	0%	100%	80%	0%	36%	
Gharyan hospital	x	x	x	x	x	x		x	x	x													x	100%	0%	0%	0%	75%	56%	38%	x	0%	0%	100%	0%	50%	30%	
Gmenis hospital																																						
Jado Hospital																															x	0%	0%	100%	80%	100%	56%	
Jalou hospital																															x	0%	0%	100%	40%	50%	38%	
Jardas Al Abeed Hospital																																						
Kabaw hospital																																						
Misslata hospital	x		x	x	x	x		x	x	x														x	100%	100%	100%	100%	100%	33%	89%	x	0%	0%	100%	80%	100%	56%



	Major Surgery																				Blood Transfusion.																		
	Tubal Ligation	Vasectomy	Cystostomy	Urethral Stricture Dilatation	Dilatation & Curettage or vacuum aspiration	Epi-siotomy, cervical and vaginal laceration repair	Obstetric fistula repair	Caesarean section	Amputation	Appendectomy	Cataract surgery	Cleft palate repair	Club foot repair	Contracture release	Skin grafting	Drainage of osteomyelitis-septic arthritis	Hernia repair (strangulated)	Hernia repair (elective)	Hernia repair (congenital)	Laparotomy	Neonatal surgery	Open reduction, and fixation for fracture	Any surgical procedures other than those minor	24 hours Staff trained in general surgery	24 hours Staff trained in anaesthesia	Guidelines IMEESC available today	Training in IMEESC in the last two years	Equipment scores	Medicines scores	Other (major) surgery readiness	Blood transfusion available	Guidelines safe blood transfusion practices	Staff trained safe blood transfusion practices	Equipment	Diagnostics score	Medicines/materials scores	Blood transfusion readiness		
Mitiga hospital			x	x				x	x	x					x	x	x	x	x			x	x	100%	100%	0%	0%	100%	33%	56%	x	0%	0%	100%	100%	100%	100%	100%	60%
Mizda hospital					x	x	x	x		x								x	x	x			x	x	100%	100%	0%	0%	75%	89%	61%	x	0%	0%	100%	100%	100%	100%	
Murziq hospital																																	x	0%	0%	100%	0%	0%	20%
Nalout hospital	x	x	x		x	x	x	x		x			x				x	x				x	x	100%	100%	0%	0%	100%	78%	63%	x	0%	100%	100%	100%	80%	0%	56%	
Nat'I Inst Oncology Subrata					x				x						x		x				x		x	100%	100%	0%	0%	75%	22%	50%	x	0%	0%	100%	100%	50%	50%		
Omar Al Mokhtar Hospital																															x	0%	0%	100%	80%	0%	36%		
Oncology Center Misratha	x	x	x	x	x		x		x	x		x			x	x	x	x	x	x		x	x	100%	100%	100%	0%	75%	67%	74%	x	0%	0%	100%	100%	0%	40%		
Ophthalmology hosp Tripoli											x												x	0%	100%	0%	0%	25%	33%	26%									
Psych Diseases Hosp Tripoli																																							
Sebha Medical Center	x				x		x	x	x	x	x		x		x	x	x			x		x	x	100%	100%	0%	0%	100%	0%	50%	x	100%	100%	100%	100%	100%	100%		
Semno Hospital																																							
Shehat Chest Hospital																																							
Slouq hospital																																							
Sooq Al Khamees hospital																																							
Subrata Hospital		x	x		x	x	x	x	x	x					x	x	x	x	x	x		x	x	100%	100%	0%	0%	100%	67%	61%	x	0%	0%	100%	100%	50%	50%		
Surmann Hospital											x												x	0%	0%	0%	0%	50%	11%	10%									
Sussa Hospital																																x	0%	0%	100%	0%	50%	30%	
Tajurra hospital																															x	0%	0%	100%	0%	100%	40%		
Tarhuna hospital	x				x	x		x	x	x				x		x	x	x		x		x	x	100%	100%	0%	0%	50%	0%	42%	x	0%	0%	100%	0%	100%	40%		
Tazarbu hospital	x	x	x	x			x	x	x	x		x	x				x	x	x	x		x	x	100%	100%	100%	0%	75%	11%	64%									
Tegi hospital	x	x	x		x	x		x		x							x			x			x	0%	0%	0%	0%	100%	44%	24%	x	0%	0%	100%	0%	50%	30%		
Traghen hospital	x				x				x								x	x	x				x	0%	0%	100%	0%	100%	33%	39%									
Tripoli central hospital				x	x				x	x						x	x	x	x			x	x	100%	100%	0%	0%	75%	89%	61%	x	0%	0%	100%	20%	50%	34%		
Tripoli medical center	x			x	x	x	x	x	x	x		x	x				x	x	x	x	x	x	x	100%	100%	0%	0%	100%	56%	59%	x	100%	0%	100%	0%	100%	60%		
Tubruq Medical Center	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	100%	100%	100%	0%	100%	56%	76%	x	0%	0%	100%	100%	100%	60%		
Tukaraa Hospital																																							
Weddan hospital																																							
Yaffren Hospital		x	x	x	x	x	x		x							x	x	x		x			x	0%	100%	0%	0%	100%	56%	43%	x	0%	0%	100%	60%	50%	42%		
Zlitan hospital	x				x	x	x	x	x	x				x		x	x	x		x		x	x	100%	100%	0%	0%	100%	78%	63%	x	0%	100%	100%	0%	50%	50%		
Abi Sitta chest diseases hosp	x	x		x	x	x	x	x	x			x	x		x	x	x	x	x	x	x	x	x	100%	100%	0%	0%	50%	0%	42%	x	100%	0%	100%	100%	0%	60%		
Al Hraba hospital																																							
Al Shewarif hospital																																							
Bin Jawad hospital																																							
Emhamd Al Meqrif hospital	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	100%	100%	100%	100%	75%	89%	94%	x	0%	0%	100%	80%	50%	46%		
Misratah hospital	x			x	x	x	x	x	x	x					x	x	x	x	x	x		x	x	100%	100%	0%	0%	100%	89%	65%	x	0%	0%	100%	100%	100%	60%		
Thuarra hospital	x	x		x	x	x	x	x	x			x	x			x	x	x	x	x	x	x	x	100%	100%	0%	0%	75%	100%	63%	x	0%	0%	100%	100%	0%	40%		
<b>Total</b>	<b>27</b>	<b>16</b>	<b>24</b>	<b>19</b>	<b>33</b>	<b>31</b>	<b>21</b>	<b>33</b>	<b>34</b>	<b>40</b>	<b>11</b>	<b>7</b>	<b>14</b>	<b>17</b>	<b>12</b>	<b>23</b>	<b>37</b>	<b>32</b>	<b>20</b>	<b>39</b>	<b>9</b>	<b>26</b>	<b>47</b>	<b>85%</b>	<b>83%</b>	<b>19%</b>	<b>9%</b>	<b>84%</b>	<b>51%</b>	<b>55%</b>	<b>53</b>	<b>19%</b>	<b>17%</b>	<b>98%</b>	<b>51%</b>	<b>63%</b>	<b>50%</b>		



## 8 Dental services

As outlined in Figure 2, many of the general, rural hospitals and primary health care facilities have dental clinics attached to them. The Health Ministry also provides dental health services through the public dental clinics, with the services generally spread throughout the cities. The main treatments are minor oral surgery, tooth scaling, and restorations. There is very little development of preventive dental services, and the population generally seeks treatment only when they notice symptoms (35).

### 8.1.1 Availability of services

A total of 226 facilities reported offering dental services. This includes 187 PHC facilities, 28 hospitals, and 11 dental clinics. Data has been disaggregated by district, and the availability of dental services has been calculated per 100,000 population, with an overall availability of 3.5 facilities providing dental care per 100,000 population. The highest ratio of dental facilities can be found in Al Jabal Al Akhdar district (9.1 clinics/100,000) and Azzawya (8.1 clinics/100,000). The lowest availability is in Wadi Ashati (no clinics), followed by Sirt (0.6/100,000) and Almarj (0.9/100,000).

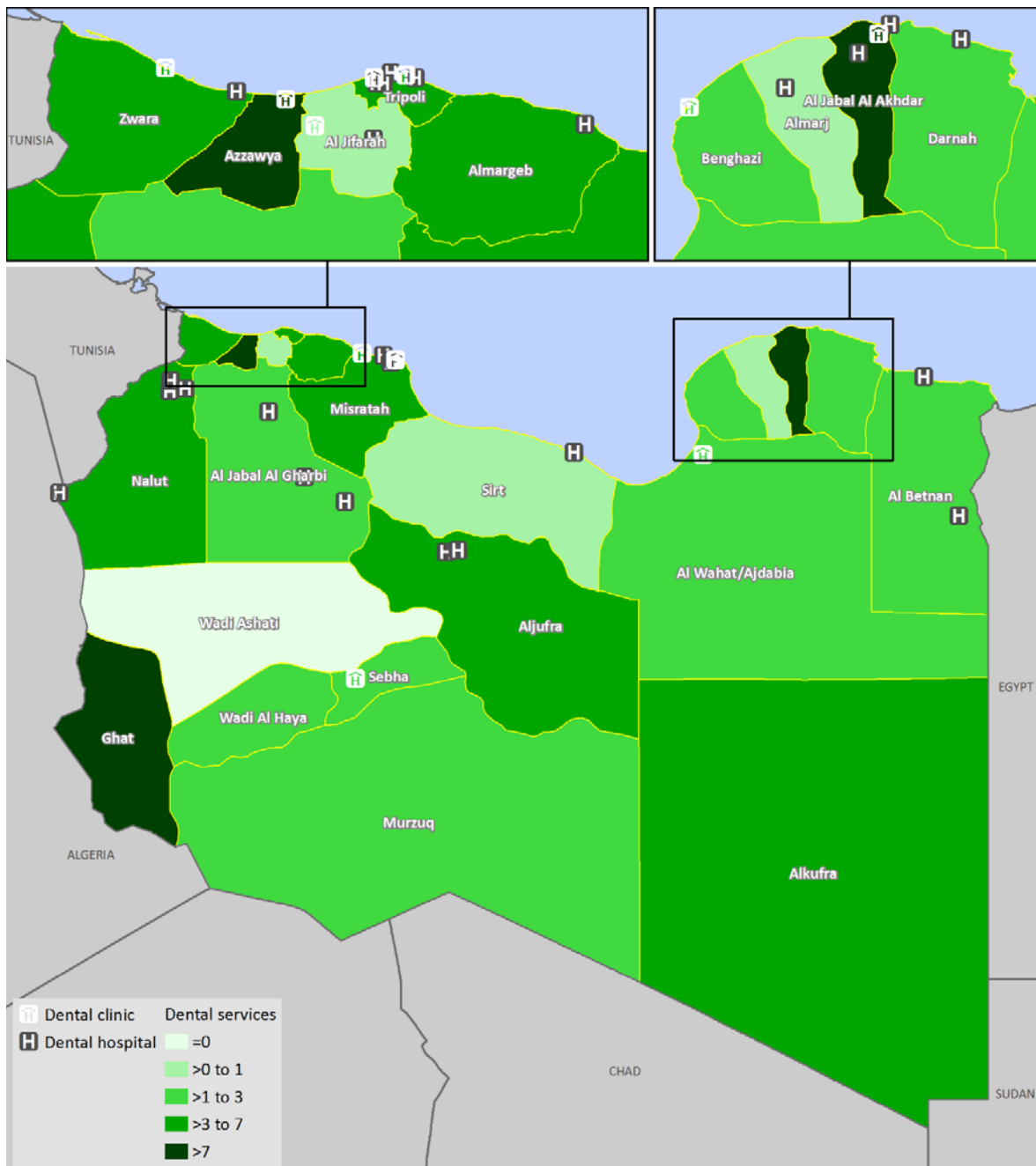
Table 96: Availability of dental services by facility type and district

	PHC	HOSPITAL	OTHER	TOTAL	Dental services per 100,000 population
Al Jabal Al Akhdar	19	2	1	22	9.1
Al Jabal Al Gharbi	5	3	0	8	2.3
Al Jifarah	3	1	1	5	1.0
Aljufra	0	2	0	2	3.5
Alkufra	2	0	0	2	3.7
Almargeb	21	1	0	22	4.3
Almarj	1	1	0	2	0.9
Al Wahat/Ajdabia	3	0	1	4	2.0
Wadi Ashati	0	0	0	0	0.0
Azzawya	27	0	1	28	8.1
Benghazi	15	0	1	16	2.2
Darnah	2	1	0	3	1.5
Ghat	2	0	0	2	7.4
Misratah	16	3	2	21	3.3
Murzuq	1	0	0	1	1.1
Nalut	1	4	0	5	4.8
Sebha	3	0	1	4	2.5
Sirt	0	1	0	1	0.6
Tripoli	52	5	2	59	5.0
Al Betnan	3	2	0	5	2.6
Wadi Al Haya	1	0	0	1	1.1
Zwara	10	2	1	13	3.8
<b>Total</b>	<b>187</b>	<b>28</b>	<b>11</b>	<b>226</b>	<b>3.5</b>

#### Box 23: Dental services: availability and readiness

Dental services in Libya are provided through 226 facilities located in hospitals, PHC centers and dental clinics, with an average of 3.5 dental facilities per 100,000 population. Approximately 300 PHC facilities have dental chairs available but do not offer dental services. Dental services are available in 21 out of 22 districts, with no services available in Wadi Ashati. Coverage is highest in Al Jabal Al Akhdar district (9.1 clinics/100,000 pop) and Azzawya (8.1 clinics/100,000). Most facilities offer simple dental treatment upon demand, with less attention to preventive services such as the provision of health information. Staff in 30% of the 187 PHC-based dental clinics had been trained in the last two years.

Figure 107: Map of the availability of dental health facilities per 100,000 population in all facility types, by district



\* Availability is defined as the ratio of facilities providing a selected service to 100,000 population; service-specific readiness is included in the map as a written percentage; only service-specific referral facilities are mapped

### 8.1.2 Breakdown of readiness indicators

Although no readiness indicators were calculated for dental health services, there is some data available to reflect the overall readiness to provide services. It shows a good availability of dental chairs, and given the number of health facilities reporting (with each facility reporting at least one chair available), there is an indication that a considerable number of dental chairs are available in health facilities where no dental services are actually being provided.

Table 97: Availability of overall readiness of dental services

	N PHCs reporting	Availability	N Other facilities reporting	Availability
Dental chairs available	488	607 chairs	17	19 chairs
<b>Services offered:</b>				
Dental health information	187	65%	11	91%
Dental treatment	187	80%	11	91%
Dental surgery	187	35%	11	9%
<b>Guidelines and training</b>				
Guidelines on dental health care	187	27%	11	0%
Staff trained on dental health in last 2 years	187	30%	11	0%

Of the 187 PHC facilities and 11 dental clinics providing dental services, the majority (80% and 91%, respectively), provide dental treatment. Dental health information is available in 65% of PHC facilities and 91% of dental clinics, with dental surgical treatment not commonly available, with only 35% of PHCs offering dental services and 9% of dental centers reporting the provision of this service.

The availability of recently trained staff and guidelines in dental health care is low, at approximately 30% of all PHC facilities. None of the dental clinics report having recently trained staff or guidelines available.

## 9 Diagnostic imaging and laboratory testing services

Diagnostic imaging is the technique and process of creating visual representations of the interior of a body for clinical analysis and medical intervention, as well as the visual representation of the function of some organs or tissues (physiology). The term laboratory testing refers to the examination of body fluids and tissues, with the purpose of establishing the presence (or absence) of a medical condition as a basis for treatment decisions in symptomatic patients, or the confirmative testing of positive individuals.

The availability of diagnostic tests and equipment is a key component of both general and specific services readiness indicators, and were consolidated under the heading “diagnostics” in earlier chapters. Sections 3.3.4.4 and 3.3.5.4 provide information for basic diagnostics at hospital and PHC facility level, respectively, while other chapters include service-specific readiness indicators for diagnostics. This chapter provides a more detailed overview of all the diagnostic imaging and testing services available in Libya that were used to make these calculations.

Table 98: Availability and readiness of diagnostic imaging and laboratory services provided, by type of facility

	General overview (% of 1149 total facilities)	Hospitals (% of all 80 hospitals)	Hospital Readiness score	PHC facilities (% of 1069 PHC facilities)	PHC Readiness score	Other facilities
Diagnostic imaging	204	78	-	103	-	23
Laboratory testing	430	78	69%	300	39%	52

A total of 203 health facilities offer diagnostic imaging services, while 430 facilities offer laboratory testing services. The majority of facilities offering these services are PHC facilities, followed by hospitals. Other facilities that offer diagnostic services include NCDC clinics, blood banks, referral medical laboratories, and diagnostics and imaging centers.

### 9.1 Diagnostic imaging services

Diagnostic imaging includes a wide range of tests, from X-rays to investigate the presence of chest diseases or fractures, to electrocardiograms (ECGs) to investigate the functioning of the heart. They are a critical tool in the arsenal of the medical professionals when it comes to the making of a correct diagnosis, and the subsequent prescription of the most effective treatment. For diagnostic imaging services, no general readiness indicator is calculated. Instead, we will present the overall availability of equipment and services as a proportion of the total number of items included in a specific category, with more detailed data per hospital and municipality presented at the start of Sections 9.3 and 9.4.

#### 9.1.1 Availability and readiness

A total of 204 facilities offer diagnostic imaging services across Libya, which includes 103 PHC facilities, 78 hospitals, and 23 other facilities (all NCDC centers offering only X-ray diagnosis for TB). The most widely available imaging service is X-ray, with 161 functional X-ray machines available across the facilities, followed by ultrasound machines, of which 71 can be found in hospitals, and 24 in PHC facilities. Mammographs are the least widely available, with 10 machines total (one in a PHC facility, and the remaining located in hospitals). All districts theoretically have at least one facility offering one form of diagnostic imaging, although the X-ray machine in Ghat was not functioning at the time of the survey, and in reality no functional service was available in this district. Table 99 reports a total of 77 hospitals offering imaging services, while all other tables report 78 hospitals. It is unclear which hospital was dropped during the calculations of these data, but the fact that one hospital is missing is not expected to dramatically alter the results, as the data for districts with no or very low numbers of hospitals is correct.

Table 99: Number of health facilities offering diagnostic imaging services, by facility type and district

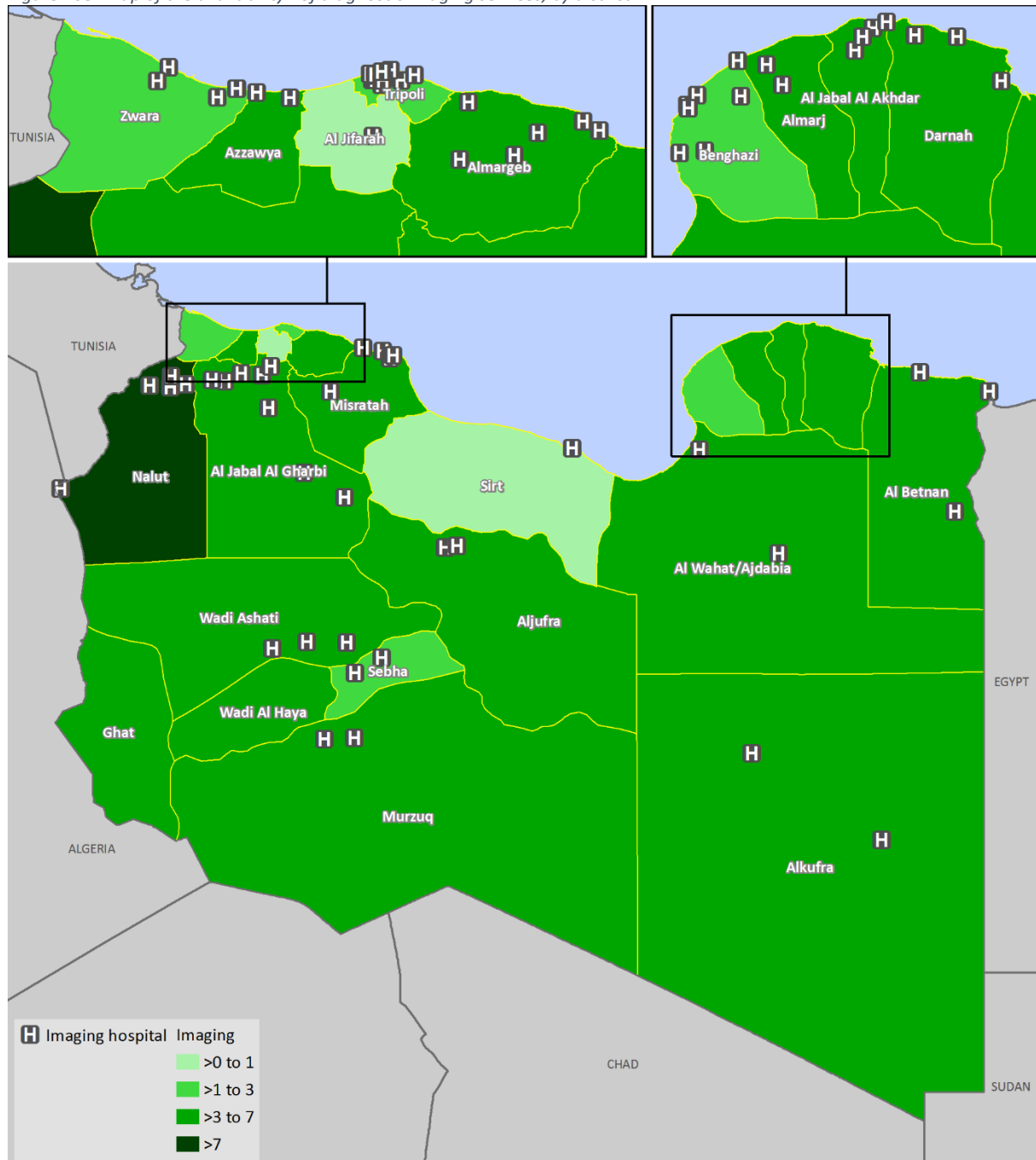
	N of PHC facilities offering imaging						N of hospitals offering imaging					N of NCDC facilities offering imaging		
	X-ray machine	Ultrasound	CT scan	Electrocardiogram (ECG)	Mammograph		X-ray machine	Ultrasound	CT scan	Electrocardiogram (ECG)	Mammograph	X-ray machine		
	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)	
<i>Al Wahat/Ajdabia</i>	5	2 (40%)	2 (40%)	0 (0%)	1 (20%)	0 (0%)	2	2 (100%)	2 (100%)	0 (0%)	2 (100%)	1 (50%)	2	2 (100%)
<i>Alkufra</i>	1	1 (100%)	1 (100%)	0 (0%)	1 (100%)	0 (0%)	2	1 (50%)	2 (100%)	0 (0%)	2 (100%)	0 (0%)	0	0
<i>Benghazi</i>	13	7 (54%)	5 (39%)	0 (0%)	7 (54%)	0 (0%)	6	6 (100%)	6 (100%)	2 (33%)	5 (83%)	1 (17%)	1	1 (100%)
<i>Al Betnan</i>	3	3 (100%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	3	3 (100%)	3 (100%)	1 (33%)	3 (100%)	0 (0%)	1	1 (100%)
<i>Al Jabal Al Akhdar</i>	9	4 (44%)	4 (44%)	0 (0%)	4 (44%)	0 (0%)	4	2 (50%)	4 (100%)	0 (0%)	2 (50%)	1 (25%)	0	0
<i>Darnah</i>	5	3 (60%)	1 (20%)	0 (0%)	0 (0%)	0 (0%)	3	3 (100%)	3 (100%)	1 (33%)	2 (67%)	1 (33%)	1	1 (100%)
<i>Almarj</i>	2	0 (0%)	2 (100%)	0 (0%)	1 (50%)	0 (0%)	4	4 (100%)	2 (50%)	1 (25%)	3 (75%)	0 (0%)	1	1 (100%)
<i>Sirt</i>	0						1	1 (100%)	1 (100%)	1 (100%)	1 (100%)	0 (0%)	0	0
<i>Aljufra</i>	0						2	2 (100%)	2 (100%)	1 (50%)	2 (100%)	0 (0%)	1	1 (100%)
<i>Misratah</i>	13	10 (77%)	1 (8%)	0 (0%)	0 (0%)	0 (0%)	5	5 (100%)	4 (80%)	3 (60%)	5 (100%)	1 (20%)	3	2 (67%)
<i>Almargeb</i>	9	5 (56%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	6	6 (100%)	6 (100%)	2 (33%)	2 (33%)	0 (0%)	2	2 (100%)
<i>Al Jifarah</i>	2	2 (100%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	1	1 (100%)	1 (100%)	0 (0%)	1 (100%)	0 (0%)	1	1 (100%)
<i>Tripoli</i>	17	14 (82%)	3 (18%)	0 (0%)	0 (0%)	0 (0%)	11	11 (100%)	10 (91%)	4 (36%)	8 (73%)	2 (18%)	1	1 (100%)
<i>Azzawya</i>	8	6 (75%)	3 (38%)	1 (13%)	1 (13%)	0 (0%)	2	1 (50%)	2 (100%)	0 (0%)	2 (100%)	0 (0%)	1	1 (100%)
<i>Zwara</i>	3	2 (67%)	0 (0%)	0 (0%)	1 (33%)	1 (33%)	5	5 (100%)	5 (100%)	2 (40%)	4 (80%)	1 (20%)	1	1 (100%)
<i>Al Jabal Al Gharbi</i>	4	3 (75%)	1 (25%)	0 (0%)	0 (0%)	0 (0%)	8	8 (100%)	8 (100%)	3 (38%)	7 (88%)	0 (0%)	2	2 (100%)
<i>Nalut</i>	1	1 (100%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	5	5 (100%)	5 (100%)	1 (20%)	5 (100%)	0 (0%)	3	3 (100%)
<i>Wadi Ashati</i>	0						3	3 (100%)	2 (67%)	0 (0%)	1 (33%)	0 (0%)	0	0
<i>Sebha</i>	1	1 (100%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	2	2 (100%)	1 (50%)	1 (50%)	1 (50%)	1 (50%)	1	1 (100%)
<i>Wadi Al Haya</i>	3	1 (33%)	1 (33%)	0 (0%)	1 (33%)	0 (0%)	0						0	0
<i>Murzuq</i>	3	1 (33%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	2	2 (100%)	2 (100%)	0 (0%)	1 (50%)	0 (0%)	1	1 (100%)
<i>Ghat</i>	1	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0						0	0
<b>Total</b>	<b>103</b>	<b>66 (64%)</b>	<b>24 (23%)</b>	<b>1 (1%)</b>	<b>17 (17%)</b>	<b>1 (1%)</b>	<b>77</b>	<b>73 (95%)</b>	<b>71 (92%)</b>	<b>23 (30%)</b>	<b>59 (77%)</b>	<b>9 (12%)</b>	<b>23</b>	<b>22 (96%)</b>

Diagnostic imaging services are available in all districts in Libya, with the highest ratio of facilities offering imaging services to population in Nalut district, and the lowest in Al Jifarah and Sirt districts. Although Ghat district has one facility that should offer imaging services, the X-ray machine was non-functional at the time of the survey, and although Figure 108 suggests the availability of services in line with the definition used for availability, the reality is that no services were available.

*Box 24: Imaging services - availability*

Diagnostic imaging services such as X-rays are provided through 203 facilities, including 103 PHC facilities, 77 hospitals and 23 NCDC centers. All districts have a theoretical availability of imaging services, but Ghat district had no functional equipment, and thus no real capacity to provide services. Sirt and Al Jifarah have a low ratio of imaging facilities available per population. At the municipality level, 41 out of 101 municipalities have functional services available. The most widely available imaging service is X-ray, followed by ultrasound. Overall availability of functional equipment in hospitals is 93%, with an average availability of suitably trained staff of 85%.

Figure 108: Map of the availability\* of diagnostic imaging services, by district



\* Availability is defined as the ratio of facilities providing a selected service to 100,000 population; service-specific readiness is included in the map as a written percentage; only service-specific referral facilities are mapped

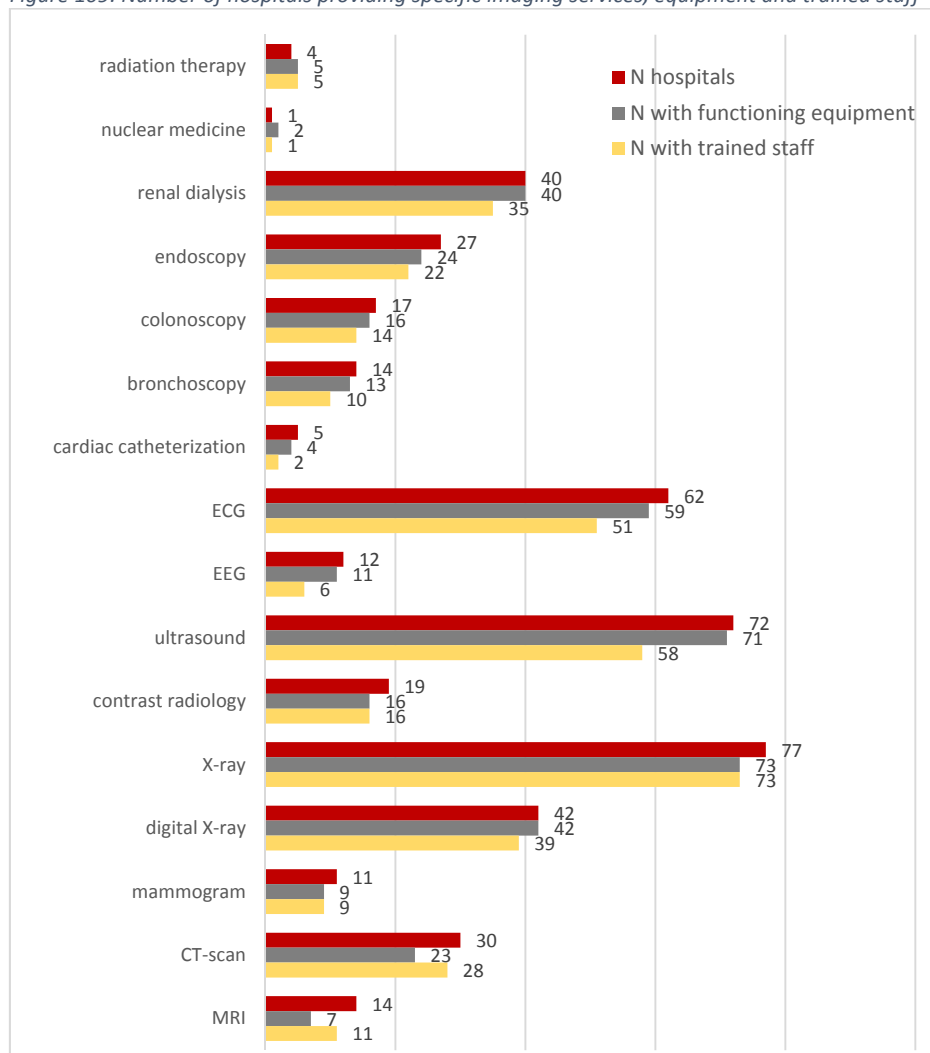
### 9.1.2 Basic readiness data for imaging services in hospitals

Readiness indicators are not calculated for imaging services, and additional data beyond the availability of imaging is not collected through the SARA Core survey questionnaire used for PHC facilities. The SARA Hospital questionnaire does collect more detailed information, and the following sections focus entirely on the imaging services provided only at the hospital level.

9.1.2.1 The availability of specific diagnostic imaging procedures, equipment and trained staff

Figure 103 indicates that for the 78 hospitals which offer imaging services, the most commonly available procedures are X-ray (77 hospitals) and ultrasound (72 hospitals), whilst the least commonly available are nuclear medicine (one hospital) and radiation therapy (four hospitals). In 93% of the hospitals that report offering specific services, functioning equipment is available, while staff with relevant training (either in-house or externally trained) was reported to have been available in 85% of the facilities. The services that have the lowest proportion of trained staff are cardiac catheterization (40%) and EEG (50%), while radiation therapy (125%), nuclear medicine (100%), and X-ray services (95%) have the highest proportions of suitably trained staff available.

Figure 109: Number of hospitals providing specific imaging services, equipment and trained staff



### 9.1.2.2 Protection of staff and maintenance of equipment

Out of the 78 hospitals providing imaging services, 64 (82%) report that lead aprons are available for staff and patients to minimize exposure to radiation. Staff in 20 hospitals (26%) routinely wear dosimeters to keep track of their overall radiation exposure.

In 30 hospitals (38%), contracts have been signed for the maintenance and repair of imaging equipment. In only 15 hospitals (19%) are there repair workers on call 24 hours a day. This suggests that there is a limited capacity to deal effectively with faulty equipment, especially after regular working hours.

## 9.2 Laboratory testing services

Laboratory testing services includes facility-based testing of body fluids such as blood and urine for the presence of indicators of a medical condition such as an infection or pregnancy, or the microscopic examination of human tissue. Tests can be as simple as dipsticks to test the presence of protein or glucose in urine, or as complex as histopathology to determine whether cells are cancerous or not. These tests are essential for the correct diagnosis and treatment of patients visiting a health facility. A laboratory testing readiness indicator has been constructed and calculated, and will be included in the presentation of the data. Additionally, a considerable amount of relevant data has been collected from hospital facilities on the management of the laboratories, and this will also be presented here.

### 9.2.1 Availability and readiness

A total of 403 health facilities offer laboratory testing services, which includes 300 PHC facilities (70%), 78 hospitals (18%), and 52 other facilities (12%) such as NCDC facilities testing for tuberculosis.

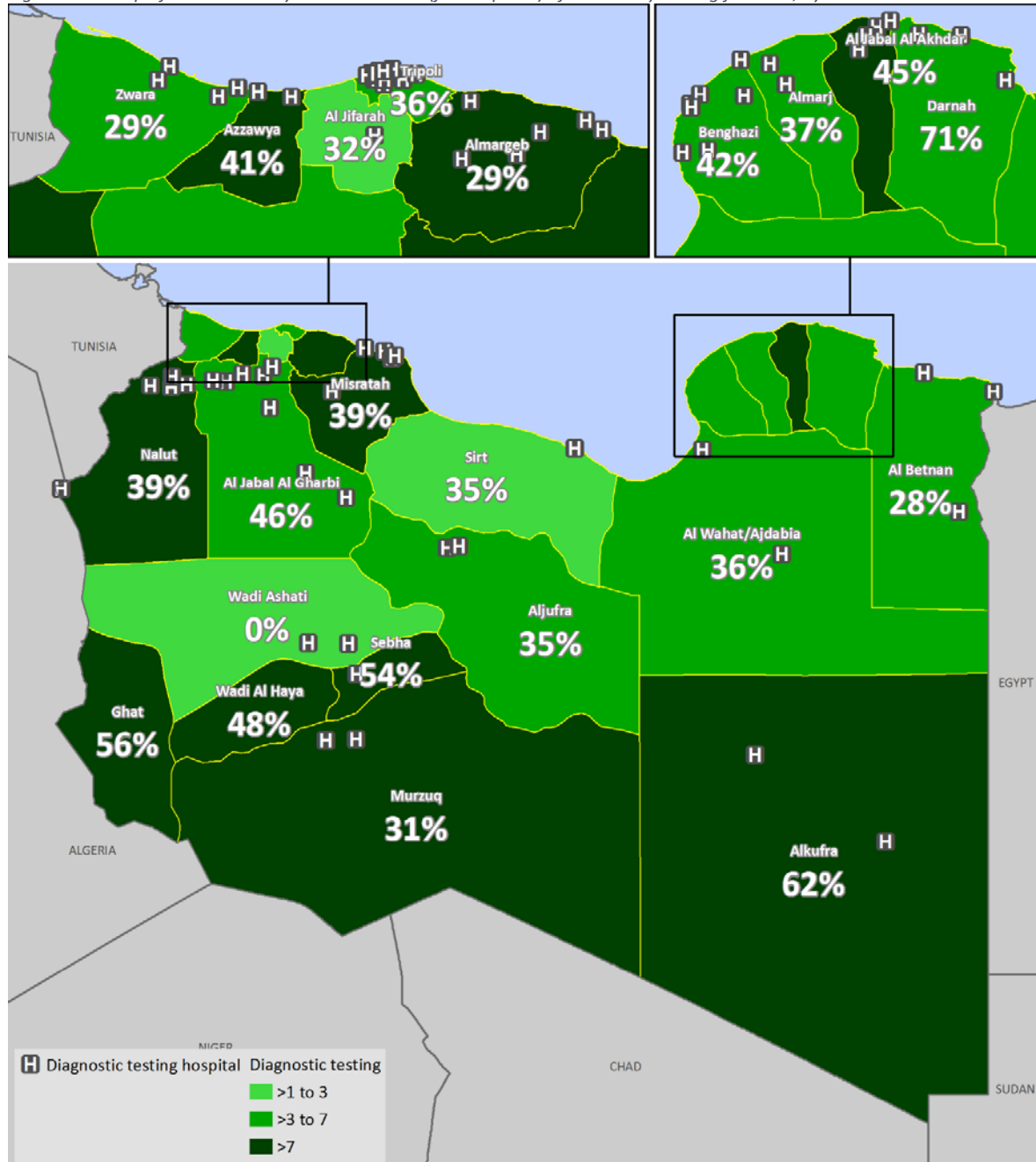
Table 100: Availability and readiness of laboratory testing services by type of facility and district

	N of PHC facilities offering laboratory testing	Material/medicine scores	Equipment scores	Overall readiness scores	N of hospitals offering laboratory testing	Material/medicine scores	Equipment scores	Overall readiness scores	N of other facilities offering laboratory testing	Total facilities offering laboratory testing
Al Wahat/Ajdabia	9	25%	47%	36%	2	80%	69%	75%	2	13
Alkufra	7	61%	62%	62%	2	90%	58%	74%	0	9
Benghazi	22	36%	47%	42%	6	65%	89%	77%	3	31
Al Betnan	4	18%	38%	28%	3	73%	82%	78%	1	8
Al Jabal Al Akhdar	15	43%	47%	45%	4	38%	54%	46%	1	20
Darnah	3	81%	61%	71%	3	60%	41%	51%	2	8
Almarj	5	34%	40%	37%	4	75%	71%	73%	1	10
Sirt	2	36%	33%	35%	1	90%	77%	84%	0	3
Aljufra	1	29%	42%	35%	2	75%	85%	80%	1	4
Misratah	44	35%	42%	39%	5	74%	83%	79%	9	58
Almargeb	43	17%	41%	29%	6	67%	72%	69%	3	52
Al Jifarah	5	31%	32%	32%	1	100%	100%	100%	2	8
Tripoli	59	31%	42%	36%	14	59%	79%	69%	4	77
Azzawya	35	34%	47%	41%	2	75%	81%	78%	6	43
Zwara	10	17%	42%	29%	5	70%	79%	74%	3	18
Al Jabal Al Gharbi	9	40%	53%	46%	8	70%	65%	68%	4	21
Nalut	3	29%	50%	39%	5	62%	77%	70%	3	11
Wadi Ashati	0				2	35%	46%	41%	0	2
Sebha	6	60%	49%	54%	1	90%	46%	68%	5	12
Wadi Al Haya	11	44%	52%	48%	0				0	11
Murzuq	5	26%	37%	31%	2	40%	65%	53%	2	9
Ghat	2	50%	63%	56%	0				0	2
<b>Total</b>	<b>300</b>	<b>33%</b>	<b>45%</b>	<b>39%</b>	<b>78</b>	<b>66%</b>	<b>73%</b>	<b>69%</b>	<b>52</b>	<b>430</b>



All districts have at least one facility that offers laboratory testing, although the districts of Wadi Ashati and Ghat have only a small number of health facilities available, coupled to a low readiness score, suggesting that service provision in these districts may be limited.

Figure 110: Map of the availability\* and readiness (for hospitals) of laboratory testing facilities, by district



\* Availability is defined as the ratio of facilities providing a selected service to 100,000 population; service-specific readiness is included in the map as a written percentage; only service-specific referral facilities are mapped

The ratio of facilities offering imaging to population appears to be reasonable across the southern districts, with lower ratios in northern districts, especially Wadi Ashati, Sirt and Al Jifarah. Readiness indicators presented here are for hospitals, and the 0% readiness value for Wadi Ashati is offset by the availability of two PHC facilities in the district that do offer laboratory testing, although their readiness score is also low, at 41%. Both Sirt and Al Jifarah have a hospital with a high readiness score, which may partially offset the poor overall availability of services overall.

Readiness indices for laboratory testing services have been calculated based on the availability of tracer items in two domains: (1) functional equipment and (2) laboratory tests and materials. The overall readiness score of the PHC facilities was low at 39%, with low scores in both domains indicating that the availability of both tests/materials (33%) and equipment (45%) need to be addressed for the overall improvement of available laboratory testing. At the hospital level, the overall readiness score of 69% indicates a better potential performance than the services provided through the PHC facilities, but there is still considerable room for improvement. The availability of tests/materials is limited (66%), although the score for functional equipment (73%) indicates that the potential for service provision is reasonably good. No readiness indices were calculated for the “other” facilities, although detailed information for these facilities at municipality level is presented in Section 9.3.

*Box 25: Laboratory services - availability and readiness*

Laboratory services are available in 430 health facilities, the majority of which are PHCs (70%), followed by hospitals (18%) and other facilities such as NCDC clinics (12%). All districts have laboratory services available although Wadi Ashati, Sirt, and Al Jifarah have a lower ratio of lab facilities to population than the other districts. Readiness scores range from 39% in the PHC facilities to 69% in the hospital laboratories, with the low score in PHC facilities primarily due to a lack of medical materials such as rapid tests and urine dipsticks. There is a significant need to address general quality control measures in the hospital laboratories.

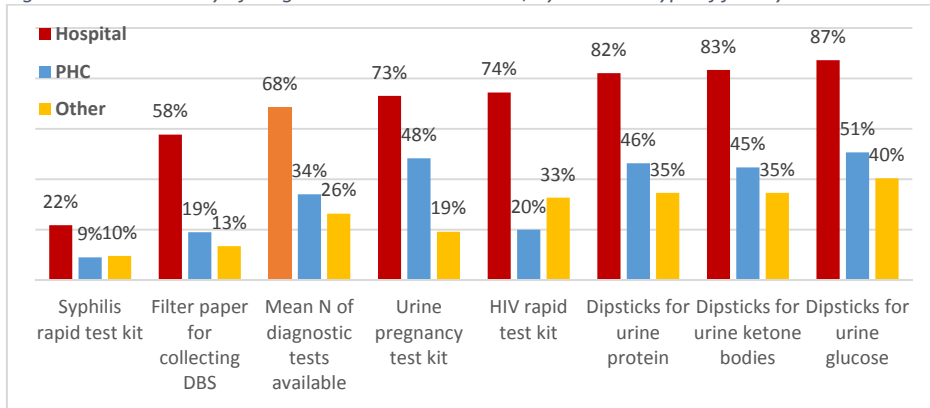
## 9.2.2 Breakdown of readiness indicators

The SARA Core survey questionnaire used for the PHC facilities did not include detailed questions on the functioning of laboratory testing services, therefore the information presented in the following section will primarily focus on the more detailed data collected for the hospitals, although data from the PHC and other facilities is included when relevant.

### 9.2.2.1 Availability of diagnostic medical materials

The availability of a selection of diagnostic medical materials varies from 68% in hospitals to 26% in other facilities, with the mean scores especially for PHC facilities and other facilities being far below acceptable levels. The most widely available diagnostic material in hospitals were urine dipsticks for glucose (87%) and ketone bodies (83%), and protein (82%). These findings are similar for PHC and other facilities, although percentages were far lower, ranging from 51% to 46% for PHC facilities, and 35% to 40% for other facilities. Syphilis rapid test kits were the least commonly available item, available only in 10% of other facilities, 9% of PHC facilities, and 22% of hospitals.

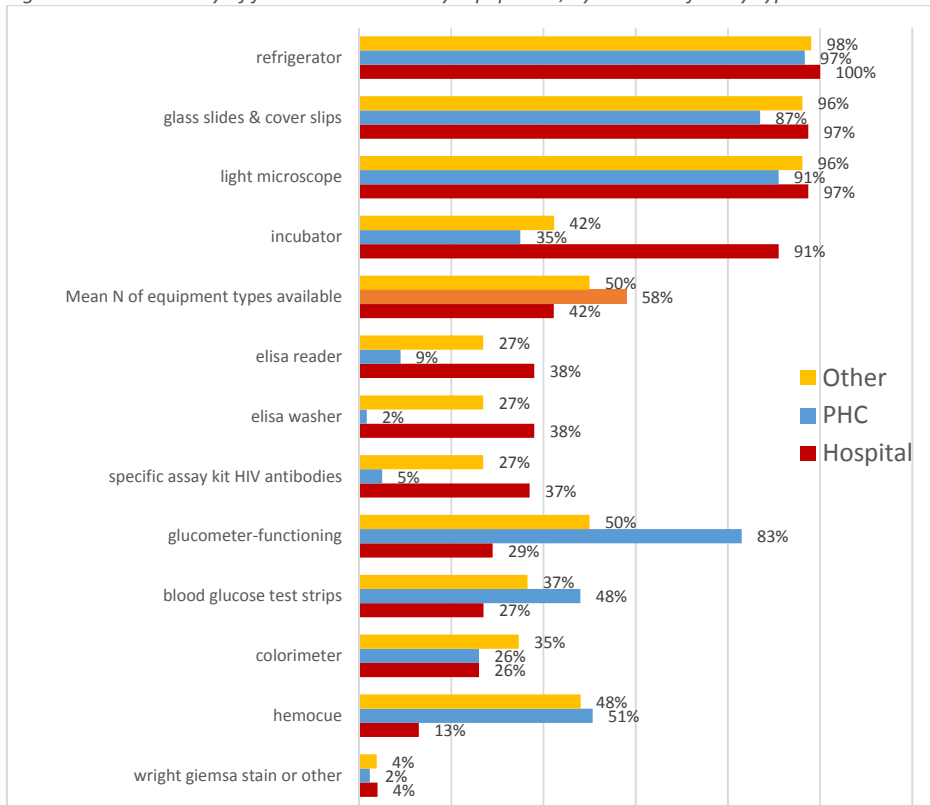
Figure 111: Availability of diagnostic medical materials, by item and type of facility



### 9.2.2.2 Availability of diagnostic equipment

The availability of a selection of functional laboratory equipment was, on average, 42% for hospitals, 58% for PHC facilities, and 50% for other facilities. The higher score for PHC facilities can be largely explained by the reasonably good availability of glucometers for the testing of blood glucose, although the availability of the required blood glucose test strips was very low, at 48% of PHC facilities, 37% of other facilities, and 27% of hospitals. The most widely available items were functional refrigerators, with near-universal availability, light microscopes, and glass slides and cover slips. Wright Giemsa stain, which is required to stain preparations for the testing for malaria, was the least widely available. This is not surprising since malaria is not endemic in Libya.

Figure 112: Availability of functional laboratory equipment, by item and facility type



### 9.2.2.3 Availability and management of laboratory services in hospitals

Table 101: Availability and management of laboratory services in hospitals

provides a summary of the staffing, services, opening hours, and maintenance and record keeping capacities of the 78 hospitals that provided data during the survey.

Table 101: Availability and management of laboratory services in hospitals

	N hospitals with data	% hospitals with availability
<b>STAFFING AND SERVICES</b>		
Accredited laboratory technicians	78	94%
Dedicated area for lab testing	78	100%
Electricity available at time of visit	78	97%
Back-up power source (generator) available	78	90%
No power for >2 hours in past week	78	19%
<b>TYPES OF PATIENTS SERVED</b>		
Outpatients only	78	15%
Inpatients only	78	6%
Both outpatients & inpatients	78	78%
<b>OTHER SERVICES PROVIDED</b>		
Satellite labs with 24-hour availability present	78	6%
Affiliated facilities send specimens for testing	78	31%
Affiliated facilities send clients for testing	78	9%
<b>OPERATING DAYS</b>		
7 days/week	78	77%
6 days/week	78	15%
5 days/week	78	6%
<5 days/week	78	1%
<b>OPERATING HOURS</b>		
24 hours	78	74%
18 hours	78	1%
12 hours	78	4%
8 hours	78	6%
6 hours	78	10%
<6 hours	78	5%
<b>MAINTENANCE IN CASE OF MALFUNCTION</b>		
Call facility biomedical engineer	78	49%
Call facility maintenance staff	78	58%
Call relevant company	78	63%
Other (i.e. call external engineer)	78	6%
<b>COSTS FOR MAINTENANCE/REPAIR/REPLACEMENT</b>		
Contracts for maintenance/repair available	78	28%
Budget line item for replacement parts	78	60%
<b>RECORD KEEPING</b>		
Functional computer available	78	46%
System for documenting specimens available	78	87%
a. Single system for all specimens	68	85%
b. System for some but not all specimens	68	15%
System present to document when test results sent/collected	78	71%

All hospitals have a dedicated area for laboratory testing, and the availability of accredited laboratory technicians is high at 94%. Coupled to a good availability of electricity and a back-up generator in most facilities, there is a good potential to provide quality laboratory services.

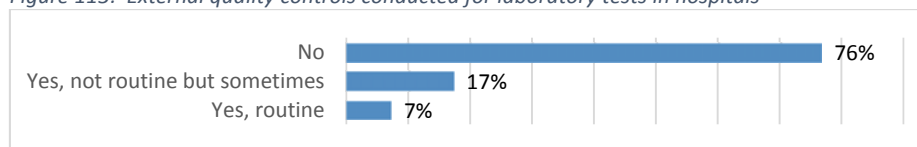
The majority of the hospitals (74%) offer laboratory services 24 hours per day (74%), seven days per week (77%), with 78% providing services to both inpatients and outpatients. Thirty-one percent of laboratories receive samples from testing from affiliated facilities, 9% receive clients, and five hospitals (6%) have satellite facilities that offer 24-hour services.

Record-keeping systems consist of a mixture of computer-based and paper-based systems, with less than half of the hospitals (46%) having a functional computer available for documentation. Systematic documentation of all laboratory specimens is done in 87% of the hospitals, with 85% of these hospital laboratories using a single system for all specimens. A system for documenting when test results are available and whether they have been sent to clients is available in 71% of the hospital labs.

#### 9.2.2.4 Quality control measures

Quality controls are routinely conducted in the laboratories of only 7% of the hospitals, while occasional quality checks are conducted in only 17% of hospital labs.

Figure 113: External quality controls conducted for laboratory tests in hospitals



#### 9.2.2.5 Guidelines and Standard Operating Procedures

Written standard operating procedures (SOPs) or guidelines for laboratory practices are available in only 24% of hospital laboratories. This includes an availability of 22% for guidelines on specific laboratory practices such as the duration of time test results should be kept, 19% availability of guidelines on infection prevention in the laboratory, but only a 10% availability of vaccination records for health workers. Infection prevention in the laboratory could benefit from additional attention, also given the relatively weak score for the standard precautions for infection prevention.

Figure 114 : Availability of guidelines and SOPs in hospital laboratories

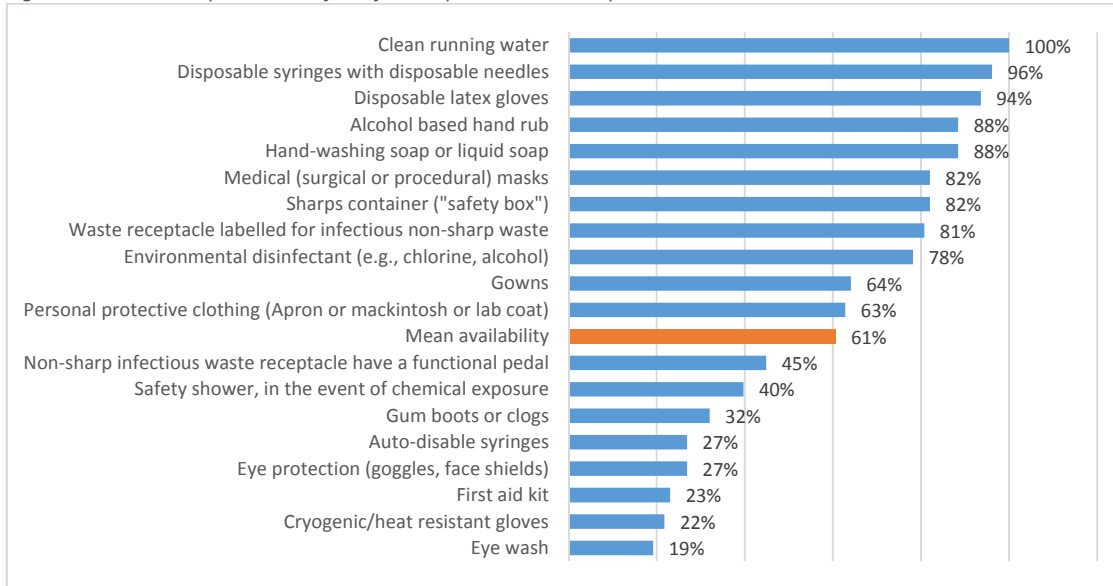


#### 9.2.2.6 Standard precautions for infection prevention in the laboratory

A mean score of 61% for the availability of items that are required for infection prevention in the laboratory indicates that there is still room for improvement in the prevention of hospital-acquired

infections. Although clean running water is available in all laboratories, and disposable needles and syringes (96%) and disposable latex gloves (94%) are available in the vast majority of locations, there is still room for improvement when it comes to the availability of eye protection (27%), first aid kits (23%), and eye wash (19%).

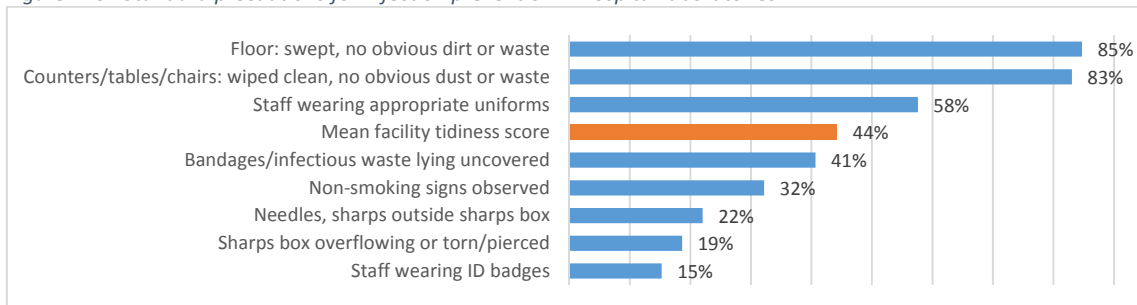
Figure 115: Standard precautions for infection prevention in hospital laboratories



#### 9.2.2.7 Facility hygiene and cleanliness

In the 59 hospital laboratories for which overall hygiene and cleanliness was assessed, the mean facility tidiness score, calculated as the mean availability of selected indicators, was a mere 44%, indicating that there is considerable room for improvement. The finding that only 15% of the staff wear ID badges may appear relatively benign, but the fact that 19% of labs had sharps boxes that were overflowing or pierced, and that in 22% of labs there were needles and sharps outside the sharps boxes, indicate the relative potential for injury and potential risk of infection. More than 83% of the laboratories did appear tidy, however, with clean floors and counters.

Figure 116 : Standard precautions for infection prevention in hospital laboratories

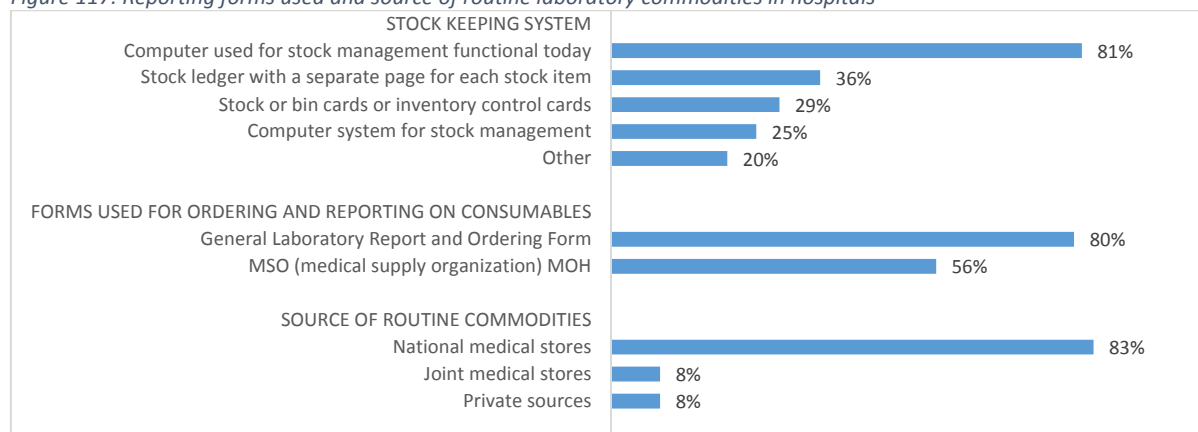


#### 9.2.2.8 Supply chain management

In terms of the management of the stocks of laboratory consumables, most hospital laboratories had a functional computer available for stock management (81%), although only 25% of laboratories reported actually having a computer system available for stock management. Stock ledgers and stock or bin cards

were not commonly available, with only 29% and 36% of hospital laboratories reporting availability. Forms for reporting and ordering of consumables were available in 80% of laboratories, with only 56% having forms available for ordering supplies and reporting on laboratory consumable commodities for the Medical Supply Organization of the MoH, even though it is the source for 83% of the laboratory commodities.

Figure 117: Reporting forms used and source of routine laboratory commodities in hospitals



### 9.3 Diagnostic imaging and laboratory testing availability, by municipality

PHC facilities in 52 municipalities report the availability of diagnostic imaging, and PHC facilities in 63 municipalities report that they offer laboratory testing. It is worth noting that although health facilities in 11 municipalities reported offering diagnostic imaging at time of survey, there was no functional equipment available, indicating that in reality only 41 out of 101 municipalities could offer any diagnostic imaging, with a mean of one type of imaging (usually X-ray) available through the PHC facilities per municipality. Similarly, seven of 63 municipalities that report offering laboratory testing do not have any of the seven basic laboratory tests available, suggesting that PHCs in only 56 municipalities actually offered basic laboratory services, with a mean availability of four types of tests (out of seven) per municipality.

Table 102: Availability and readiness of diagnostic imaging and laboratory testing services at PHC and other facilities, by imaging type and municipality

	PHC facilities - Imaging							Other facilities		PHC facilities - testing		Other - testing
	diagnostic imaging offered	X-ray machine	ultrasound equipment	CT scan	ECG	mammograph	N of types of imaging available	diagnostic imaging offered	X-ray machine	laboratory testing offered	Diagnostics readiness index	laboratory testing offered
Abusliem	2	2					1			2	86%	
Ain Zara	1	1					1			11	40%	
Al Aziziya								1	1	1	14%	1
Al Swani	1	1					1			2	43%	
Alasabaa	1	1					1			1	57%	
Alabyar										2	36%	
Albayda	5		4		4		2			10	43%	1
Albrayga										3	29%	
Aldawoon	1	1					1			1	14%	
Algatroun	1						0					
Alghrayfa	2	1					1			4	61%	
Aljmail	1	1			1	1	3			5	26%	
Aljufra								1	1	1	43%	1
Alkhums	4	3					1	1	1	16	38%	2
Alkufra	1	1	1		1		3			6	71%	

	PHC facilities - Imaging							Other facilities		PHC facilities - testing		Other - testing
	diagnostic imaging offered	X-ray machine	ultrasound equipment	CT scan	ECG	mammograph	N of types of imaging available	diagnostic imaging offered	X-ray machine	laboratory testing offered	Diagnostics readiness index	laboratory testing offered
Almarj	2		2		1		2	1	1	2	64%	1
Alqubba	1						0					
Alsharguiya										1	29%	
Arrajban										2	57%	
Assahel	2	2					1			2	57%	
Aujala	1	1	1		1		3			1	57%	
Azzahra	1	1					1					1
Azzawya	3	2	2		1		3	1	1	21	40%	4
Azzintan	2	1	1				2			5	43%	2
Bani Waleed	4	2	1				2	1	1	7	55%	1
Baten Aljabal	1						0			1	29%	1
Benghazi	11	7	5		7		3	1	1	19	55%	3
Bint Bayya	1		1		1		2			6	55%	
Daraj								1	1	2	43%	1
Derna	2	2					1	1	1	2	100%	2
Ejdhabia	2	1	1				2	1	1	4	43%	1
Ejkherra	1						0					
Emsaed	1	1					1			1	57%	
Espeaa										1	71%	
Garabolli										5	23%	
Gasr Akhyar	1						0			4	25%	
Gemienis	1						0			2	29%	
Ghadamis								1	1	1	57%	1
Gharb Azzawya	2	2					1			2	86%	
Ghat	1						0			2	64%	
Ghiryan	1	1					1	1	1	1	100%	1
Hai Alandalus	1	1					1	1	1	15	48%	1
Jalu	1						0	1	1			1
Janjour	1	1					1			5	34%	1
Jardas Alabeed										1	57%	
Marada										1	29%	
Misrata	4	3					1	1	1	14	56%	5
Msallata	1	1					1			8	41%	
Murzug	1	1					1	1	1	1	100%	2
Nalut	1	1					1	1	1	1	29%	1
Sabratha	1						0					
Sebha	1	1					1	1	1	6	71%	5
Shahhat	2	2					1			3	71%	
Sirt										2	43%	
Sug Aljumaa	4	4					1			11	52%	1
SugAlkhamees										1	71%	
Suloug	1						0			1	57%	
Surman	2	2	1	1			3			12	60%	2
Tajoura	4	4					1			4	100%	
Taraghin	1						0					
Tarhuna	2							1	1	9	37%	1
Tazirbu										1	71%	
Tobruk	2	2					1	1	1	3	5%	1
Tripoli	4	1	3				2			11	36%	1
Ubari										1	86%	
Umm arrazam	2	1	1				2			1	71%	
Wadi Etba										3	24%	
Yefren								1	1			1
Ziltun										2	7%	
Zliten	5	5					1	1	0	23	45%	3
Zwara	1	1					1	1	1	1	86%	2
<b>Total</b>	<b>103</b>	<b>66</b>	<b>24</b>	<b>1</b>	<b>17</b>	<b>1</b>	<b>1</b>	<b>23</b>	<b>22</b>	<b>300</b>	<b>48%</b>	<b>52</b>

The “other” facilities report offering diagnostic imaging in 23 municipalities, of which 22 have a functional X-ray machine. Laboratory testing was reported available in 31 municipalities, of which “other” facilities



in 18 municipalities reportedly offer one or more type of test, but the actual availability of at least one type of laboratory test is reported for only 17 municipalities. A mean of two basic laboratory tests are available per municipality through the “other” facilities.

The mean availability in PHC facilities of a selection of seven diagnostic tests across all municipalities is 61%, equivalent to four types of test per municipality. PHC facilities in three municipalities offer all of the 11 selected types of diagnostic testing, while the three PHCs in Tobruk that reportedly offer diagnostic testing did not report having any specific types of testing available, nor did they have any tests in store, except for one facility with urine pregnancy tests. PHC facilities in six municipalities that state they offer simple diagnostic testing do not have any diagnostic tests available, while the health facilities in 14 municipalities have all diagnostic tests available.

Functional light microscopes and glass slides and cover slips are available in PHC facilities in all but four of the 63 municipalities that report the availability of laboratory testing. All municipalities have at least some basic laboratory equipment available, with a mean availability of 58% of 12 selected pieces of laboratory equipment across municipalities, while the PHCs in only one municipality (Zliten) have all 12 pieces of equipment available between them.

Table 103: Types of laboratory testing, materials and equipment available in PHC facilities, by municipality

	N PHC facilities offering laboratory testing	Types of laboratory testing available											Diagnostic tests available							Laboratory testing equipment available														
		Syphilis rapid testing	HIV rapid testing	urine testing pregnancy	urine protein dipstick	urine glucose testing	urine ketone dipstick	DBS Viral load	blood glucose testing	hemoglobin	general microscopy	HIV antibody	Mean N of diagnostic test offered	Syphilis rapid test kit	HIV rapid test kit	urine pregnancy test kit	dipsticks urine protein	dipsticks urine glucose	dipsticks urine ketones	filter paper DBS	Mean N of diagnostic tests available	light microscope	glass slides & cover slips	refrigerator	glucometer-functioning	blood glucose test strips	colorimeter	hemocue	wright giemsa stain or	elisa washer	elisa reader	incubator	specific assay kit HIV antibodies	Mean N of equipment types available
Al Swani	2	1	1	1	1	1	1	2	2	1	82%			1	1	1	1	1	57%	1	1	2	1	1	1	1	1	1					1	67%
Abusliem	2	1	1	2	2	2	2	2	2	2	91%	1	1	2	2	2	2	1	100%	2	2	2	2	1	1				2	1			67%	
Ain Zara	11	3	5	9	9	9	1	8	1	5	82%	2	3	4	4	3			71%	11	11	11	1	5	1	1					1		67%	
Al Aziziya	1				1			1			18%								0%				1										8%	
Alabyar	2		1	2		2	2				55%		1	1	1		1		57%	2	2	2	2				1						42%	
Alasabaa	1	1	1	1	1	1	1	1	1	1	82%		1	1	1	1	1		57%	1	1	1	1	1		1	1					1	67%	
Albayda	10			9	9	6		9	3	9	64%	5	1	6	6	5	6		86%	9	9	9	9	9		8							50%	
Albrayga	3		3	3	2	3	2	1	3	3	82%								0%	3	3	3	3	1	3	3							58%	
Aldawoon	1							1			9%								0%			1	1	1								1	33%	
Alghrayfa	4		3	4	4	4	4	4	3	2	73%	2	4	3	1	2	1		86%	4	3	4	3	1	1	1	2		2	2	3		83%	
Aljmail	5		1	3	3	3	1	3	3		64%		2	2	1	1	1		71%	4	4	4	3	2	2	3							58%	
Aljufra	1			1				1	1	1	36%		1						29%		1	1	1				1				1		42%	
Alkhums	16		3	8	6	6	6	13	8	1	73%	2	8	6	5	5			71%	14	16	16	13	11	7	7				5		67%		
Alkufra	6	1	2	6	6	6	6	6	6	6	91%	1	2	5	5	5	5		100%	6	6	6	6	5	5	5	1	2	3	2		92%		
Almarj	2			2	2	2	2	1	2	2	64%		1	2	2	2			57%	2	2	2	2	1	2								50%	
Alsharguiya	1							1	1		18%								0%			1	1	1	1	1	1						42%	
Arrajban	2			2	1	2	1	2	1	1	64%		2	1	2	1			57%	2	2	2	2	1	1	1							58%	
Assahel	2	2	2	2	2	2	2	2	2	2	82%		2	2	2	2			57%	2	2	2	2	2		2	2				2		67%	
Aujala	1		1		1	1	1	1	1	1	73%	1			1	1			43%	1	1	1	1	1						1		50%		
Azzawya	21			8	13	16	13	18	16	17	64%	1	5	9	1	9	1		86%	21	21	21	2	15	2	11				6		67%		
Azzintan	5	1	5	5	4	5	5	5	5	3	82%	2	1	2	2	1			71%	5	3	5	4	3	2	3	1			4	1		83%	
Bani Waleed	7			7	4	5	4	7	7	7	64%		6	3	4	3	1		71%	6	6	7	5	5	4	4				4		67%		
Baten Aljabal	1				1	1		1	1	1	36%				1	1			29%	1	1	1	1	1								42%		
Benghazi	19	5	1	15	13	15	16	1	19	16	15	1	100%	7	2	16	1	12	11	3	100%	19	16	18	17	7	1	14		13	1	75%		
Bint Bayya	6	1	4	6	4	6	6	2	6	5	6	91%	1	6	2	3	2		86%	6	6	5	6	4	2	5				3		67%		
Daraj	2		1	1	2	2	2	2	1	1	73%	1	1		1				57%	2	2	2	2	1	1	1				1		67%		
Darnah	2	2	2	2	2	2	2	2	2	2	82%	2	2	2	2	2	2		100%	2	2	2	2	2				2	2			58%		
Ejdabia	4	1	4	2	2	2	2	1	2	2	3	91%	1	1	2	2	2	1	100%	4	3	4	3	2				1	3			58%		
Emsaed	1	1	1	1	1	1	1	1	1	1	82%		1	1	1	1	1		57%	1	1	1	1	1	1	1	1			1		67%		
Espeaa	1		1	1	1	1	1	1	1	1	64%	1	1	1					43%	1	1	1	1									33%		
Garaballi	5			1	2	2	2	3	2	4	64%		1	1	1	1			57%	5	4	4	5	5	1	1		1				67%		
Gasr Akhyar	4		2	1	2	4	4	4	3		64%								0%	4	3	4	4	1	1							50%		
Gemienis	2			1	1			1	1		36%		1		1				29%	2	2		1	1								33%		
Ghadamis	1		1	1				1	1		36%	1	1						29%	1	1	1	1		1	1						50%		

	N PHC facilities offering laboratory testing	Types of laboratory testing available											Diagnostic tests available							Laboratory testing equipment available																	
		Syphilis rapid testing	HIV rapid testing	urine testing pregnancy	urine protein dipstick	urine glucose testing	urine ketone dipstick	DBS Viral load	blood glucose testing	hemoglobin	general microscopy	HIV antibody	Mean N of diagnostic test offered	Syphilis rapid test kit	HIV rapid test kit	urine pregnancy test kit	dipsticks urine protein	dipsticks urine glucose	dipsticks urine ketones	filter paper DBS	Mean N of diagnostic tests available	light microscope	glass slides & cover slips	refrigerator	glucometer-functioning	blood glucose test strips	colorimeter	hemocue	wright giemsa stain or	elisa washer	elisa reader	incubator	specific assay kit HIV antibodies	Mean N of equipment types available			
Gharb Azzawya	2	1	2	2	2	2	2	2	2	2	1	82%	1	2	2	1	2	1	1	100%	2	2	2	2	2											58%	
Ghat	2	1	1	1	1	1	1	1	1	1	1	100%	1	1	1	1	1	1	1	100%	2	1	2	2	1											83%	
Ghiryay	1	1	1	1	1	1	1	1	1	1	1	82%	1	1	1	1	1	1	1	100%	1	1	1	1	1											58%	
Hai Alandalus	15		1	1	11	1	12		15	15	6	73%		4	5	5	6	5		71%	12	13	15	11	4	3	13									58%	
Janzour	5	1		1	2	2	2		4	3	1	73%	1			2	2	2		57%	2	3	4	3	1	2	1									75%	
Jardas Alabeed	1		1	1		1			1	1	1	55%			1	1				29%			1	1		1	1									33%	
Marada	1		1	1	1	1	1	1	1	1	1	91%			1	1	1	1	1	71%	1	1	1	1	1	1										50%	
Misrata	14		6	13	12	11	11	3	12	1	8	91%		5	11	1	9	7	6	86%	12	12	12	1	7	4	4									75%	
Msallata	8		1	5	7	6	7		8	7	4	73%			4	2	2	2		57%	7	8	8	7	2		4									58%	
Murzuq	1	1	1	1	1	1	1		1	1	1	82%	1	1	1	1	1	1	1	100%	1	1	1	1	1	1										58%	
Rigdaleen	1								1	1		18%								0%	1	1	1	1	1	1	1									58%	
Sebha	6	1	2	5	6	6	6		6	6	6	91%	1	2	3	6	6	6	1	100%	5	6	6	6	2	3	4									75%	
Shahhat	3	2	2	2	2	2	2		3	2	2	82%	2	2	2	2	2	2	2	100%	2	2	3	3	2											58%	
Sirt	2		1	1	1	1	1	1	2		1	73%		1		1	2	1		57%	2	2	2	1												42%	
Sug Aljuma	11	3	7	1	11	11	11		1	11	3	82%	3	3	5	4	4	4	3	100%	11	11	11	6	6	5	5										75%
Sug Alkhamees	1		1	1	1	1	1		1	1		64%			1	1	1	1		57%	1	1	1	1		1											42%
Suloug	1		1	1	1	1	1		1	1	1	73%				1	1	1	1	57%	1	1	1	1													33%
Surman	12		1	7	1	11	1	1	12	1	1	82%		3	6	9	1	9	2	86%	12	12	12	11	11		7										58%
Tajoura	4	4	4	4	4	4	4		4	4	4	82%	4	4	4	4	4	4	4	100%	4	4	4	4	4												58%
Tarhuna	9	1	2	3	2	5	5		7	6	3	82%		1	3	3	3	2		71%	7	7	9	6	1	1	4										67%
Tazirbu	1			1	1	1	1		1	1	1	64%			1	1	1	1		57%	1	1	1	1	1												42%
Tobruk	3											0%			1					14%	2	1	3	1	1	1	1										58%
Tripoli	11		4	7	1	1	1		1	7	7	73%		2	4	3	2	2		71%	11	8	11	8	4	6											50%
Ubari	1		1	1	1	1	1		1	1		64%		1	1	1	1	1		71%	1	1	1	1	1	1											50%
Umm Arrazam	1			1	1	1			1	1	1	55%			1	1	1			43%	1	1	1	1	1	1	1										67%
Wadi Etba	3			2		1			3			27%			2					14%	2	2	3	2	1												42%
Ziltun	2								1	1	1	18%								0%	1	1	2	2	1	1	1										67%
Zliten	23	1	1	4	15	19	15		22	21	9	91%		1	4	14	13	13	2	86%	23	19	23	17	3	2	3	1	1	2	15	2					100%
Zwara	1		1	1	1	1	1	1	1	1	1	73%		1	1	1	1	1		71%	1		1	1	1	1	1										50%
Total	300	34	96	190	204	226	206	15	271	229	178	67%	27	60	145	139	152	134	57	61%	273	261	290	249	144	78	152	7	5	27	105	15			58%		

The mean availability in other facilities of a selection of seven diagnostic tests across all municipalities is 29%, or two types of test per municipality. No “other” facilities in any municipality offer all of the 11 selected types of diagnostic testing, and in 13 municipalities none of the 11 types of testing and none of the seven tests are available. This is likely due to the fact that nearly half of the “other” facilities have laboratories that are exclusively geared towards testing for TB, and therefore do not offer any of the selected types of tests.

Functional light microscopes and glass slides and cover slips are available in all “other” facilities in all but two of the 31 municipalities that report the availability of laboratory testing through these clinics. “Other” facilities in all but one municipality have at least some basic laboratory equipment available, with a mean availability of 50% of 12 selected pieces of laboratory equipment across municipalities. The five “other” facilities in Sebha district have all pieces of laboratory equipment available between them. Jalu municipality, which reports having one “other” facility that offers laboratory services, does not offer any of the selected 11 tests nor does it have any equipment available, indicating that these services are essentially unavailable in this municipality.

Table 104: Types of laboratory testing, materials and equipment available in other facilities, by municipality

	N other facilities with laboratory	Types of laboratory testing available											Diagnostic tests available							Laboratory testing equipment available																
		Syphilis rapid testing	HIV rapid testing	urine testing	urine protein	urine glucose testing	urine ketone	DBS Viral load	blood glucose	hemoglobin	general microscopy	HIV antibody	Mean N of diagnostic test	Syphilis rapid test	HIV rapid test kit	urine pregnancy test	dipsticks urine	dipsticks urine	dipsticks urine	filter paper DBS	Mean N of diagnostic tests	light microscope	glass slides & cover	refrigerator	glucometer-	blood glucose test	colorimeter	hemocue	wright giemsa stain	elisa washer	elisa reader	incubator	specific assay kit HIV antibodies	Mean N of equipment types		
Al Aziziya	1											0%								0%															17%	
Albayda	1			1		1			1	1		36%			1		1			29%	1	1	1					1							33%	
Aljufra	1											0%								0%	1	1	1												25%	
Alkhums	2			1	1	1	1		1	1	2	64%			1	1	1	1		57%	2	2	2	1	1	1	1	1	1			2		67%		
Almarj	1											0%								0%	1	1	1												25%	
Azzahra	1		1	1		1			1	1	1	55%			1		1			29%	1	1	1	1	1	1	1	1							50%	
Azzawya	4	3	3		3	3	3	2	3	3	4	91%	1	3	1	3	3	3	2	100%	4	4	4	3	3	2	2	2	1	1	1	1	3		92%	
Azzintan	2		2	1	2	2	2		2	2	2	82%		2	1	2	2	1		71%	2	2	2	1	1	1	1	2	1						75%	
Bani Waleed	1											0%								0%	1	1	1												25%	
Baten Aljabal	1		1		1	1	1	1	1	1	1	82%		1	1	1	1	1	1	86%	1	1	1	1	1	1	1	1	1	1	1	1	1	1	92%	
Benghazi	3	2	2	1	2	2	2		2	3	2	91%	1			2	2	2		57%	3	3	3	2	1	2	3		2	2	3	2		92%		
Daraj	1											0%								0%	1	1	1												25%	
Darnah	2		1				1				1	27%		1						14%	1	1	2						1	1	1	1	1		58%	
Ejhabia	1											0%								0%	1	1	1												25%	
Ghadamis	1											0%								0%	1	1	1													25%
Ghiryan	1											0%								0%	1	1	1													25%
Hai Alandalus	1										1	9%								0%	1	1	1						1	1	1	1	1	1		67%
Jalu	1											0%								0%																0%
Janzour	1		1					1	1			27%		1						14%	1	1	1	1	1	1	1									50%
Misrata	5	1	3	2	4	4	4	1	4	4	3	100%		2	2	4	4	4	1	86%	5	5	5	4	4	3	3	1	1	2	1	2	1		92%	
Murzuq	2	1	1								1	27%	1	1						43%	2	2	2	1								1			42%	
Nalut	1											0%								0%	1	1	1													25%
Sebha	5	1	2	2	3	3	3		5	5	5	91%	1	1	1	2	2	2		86%	5	5	5	5	3	4	5	1	2	3	4	2			100%	
Sug Aljumaa	1	1	1						1			27%	1	1						29%	1	1	1					1								33%
Surman	2		2		2	2	2	1	1	2	2	82%		2		1	2	2	1	71%	2	2	2	2	1		1		2	2	1	2			83%	
Tarhuna	1											0%								0%	1	1	1													25%
Tabruk	1											0%								0%	1	1	1													25%
Tripoli	1	1	1	1	1	1	1		1	1	1	91%		1	1	1	1	1		71%	1	1	1	1		1	1	1	1	1	1	1	1	1		83%
Yefren	1											0%								0%	1	1	1													25%
Zliten	3			1	2	2	2		2	2		55%				1	1	1	1	57%	3	3	3	2	2	1	1					2				67%
Zwara	2		1	1	1	1	1		1	1	2	73%		1						14%	2	2	2	1	1	1	1		1	1	1					83%
Total	52	10	22	12	22	24	22	6	25	29	25	36%	5	17	10	18	21	18	7	29%	50	50	51	26	19	18	25	2	14	14	22	14		50%		

#### 9.4 Diagnostic imaging and laboratory testing availability through hospital facilities, by hospital

The availability of diagnostic imaging was reported by 78 hospitals, and the same number of hospitals report offering laboratory testing. All 78 hospitals report having at least one type of imaging service available, with a mean availability of 32%, indicating that on average, five out of a total of 16 types of imaging services for which data was collected were available per hospital.

Five out of the 78 hospitals that reported offering laboratory diagnostics had readiness scores of 0%, indicating that only 73 hospitals had an actual capacity to deliver these services. The mean readiness score across all hospitals for laboratory testing was 63%, with three hospitals receiving a score of 100%, and 20 hospitals receiving a score of 86%.

Table 105: Diagnostic imaging and testing available and readiness score for laboratory testing, by imaging type and hospital

Hospital name	Diagnostic Imaging offered	Electrocardiogram (ECG)	Ultrasound	X-ray	CT scan	Radiation therapy	Renal dialysis	Nuclear medicine	Endoscopy	Colonoscopy	Bronchoscopy	Cardiac catheterization	Electroencephalogram (EEG)	Contrast radiology	Digital X-ray machine	Mammogram	Magnetic resonance scan (MRI)	Mean availability of imaging services	Laboratory testing offered	Laboratory testing index scores	
Atiya Al Kaseh- Al Kuffra hospital	x	x	x	x			x								x			31%	x	71%	
Tripoli pediatric hospital	x	x	x	x	x		x		x				x	x	x				56%	x	71%
Zwara Albahree Hospital	x	x	x	x			x						x						31%	x	100%
Abi Sleem trauma hospital	x		x	x											x				19%	x	29%
Adri hospital	x			x															6%		
Al –Zawia Hospital	x	x	x	x			x								x				31%	x	71%
Al Abyar Hospital	x			x			x												13%	x	86%
Al Afia hospital - Houn	x	x	x	x	x		x								x				38%	x	71%
Al Asaabaa hospital	x	x	x	x															19%	x	0%
Al Aujilat Hospital	x	x	x	x			x							x	x				38%	x	71%
Al Bardi Hospital	x	x	x	x															19%	x	71%
Al Dawoon hospital	x		x	x															13%	x	71%
Al Jaghub hospital	x	x	x	x											x				25%	x	86%
Al Jalaa gynecology hospital - Tripoli	x		x	x											x				19%	x	57%
Al Jalaa hospital – Benghazi	x	x	x	x	x		x		x	x				x					50%	x	100%
Al Jameel Hospital	x		x	x			x		x										25%	x	43%
Al Kewefia chest diseases hospital	x		x	x	x						x								25%	x	43%
Al Khadra hospital	x	x	x	x	x								x	x	x		x		50%	x	43%
Al khums hospital	x		x	x	x		x												25%	x	0%
Al Kuriaat hospital	x		x	x															13%	x	71%
Almarj Hospital	x	x	x	x	x		x		x	x	x			x	x		x		69%	x	71%
Al Qarabouli hospital	x		x	x															13%	x	86%
Al Quba Hospital	x	x	x	x															19%	x	0%
Al Temimi Hospital	x	x	x	x															19%	x	86%
Al Wehda Hospital	x		x	x	x		x		x	x				x	x	x	x		63%	x	86%
Al Zintan hospital	x	x	x	x	x										x				31%	x	71%
Ali Omar Askar hospital-Sbeia	x	x	x	x											x				25%	x	100%
Bani waleed hospital	x	x	x	x			x								x				31%	x	86%
Be'ar Al Austa Milad hospital	x			x															6%	x	43%
Benghazi hospital for pediatrics & surgery	x	x	x	x			x		x				x						38%	x	57%
Benghazi medical center	x	x	x	x			x		x	x	x	x	x		x	x			69%	x	14%
Bergan hospital	x	x	x	x															19%	x	57%
Brak hospital	x		x	x			x		x										25%	x	0%
Burns & plastic surgery hospital - Tripoli	x	x	x	x	x										x	x	x		44%	x	71%
Chest diseases hospital, Misratah	x	x		x											x				19%	x	43%
Diabetes and endocrine hospital - Tripoli	x	x	x																13%	x	57%
Ghadames hospital	x	x	x	x			x		x	x	x				x				50%	x	86%
Gharyan hospital	x	x	x	x	x		x								x				38%	x	71%
Gmenis hospital	x	x	x	x			x								x				31%	x	86%
Jado Hospital	x	x	x	x	x										x				31%	x	57%
Jalou hospital	x	x	x	x			x								x				31%	x	71%
Jardas Al Abeed Hospital	x	x	x	x											x				25%	x	86%
Kabaw hospital	x	x	x	x															25%	x	14%
Misslata hospital	x	x	x	x	x		x								x				38%	x	71%
Mitiga hospital	x	x	x	x						x			x						31%	x	86%
Mizda hospital	x	x	x	x															19%	x	57%
Murziq hospital	x		x	x			x												19%	x	14%
Nalout hospital	x	x	x	x	x		x		x						x				44%	x	100%
National Institute for Oncology - Subrata	x	x	x	x	x				x	x					x	x	x		56%	x	57%
Omar Al Mokhtar Hospital	x	x	x																13%	x	71%
Oncology Center Misratah	x	x	x	x	x	x			x	x	x				x	x	x		69%	x	71%

Hospital name	Diagnostic Imaging offered	Electrocardiogram (ECG)	Ultrasound	X-ray	CT scan	Radiation therapy	Renal dialysis	Nuclear medicine	Endoscopy	Colonoscopy	Bronchoscopy	Cardiac catheterization	Electroencephalogram (EEG)	Contrast radiology	Digital X-ray machine	Mammogram	Magnetic resonance scan (MRI)	Mean availability of imaging services	Laboratory testing offered	Laboratory testing index scores
Ophthalmology hospital - Tripoli																			x	57%
Psychiatric Diseases Hospital - Tripoli																			x	57%
Sebha Medical Center	x	x	x	x	x		x									x		38%	x	86%
Semno Hospital	x			x														6%		
Shehat Chest Hospital	x		x	x							x							19%	x	14%
Slouq hospital	x	x	x	x			x								x			31%	x	86%
Sooq Al Khamees hospital - Al khums	x		x	x														13%	x	86%
Subrata Hospital	x	x	x	x	x		x		x					x	x			50%	x	57%
Surmann Hospital	x	x	x				x											19%	x	57%
Sussa Hospital	x		x	x														13%	x	0%
Tajurra hospital	x	x	x	x			x								x			31%	x	57%
Tarhuna hospital	x	x	x	x			x		x	x								38%	x	86%
Tazarbu hospital	x	x	x															13%	x	71%
Tegi hospital	x	x	x	x			x								x			31%	x	43%
Traghen hospital	x	x	x	x			x		x									31%	x	71%
Tripoli central hospital	x	x	x	x			x		x	x	x		x		x			56%	x	29%
Tripoli medical center	x	x	x	x	x	x	x	x	x	x		x	x	x	x	x	x	88%	x	86%
Tubruq Medical Center	x	x	x	x	x		x		x	x	x	x	x	x	x	x	x	81%	x	71%
Tukaraa Hospital	x	x		x			x											19%	x	57%
Weddan hospital	x	x	x	x											x			25%	x	86%
Yaffren Hospital	x	x	x	x			x								x			31%	x	71%
Zlitan hospital	x	x	x	x	x		x		x		x			x	x			56%	x	57%
Abi Sitta chest diseases hospital	x			x					x		x		x		x			31%	x	86%
Al Hraba hospital	x	x	x	x														19%	x	57%
Al Shewarif hospital	x	x	x	x											x			25%	x	57%
Bin Jawad hospital	x	x	x	x	x		x	x	x	x	x	x		x			x	75%	x	86%
Emhamd Al Meqrif Hospital Ejdabiya	x	x	x	x			x		x	x	x		x	x	x	x		69%	x	86%
Misratah hospital	x	x	x	x	x				x	x				x	x	x		56%	x	86%
Thuarra hospital	x	x	x				x		x	x					x			44%	x	57%
<b>Total</b>	<b>78</b>	<b>59</b>	<b>71</b>	<b>73</b>	<b>23</b>	<b>5</b>	<b>40</b>	<b>2</b>	<b>24</b>	<b>16</b>	<b>13</b>	<b>4</b>	<b>11</b>	<b>16</b>	<b>42</b>	<b>9</b>	<b>7</b>	<b>32%</b>	<b>78</b>	<b>63%</b>

In terms of the availability of functional equipment and trained staff for a selection of 16 types of imaging services potentially offered by hospitals, availability is highest for X-ray and ultrasound services across all hospitals. Full details by hospital are presented in table 106, while summary data has been presented earlier in Section 9.1.2. Table 107 and Table 108 provide a complete breakdown of laboratory testing services and equipment available in the hospitals, with summary data having already been presented earlier, in Section 9.2.2.









Hospital name	Rapid testing available										Types of rapid tests available										Cancer testing					Laboratory equipment available																					
	Malaria rapid diagnostic testing	Rapid syphilis testing	HIV rapid testing	Urine rapid tests for pregnancy	Urine protein dipstick testing	Urine glucose dipstick testing	Urine ketone dipstick testing	Dry Blood Spot (DBS) collection for HIV viral load or EID	Any type of rapid anemia testing	Rapid hepatitis test for hepatitis B and C	Mean availability of testing	Malaria rapid diagnostic kit	Syphilis rapid test kit	HIV rapid test kit	Urine pregnancy test kit	Dipsticks for urine protein	Dipsticks for urine glucose	Dipsticks for urine ketone bodies	Filter paper for collecting DBS	Hemoglobin colour scale	Hepatitis rapid test for hepatitis B & C	Any reagent strips for blood chemistry analysis	Mean availability of tests	Histopathology department available	Read PAP smears onsite and provide results	All stains and supplies needed for tissue sections (H&E stain) PAP smear	Capacity to prepare and examine tissues or samples for diagnosis of cancer	functional microtome for slicing tissues section samples	Light microscope	Glass slides	Cover slips for glass slides	Centrifuge for plasma and urine separation	Test tubes	Pipettes	Incubator (37 degrees C)	Agar plates for culture	Autoclave or dry heat sterilizer	Ice box and packs for transporting specimens	Vortex mixer	Rockers/shaker	Laboratory has a functional refrigerator for storing reagents and samples	Laboratory have a freezer for storing samples	Mean availability of equipment				
Al khums hospital			X	X						20%												0%						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	93%		
Tarhuna hospital		X	X	X	X	X			X	60%		X	X	X	X	X			X	X	X	73%						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	93%	
Al Dawoon hospital		X	X	X	X	X	X		X	60%		X	X	X	X	X			X	X	X	64%						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	93%	
Mitiga hospital		X	X	X	X	X			X	80%		X	X	X	X	X						55%						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	93%	
Abi Sitta chest diseases hospital		X	X	X	X	X	X	X	X	80%		X	X	X	X	X	X	X	X	X	X	82%						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	93%	
Ophthalmology hosp- Tripoli				X	X	X	X	X	X	60%		X		X	X	X	X	X	X	X	X	73%						X	X	X	X	X	X	X	X	X	X	X					X		64%		
Tripoli central hospital	X	X	X	X	X	X			X	70%				X	X	X					X	36%	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	79%		
Burns & plastic surgery hospital		X	X	X	X	X			X	80%		X	X	X	X	X	X			X	64%	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	93%		
Tripoli pediatric hospital		X	X		X	X	X		X	60%		X	X		X	X	X	X	X	X	73%						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	100%	
Al Jalaa gynecology hospital		X	X	X	X	X			X	60%			X	X	X	X	X				45%						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	100%	
Tajurra hospital		X	X	X	X	X	X	X	X	80%		X		X	X	X				X	45%						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	86%	
Be'ar Al Austa Milad hospital			X	X	X	X			X	50%			X	X	X						36%						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	93%	
Al Khadra hospital				X	X	X	X	X		50%				X	X	X	X				36%						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	100%	
Abi Sleem trauma hospital				X	X	X	X			40%				X	X	X					27%						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	93%	
Tripoli medical center		X	X	X	X	X	X	X	X	90%		X	X	X	X	X	X	X	X	X	X	91%						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	64%	
Diabetes & endocrine hospital				X	X	X	X	X		50%			X	X	X	X	X	X	X	X	64%						X	X	X	X	X	X	X	X	X	X	X					X		64%			
Psychiatric Dis Hosp-Tripoli			X	X	X	X	X	X	X	70%			X	X	X	X					36%						X	X	X	X	X	X	X	X	X	X			X		X	X	X	X	71%		
Weddan hospital		X	X	X	X	X	X	X	X	80%		X	X	X	X	X	X	X	X	X	73%						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	64%	
Al Afia hospital - Houn			X	X	X	X			X	60%		X	X	X	X	X	X	X	X	X	64%						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	100%
Al-Zawia Hospital	X	X	X	X	X	X	X		X	90%		X	X	X	X	X	X			X	73%						X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	79%	
Surmann Hospital		X	X	X	X	X			X	70%		X	X	X	X	X	X			X	64%						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	79%	
Al Jameel Hospital			X	X	X	X			X	40%		X	X	X	X	X			X	55%						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	93%	
Zwara Albahree Hospital		X	X	X	X	X			X	80%		X	X	X	X	X	X	X	X	X	82%						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	79%	
Al Aujilat Hospital		X	X	X	X	X			X	70%		X	X	X	X	X	X			X	73%						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	86%	
Subrata Hospital		X		X	X	X			X	60%		X		X	X	X	X	X	X	X	64%						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	79%	
Nat'l Inst for Oncology- Subrata		X		X	X	X			X	50%			X	X	X	X	X	X	X	X	45%	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	100%	
Gharyan hospital		X	X	X	X	X			X	70%		X	X	X	X	X	X	X	X	X	82%						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	64%	
Al Asaabaa hospital		X	X	X	X	X			X	60%			X	X	X				X	X	18%						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	93%	
Jado Hospital		X	X	X		X	X		X	60%		X	X	X	X	X			X	X	64%						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	64%	
Mizda hospital		X	X	X	X	X	X	X	X	80%		X	X	X	X	X	X	X	X	X	73%						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	93%
Al Kuriaat hospital		X		X	X	X	X		X	70%		X	X	X	X	X	X			X	73%						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	93%	
Al Zintan hospital		X	X	X	X	X			X	60%		X	X	X	X	X			X	64%						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	79%	
Yaffren Hospital		X	X	X		X	X		X	60%		X	X	X	X	X			X	73%						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	79%	
Al Shewarif hospital		X	X	X	X	X	X		X	50%		X	X	X	X	X	X	X	X	X	64%						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	86%	
Nalout hospital		X	X	X	X	X			X	70%		X	X	X	X	X	X	X	X	X	91%						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	100%
Al Hraba hospital				X						10%		X	X	X	X	X	X			X	73%						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	86%	
Kabaw hospital										0%											0%						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	79%	
Tegi hospital		X	X	X	X	X			X	50%		X	X		X				X	45%						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	93%	
Ghadames hospital		X	X	X	X	X			X	70%		X	X	X	X	X	X	X	X	X	73%						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	71%	
Total	2	18	51	62	69	69	67	20	47	59	59%	1	17	58	57	64	68	65	45	30	60	50	59%	10	8	8	10	10	76	76	75	76	74	67	71	60	67	55	51	50	78	41	82%				







## 10 Essential medicines

One of the most important resources available in a hospital or health facility are essential medicines and medical materials, as these are the means of achieving what patients seek from the health sector: a cure, or at the very least, symptomatic relief. WHO defines essential medicines to be those medicines that "satisfy the priority health care needs of the population", and they are the medicines to which people should always have access in sufficient amounts. Acute shortages of essential medicines is a common problem, contributing to ineffective health services delivery.

This chapter examines the available data on the essential medicines and medical materials that are available in Libya at the hospital, PHC facility and medical stores levels. The availability of essential medicines and medical materials is one of the key domains for the calculation of General, and Service-Specific Readiness indices, and relevant data have been presented in earlier chapters. Because this chapter covers a different, and broader, set of tracer items than those previously used for the calculation of service-specific readiness indices, the percentages reported here are not necessarily the same as those in earlier chapters.

In Libya, the continued instability has not allowed for a proper recovery of public sector services following the 2011 uprising and civil war. The steady decline in national revenues (reduced oil exports along with falling prices), together with the ongoing political and security situation are affecting the health system, and have resulted in severe shortages of drugs and medical supplies. In 2015, WHO reported that most of the medical warehouses in the east of the country were destroyed or located in hard-to-access, conflict-affected areas. Severe shortages existed for medicines for chronic diseases, including insulin, and critical shortages of medicines to treat TB and HIV/AIDS, blood derivatives, laboratory reagents, anesthetics and kidney dialysis supplies and anti-neoplastic medicines, as well as for obstetric supplies and maternal and child health medicines and supplies. Severe shortages of dressing materials, internal fixators for fractures, and intravenous fluids were also reported in some hospitals (36). Notwithstanding the assistance that is currently being provided by the international community, the shortages of essential medicines and medical materials in Libya continue to persist, and the earlier chapters of this report have clearly demonstrated that these shortages impact the overall readiness for health service provision in Libya.

### 10.1 General availability and readiness scores

A total of 397 (27%) of the PHC facilities and hospitals surveyed reported offering pharmacy services or having a main storage area for pharmaceutical commodities available, with 80% of services available through PHC facilities and 20% through hospitals. Additionally, 52 functional medical supply stores were available to house and distribute medical supplies to individual health facilities. Disaggregated data on the medical supply stores is presented separately in Section 10.4, using data on stocks of medicines and medical materials for the 30 stores that answered "yes" to the question asking whether they provided medicines directly to patients.

Table 109 indicates that Wadi Ashanti and Wadi Al Haya districts do not have PHC facilities available with dispensing pharmacies. Hospitals with dispensing pharmacies are present in 20 districts, with Wadi Al Haya and Ghat having no functional hospitals. Medical supply warehouses exist in all districts except Wadi Al Haya, but stocks were reported for only 15 districts. Nationally, at least one public health facility with a dispensing pharmacy was available in all districts except Wadi Al Haya.

Table 109: Mean availability of essential medicines in PHCs and hospitals by treatment category and district

	N PHC facilities with pharmacy	communicable diseases	non-communicable diseases	reproductive health/family planning	maternity medicines	child medicines	mental health	Overall medicine scores PHC facilities	N hospitals with pharmacy	maternal and neonatal	communicable diseases	cardiovascular	diabetes	General medicines	mental Health	surgical	IV Fluids	Overall medicine scores Hospitals	N Medical Stores/ warehouses	Overall medicine scores Medical Warehouses
Al Wahat/Ajdabia	11	12%	12%	2%	20%	21%	0%	11%	2	36%	45%	28%	42%	58%	10%	58%	50%	41%	4	17%
Alkufra	10	16%	23%	3%	24%	33%	0%	17%	2	7%	14%	0%	8%	34%	20%	17%	0%	13%	2	25%
Benghazi	21	25%	9%	0%	9%	17%	0%	10%	6	17%	34%	11%	22%	29%	9%	63%	96%	35%	2	
Al Betnan	1	100%	100%	33%	58%	100%	0%	65%	3	33%	38%	37%	61%	40%	9%	25%	75%	40%	1	
Al Jabal Al Akhdar	21	68%	49%	8%	33%	67%	3%	38%	4	36%	36%	36%	42%	41%	12%	42%	63%	38%	4	12%
Darnah	1	100%	100%	33%	58%	100%	0%	65%	3	33%	38%	37%	50%	34%	9%	8%	33%	30%	3	16%
Almarj	4	86%	17%	0%	49%	78%	0%	38%	4	32%	39%	19%	38%	37%	10%	29%	50%	32%	3	34%
Sirt	5	0%	0%	0%	0%	0%	0%	0%	1	29%	29%	33%	83%	29%	0%	17%	0%	27%	1	1%
Aljufra	1	43%	30%	0%	11%	22%	0%	18%	2	43%	38%	11%	33%	41%	20%	33%	50%	34%	1	28%
Misratah	22	19%	16%	3%	11%	16%	0%	11%	5	31%	29%	42%	43%	46%	15%	67%	90%	45%	4	11%
Almargeb	48	5%	1%	0%	3%	2%	0%	2%	6	48%	43%	43%	56%	49%	22%	40%	88%	48%	4	6%
Al Jifarh	9	22%	27%	11%	18%	30%	1%	18%	1	57%	91%	100%	100%	84%	100%	100%	100%	92%	1	
Tripoli	64	15%	11%	0%	7%	5%	0%	6%	14	34%	44%	39%	63%	46%	19%	52%	77%	47%	2	
Azzawya	56	16%	8%	1%	5%	11%	0%	7%	2	21%	31%	50%	42%	46%	10%	54%	50%	38%	3	11%
Zwara	22	1%	1%	0%	2%	4%	0%	1%	5	23%	26%	51%	63%	49%	20%	55%	85%	47%	5	3%
Al Jabal Al Gharbi	12	43%	45%	14%	26%	48%	0%	29%	8	43%	29%	39%	54%	39%	1%	41%	75%	40%	3	10%
Nalut	1	0%	4%	0%	0%	0%	100%	17%	5	49%	48%	47%	43%	45%	15%	45%	95%	48%	4	3%
Wadi Ashati	0								3	33%	32%	11%	17%	19%	4%	0%	92%	26%	1	
Sebha	3	14%	13%	0%	16%	7%	0%	8%	1	0%	0%	0%	0%	0%	0%	0%	0%	0%	1	11%
Wadi Al Haya	0								0										0	
Murzuq	2	0%	0%	0%	0%	0%	0%	0%	2	43%	38%	11%	50%	39%	17%	42%	100%	42%	2	
Ghat	4	0%	39%	0%	16%	11%	0%	11%	0										1	12%
Total	318	19%	14%	2%	11%	16%	1%	10%	79	34%	37%	34%	48%	41%	14%	43%	73%	41%	52	13%

The readiness indicator for essential medicines was calculated based on the availability of groups of tracer medicines for specific treatment categories, with different categories used for hospitals, PHC facilities, and medical stores, depending on the availability of data and the data collection tool used. The categories, and the number of medicines per treatment category, are summarized in Table 110. For PHC facilities, eight treatment categories are available, accounting for 111 medicines. For hospitals, 122 medicines are included in the nine treatment categories, and 80 medicines are included in the six treatment categories used for calculating the essential medicines index for the warehouses. No TB nor HIV medicines were reportedly available in any facility; therefore these medicines were not included.

Essential medicines availability index scores are highest for hospitals (41%), followed by warehouses (13%) and lowest for PHC facilities at 10%. Overall scores indicate a severe shortage of medicines.

Table 110: Number of medicines per treatment category for calculation of the availability indices, by facility type

PHC treatment category	N of medicines	Hospital treatment category	N of medicines	Warehouse treatment category	N of medicines
1. Maternity	19	1. Maternal/neonatal	7	1. Maternity	19
2. Communicable diseases/ anti-infectives	7	2. Communicable diseases/ anti-infectives	21	2. Communicable diseases/ anti-infectives	7
3. NCDs	23	3. Cardiovascular	9	3. NCDs	23
4. Child health	9	4. Diabetes	6	4. Child health	9
5. Reproductive health/family planning	9	5. General	45	5. Reproductive health/family planning	9
6. Mental health	14	6. Mental health	15		
7. Other drugs	21	7. Surgical	12	6. Surgical	13
8. Palliative care	9	8. IV fluids	4		
		9. Respiratory	3		

Medicine availability scores presented here are lower than the scores that were reported as part of the General Service Availability scores in Chapter 3 of this report. This is because, for the General Service Availability indices, a considerably smaller subset of basic medicines was used for the calculation of the scores. The Basic Medicine availability score for hospitals (20 medicines) was 44%, while the General Medicine availability score of 41% for the hospital indicates the availability of a set of 122 medicines. For PHC facilities, the Basic Medicine availability was 16% (20 medicines), while the PHC General Medicine availability score (111 medicines) is 10%.

Figure 118: Map of availability of medicines in hospitals, and location of medical warehouses

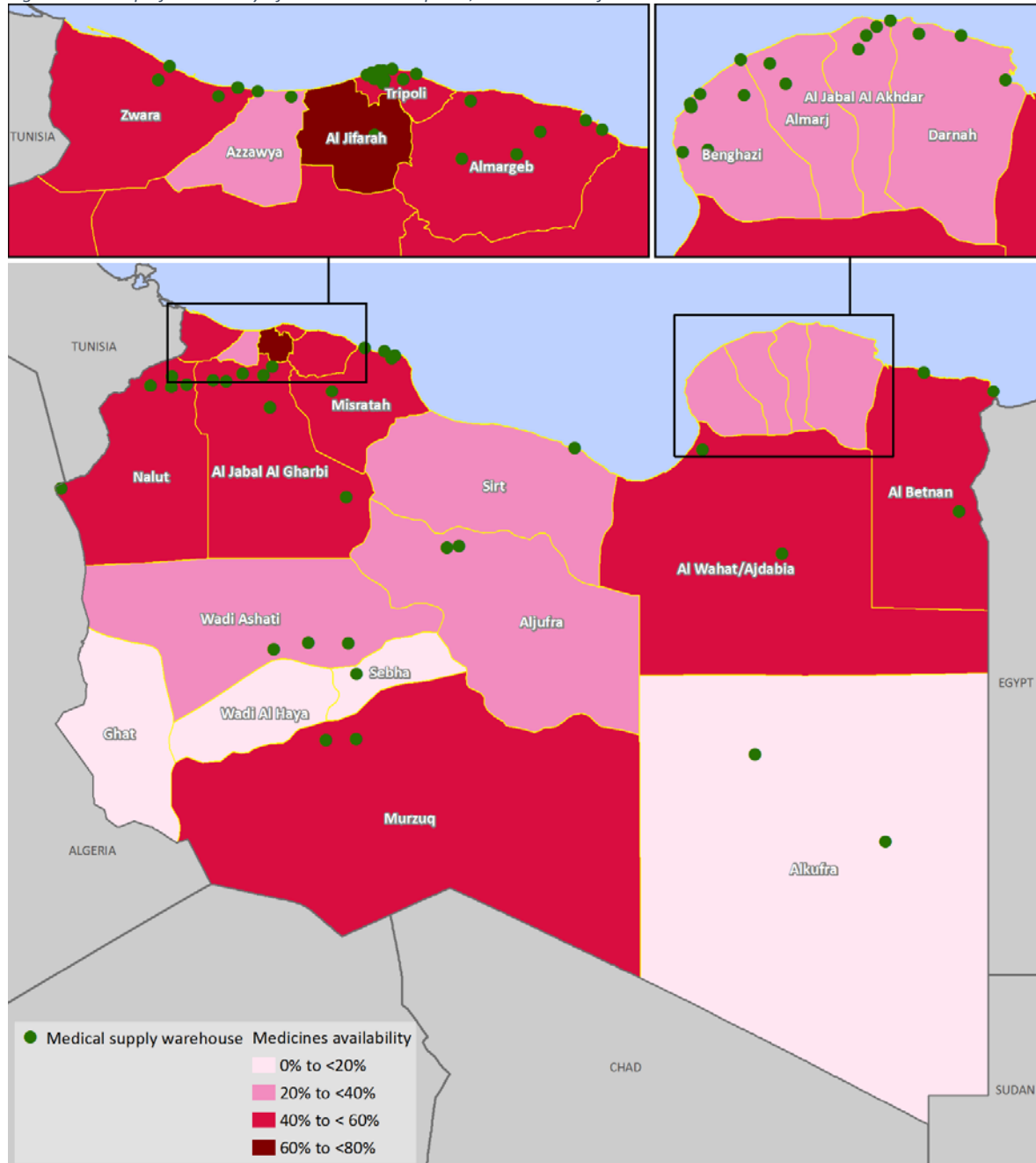
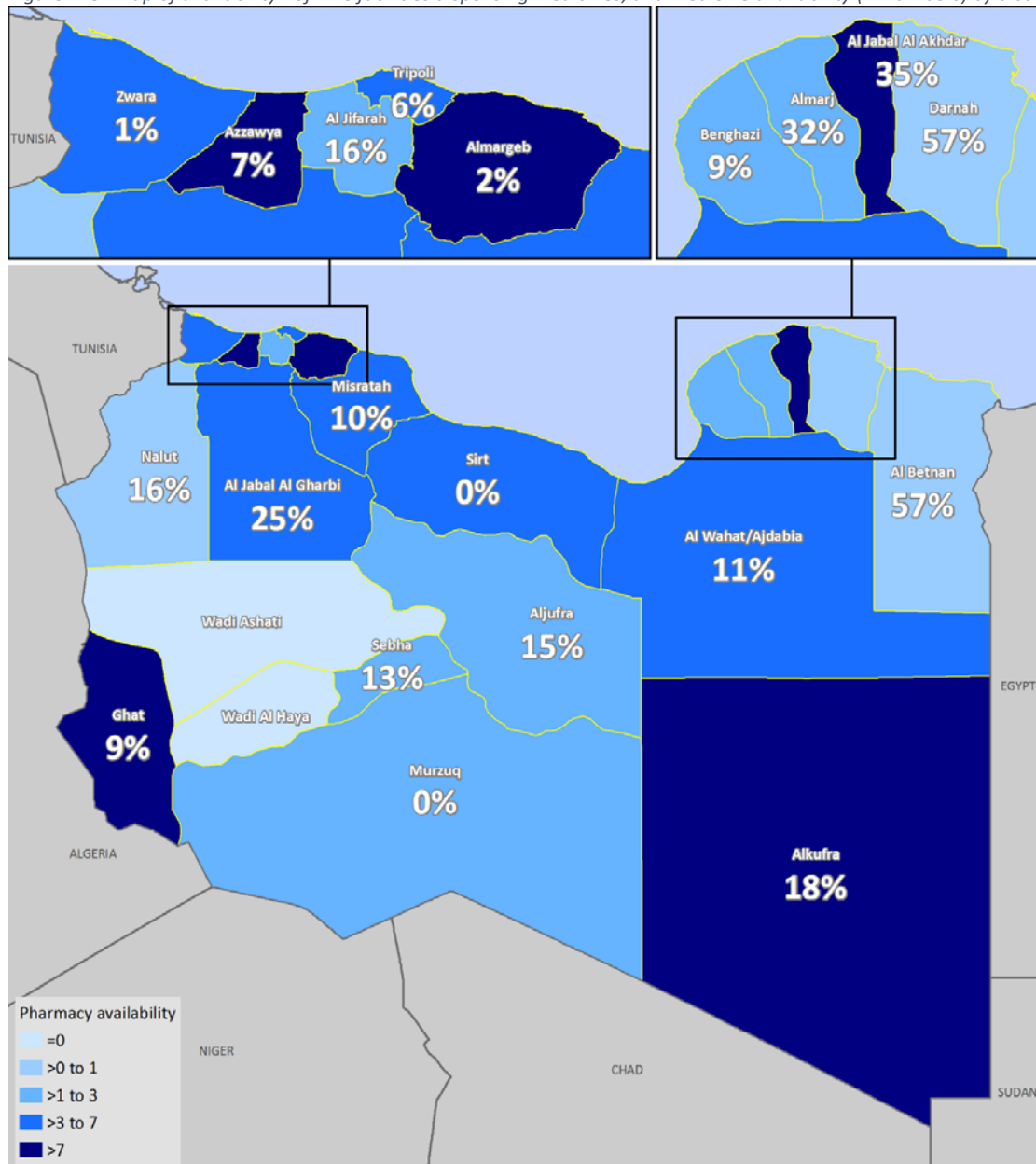




Figure 119: Map of availability\* of PHC facilities dispensing medicines, and medicine availability (in numbers) by district



\* Availability is defined as the ratio of PHC facilities providing pharmacy services per 100,000 population; overall availability of a group of 111 medicines at district level is included in the map as a written percentage

The next three sections provide an overview of available data on general supply chain management and the availability of medicines by municipality for PHC facilities, for the individual hospitals, and for the warehouses. Given that availability of individual essential medicines continuously changes, data on individual medications is not provided here. Instead, results are grouped by general treatment category, to allow for a more general insight into essential medicine needs by group of diseases. A breakdown of the medicines for each treatment category for PHC and other facilities, and for hospitals, is provided in Table 111 and 112, respectively. In the event specific detail is desired, national level availability data for individual medications is provided in the sub-chapters for each disease category.



Table 111: Medicines included in each of the treatment categories for PHC and "other" facilities

	Anti-infectives	NCDs	RH/Family planning	Maternal health	Child health	Other/Surgical	Mental Health	Palliative care
1	Co-trimoxazole cap/tab	Metformin cap/tab	Combined estrogen progesterone oral contraceptive pills	Iron tablets	Procaine penicillin injection	Normal saline IV solution	Amitriptyline tablet	Dexamethasone injection
2	Fluconazole cap/tab or suspension	Insulin regular injection	Progestin-only contraceptive pills	Folic acid tablets	ORS sachets	Ringers lactate IV solution	Carbamazepine tablet	Haloperidol injection
3	Albendazole or Mebendazole cap/tab	Glucose 50% injection	Combined estrogen progesterone injectable contraceptives	Iron and folic acid combined tablets	Zinc sulphate tablets	5% dextrose IV solution	Chlorpromazine injection	Hyoscine butylbromide injection
4	Metronidazole cap/tab	ACE inhibitor	Progestin-only injectable contraceptives	Oxytocin injection	Zinc sulphate syrup or dispersible tablets	IV treatment for fungal infections	Diazepam tablet	Lorazepam tablet
5	Amoxicillin cap/tab	Thiazide	Male condoms	Sodium chloride injectable solution	Vitamin A capsules	Skin disinfectant	Diazepam injection or diazepam rectal tubes	Metoclopramide injection
6	Ceftriaxone injection	Beta blocker	Female condoms	Calcium gluconate injection	Antibiotic eye ointment for newborns	Gowns	Fluoxetine tablet	Morphine granules, tablet
7	Ciprofloxacin cap/tab	Calcium channel blocker	Implant	Magnesium sulphate injectable	Co-trimoxazole syrup/suspension	Eye protection (goggles, face shields)	Fluphenazine injection	Morphine injection
8		Aspirin cap/tab	Emergency contraceptive pill	Ampicillin powder for injection	Paracetamol syrup/suspension	Medical (surgical or procedural) masks	Haloperidol tablet	Senna preparation (laxative)
9		Beclometasone inhaler	Intrauterine contraceptive device	Gentamicin injection	Amoxicillin 50mg or 500mg dispersible tab or syrup/suspension	Absorbable suture material	Lithium tablet	Loperamide tab/cap
10		Prednisolone cap/tab		Hydralazine injection		Ketamine injection	Phenobarbital tablet	
11		Hydrocortisone injection		Metronidazole injection		Non-absorbable suture material	Phenytoin tablet	
12		Epinephrine injection		Misoprostol 100µg tablets		Lidocaine 1% or 2%	Valproate sodium tablet	
13		Furosemide cap/tab		Azithromycin cap/tab or oral liquid		Diazepam injection	Lorazepam injection	
14		Glibenclamide 5mg cap/tab		Cefixime cap/tab		Thiopental powder	Levodopa + carbidopa tablet	
15		Gliclazide tablet or glipizide tablet		Benzathine benzylpenicillin powder for injection		Suxamethonium bromide (powder)		
16		Glyceryl trinitrate sublingual tablet		Betamethasone injection		Atropine injection		
17		Ibuprofen tablet		Dexamethasone injection		Halothane inhalation		
18		Isosorbide dinitrate tablet		Nifedipine cap/tab		Bupivacaine injection		
19		Omeprazole mg cap/tab		Methyldopa tablet		Lidocaine 5% heavy spinal solution		
20		Paracetamol tablet				Epinephrine injection		
21		Salbutamol inhaler				Ephedrine injection		
22		Simvastatin cap/tab						
23		Spironolactone tablets						

Table 112: Medicines included in each of the treatment categories for hospitals

RESPIRATORY	CARDIO-VASCULAR	DIABETES	OTHER/GENERAL FOR SYMPTOMS AND NON-COMMUNICABLE DISEASES	MENTAL HEALTH/ NEUROLOGICAL	ANTI-INFECTIVE	MATERNAL/NEONATAL	IV FLUIDS	SURGICAL MEDICINES
Beclomethasone inhaler	Calcium channel blocker (e.g., Amlodipine tablet)	Gliclazide tablet or other sulfonylurea (e.g., glipizide)	Acetylsalicylic acid (Aspirin) Adrenaline/epinephrine injection Atropine injection	Amitriptyline tablet Carbamazepine tablet	Albendazole OR mebendazole tablet	Tetanus toxoid vaccine	.09% Sodium chloride (normal saline) (.09NS)	Atracurium (besilate) injection
Salbutamol inhaler	Beta blocker (e.g., Bisoprolol, metoprolol, carvedilol tablet)	Glibenclamide tablet	Betamethasone injection Calcium gluconate injection Calcium chloride injection	Chlorpromazine injection Fluoxetine tablet	Procaine benzylpenicillin injection Ampicillin powder for injection	Antibiotic eye cream for newborn (tetracycline)	Dextrose 5% and normal saline (D5NS)	Bupivacaine injection
Salbutamol nebulizer solution	ACE inhibitor (e.g., Enalapril tablet)	Insulin injection-regular	Diazepam suppository Diazepam cap/tab Diazepam injection	Fluphenazine injection Haloperidol injection Haloperidol tablet	Amoxicillin suspension/or dispersible tablet (child dose) Amoxicillin tablet/capsule	Caffeine citrate injection	Sodium lactate (Ringers) (RL)	Ephedrine injection
	Digoxin injection	Insulin injection- other than regular	Dexamethasone injection Dopamine injection	Levodopa+carbidopa tablet	Fluconazole or Flucytosine tablet	Magnesium sulphate injection	Dextrose 5% and water (D5W)	Halothane (liquid inhalant)
	Glyceryl trinitrate sublingual tablet	Metformin tablet	Ferrous Sulfate (iron) tablets Folic acid tablets Combined ferrous and folic tablets	Lithium tablet Lorazepam tablet Lorazepam injection	Cotrimoxazole syrup or dispersible tablets	Misoprostol tablet 200mcg		Isoflurane or desflurane or sevoflurane (liquid inhalant)
	Thiazide diuretic (e.g., hydrochlorothiazide or Bendrofluzide tablet)	Glucose 50% injection	Furosemide tablet Furosemide injection Heparin sodium injection	Phenobarbital tablet Phenobarbital injection	Benzathine benzylpenicillin powder for injection	Nifedipine 10mg immediate release		Ketamine injection
	Isosorbide dinitrate tablet		Hydralazine tablet Hydralazine injection	Phenytoin tablet Valproate sodium tablet	Amphotericin injection	Oxytocin injection		Lidocaine 2% injection
	Statin (e.g., simvastatin tablet)		Hydrocortisone injection Hyoscine (butylbromide) injection		Fluconazole or flucytosine injection			Lidocaine 5% heavy spinal injection
	Warfarin tablet		Ibuprofen tablet Levodopa/carbidopa preparation		Azithromycin tablet or suspension			Suxamethonium bromide or chloride injection
			Loperamide tablet		Cefixime cap/tab			Nitrous oxide (gas)
			Methyldopa tablet		Ceftriaxone injection			Midazolam injection
			Metoclopramide injection		Ciprofloxacin cap/tab			
			Morphine injection		Clindamycin injection			
			Morphine tablet or morphine solution		Intravenous drug to treat fungal infections			
			Naloxone injection		Cotrimoxazole cap/tab			
			Oral Rehydration Salts		Gentamycin injection			
			Paracetamol tablet		Metronidazole cap/tab			
			Paracetamol syrup/suspension		Metronidazole injection			
			Potassium chloride injection		Vancomycin injection			
			Prednisolone tablet					
			Protamine (sulphate) injection					
			Proton pump inhibitor (e.g., Omeprazole or Rabeprazole tablet)					
			Ranitidine injection					
			Senna preparation (or other laxative)					
			Spiralactone tablets					
			Streptokinase injection					
			Trihexyphenidyl or biperiden tablet					
			Vitamin A capsules					
			Vitamin K injection					
			Zinc sulphate tablet					
			Zinc sulphate syrup					

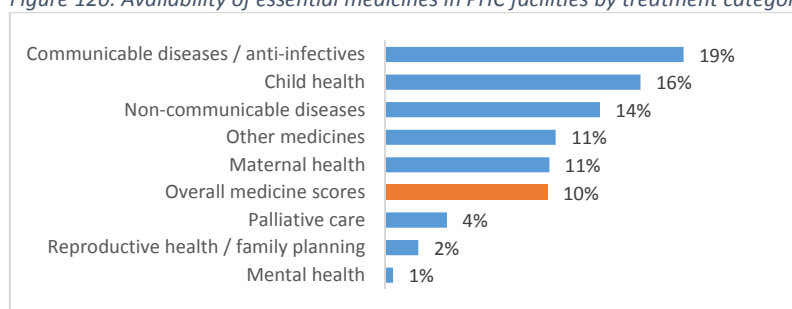
## 10.2 Medicines and medical materials in PHC facilities, by municipality

This section of the report focuses on the availability of medicines, and on the supply chain management data that is available for the PHC facilities. The core questionnaire used to collect data on the supply chain for PHC facilities was not very comprehensive, and the availability of data at this level is therefore more limited than that for the hospitals.

### 10.2.1 Availability of essential medicines and medical materials

In the PHC facilities, the availability of essential medicines was a very low 10%. Anti-infective medicines used to treat communicable diseases (19%) were most commonly available, followed by child health medicines (16%) and NCD medicines (14%). Only 1% of PHC facilities had any medicines available for the treatment of mental health issues.

Figure 120: Availability of essential medicines in PHC facilities by treatment category



The 318 PHC facilities that reported presence of in-house pharmacies for the provision of essential medicines are in only 50 municipalities, suggesting that the remaining 51 municipalities are devoid of public pharmacy services. Of these 50 municipalities, eight report having no stocks available at all, while another eight municipalities have general medicine availability scores below 5%. Six municipalities received the highest score of 57% for the general availability of medicines.

Table 113: Availability of essential drugs, by treatment category and municipality

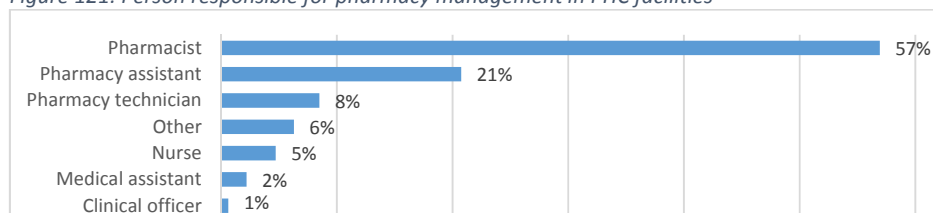
	N facilities	INFECTIOUS DISEASE	NCD	REPROD. HEALTH / FP	MATERNAL HEALTH	CHILD HEALTH	MENTAL HEALTH	OTHER MEDS	PALLIATIVE CARE	AVERAGE ALL MEDS
Abusliem	5	26%	24%	2%	18%	20%	0%	27%	0%	15%
Ain Zara	11	13%	9%	0%	11%	7%	0%	14%	0%	7%
Al Aziziya	2	0%	0%	0%	0%	0%	0%	0%	0%	0%
Al Swani	3	67%	67%	22%	39%	67%	0%	41%	0%	38%
Alasabaa	1	100%	100%	33%	58%	100%	0%	62%	0%	57%
Albayda	13	69%	36%	0%	30%	60%	4%	29%	26%	32%
Albrayga	5	0%	0%	0%	0%	0%	0%	0%	0%	0%
Algaygab	1	100%	100%	33%	58%	100%	0%	62%	0%	57%
Aljmail	15	0%	0%	0%	0%	1%	0%	0%	1%	0%
Aljufra	1	43%	30%	0%	21%	22%	0%	0%	0%	15%
Alkhums	22	5%	1%	0%	3%	0%	0%	3%	3%	2%
Alkufra	9	17%	25%	4%	25%	35%	0%	33%	10%	19%
Arrayayna	1	100%	100%	33%	58%	100%	0%	62%	0%	57%
Assahel	7	61%	65%	19%	36%	76%	0%	39%	13%	39%
Aujala	2	21%	17%	0%	42%	22%	0%	12%	17%	16%
Azzahra	3	0%	12%	11%	16%	22%	2%	5%	7%	9%
Azzawya	26	31%	13%	2%	9%	19%	0%	10%	7%	11%
Azzintan	9	24%	26%	7%	16%	31%	0%	16%	0%	15%
Bani Waleed	2	36%	26%	0%	26%	39%	0%	21%	6%	19%
Benghazi	17	31%	12%	0%	11%	21%	0%	8%	4%	11%
Derna	1	100%	100%	33%	58%	100%	0%	62%	0%	57%
Ejdabia	2	36%	7%	0%	13%	33%	0%	0%	0%	11%

	N facilities	INFECTIOUS DISEASE	NCD	REPROD. HEALTH / FP	MATERNAL HEALTH	CHILD HEALTH	MENTAL HEALTH	OTHER MEDS	PALLIATIVE CARE	AVERAGE ALL MEDS
Ejkherra	1	0%	57%	22%	74%	67%	0%	52%	67%	42%
Emsaed	1	100%	100%	33%	58%	100%	0%	62%	0%	57%
Espeaa	1	0%	4%	0%	0%	0%	0%	10%	11%	3%
Garaballi	10	0%	0%	0%	1%	0%	0%	1%	0%	0%
Gasr Akhyar	9	10%	3%	0%	2%	2%	0%	3%	5%	3%
Gharb Azzawya	11	3%	2%	0%	1%	1%	0%	7%	1%	2%
Ghat	4	0%	39%	0%	16%	11%	0%	4%	0%	9%
Hai Alandalus	16	11%	8%	0%	3%	6%	0%	11%	0%	5%
Janzour	4	18%	10%	0%	3%	6%	0%	6%	3%	6%
Marada	1	29%	26%	0%	32%	56%	0%	38%	22%	25%
Misrata	7	14%	16%	5%	8%	21%	0%	12%	0%	9%
Msalata	1	0%	4%	0%	16%	0%	0%	19%	33%	9%
Nalut	1	0%	4%	0%	0%	0%	100%	0%	22%	16%
Nesma	1	100%	100%	33%	58%	100%	0%	62%	0%	57%
Rigdaleen	4	7%	7%	0%	8%	17%	0%	5%	3%	6%
Sabratha	8	4%	4%	0%	3%	6%	0%	7%	3%	3%
Sebha	3	19%	13%	0%	16%	7%	0%	37%	11%	13%
Sug Aljuma	16	19%	15%	0%	9%	3%	0%	9%	3%	7%
Suloug	4	0%	0%	0%	0%	0%	0%	4%	0%	0%
Surman	11	8%	3%	0%	1%	5%	0%	4%	0%	3%
Tarhuna	6	10%	0%	0%	4%	9%	0%	2%	4%	4%
Tazirbu	1	0%	17%	0%	16%	22%	0%	33%	0%	11%
Toukra	4	86%	17%	0%	49%	78%	0%	20%	6%	32%
Tripoli	12	10%	5%	0%	3%	0%	0%	7%	3%	3%
Wadi Etba	2	0%	0%	0%	0%	0%	0%	0%	0%	0%
Zamzam	5	0%	0%	0%	0%	0%	0%	0%	0%	0%
Ziltun	3	0%	0%	0%	0%	0%	0%	0%	0%	0%
Zliten	13	20%	15%	3%	9%	11%	0%	7%	3%	8%
<b>Grand Total</b>	<b>318</b>	<b>19%</b>	<b>14%</b>	<b>2%</b>	<b>11%</b>	<b>16%</b>	<b>1%</b>	<b>11%</b>	<b>4%</b>	<b>10%</b>

## 10.2.2 Administrative processes

Administrative processes at PHC facilities related to the supply and storage of essential drugs include the ordering and reporting procedures, and stock-keeping systems, and are described for the 318 facilities which have reported stocking medicines, vaccines and commodities. Figure 112 indicates that most of the PHC pharmacy management is done by trained pharmacists (57%), followed by pharmacy assistants (21%) and pharmacy technicians (8%). The remaining 14% of pharmacy services are managed by staff that have not received specific training in pharmaceutical services, although most do have a medical background.

Figure 121: Person responsible for pharmacy management in PHC facilities



### 10.2.2.1 Storage conditions

Amoxicillin was used as a tracer drug to test how medicines were stored and displayed. This medicine was stored in the order of “First Expired, First Out (FEFO)” in 94% of the 95 PHC facilities checked. Additionally, in 96% of these facilities, the identification labels of this medicine were visible. Oxytocin was the tracer medicine used to check whether medicines requiring cold storage were stored in the refrigerator. This was the case in 95% of the 22 PHC facilities having this medicine in stock.

### 10.2.2.2 Ordering and supply

In terms of medical orders, most of the PHC facilities (76%) reported that resupply quantities were determined by the facility itself, and 58% of the facilities made use of formulas/calculations to determine the quantities required. The main source of pharmaceutical supplies were the national medical stores (93%), and for most orders, the facility themselves were responsible for collecting the available pharmaceuticals (66%). The length of time between order and delivery was less than two weeks for 34% of the PHC facilities reporting, while an equal number reported having to wait for more than two months.

Table 114: Summary of ordering and supply data for pharmaceuticals in PHCs

<b>Medicine resupply quantities determined by</b>	
Facility itself	76%
Higher level facility	19%
Other	4%
<b>Medicine resupply quantities determined by</b>	
Formula/calculation	58%
Other	18%
Don't know	24%
<b>Main source of pharmaceutical supplies</b>	
National medical stores	93%
Joint medical stores	0.3%
NGOs/donors	1%
Other	6%
<b>Transport of medicines</b>	
Local supplier delivers	65%
Higher facility delivers	23%
Facility collects their order	66%
Other	12%
<b>Duration between order and delivery</b>	
Less than two weeks	34%
2 weeks – 1 month	26%
1-2 months	5%
More than 2 months	34%

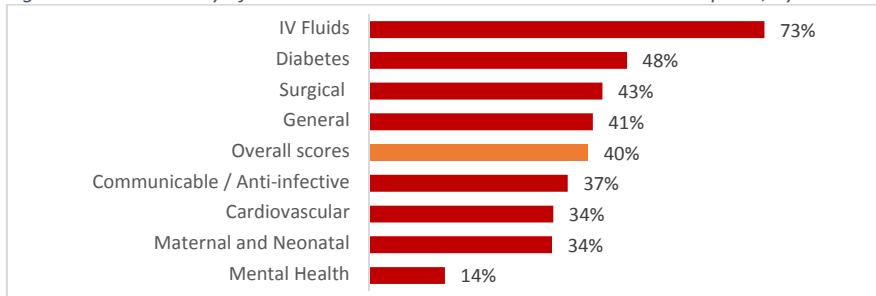
## 10.3 Medicines and medical materials in hospitals

In-house pharmacies that dispensed to in and outpatients were reported available in 79 out of 80 hospitals, with Semno hospital being the only one that did not report having pharmacy services available. Bulk storage areas for medicines and medical materials were said to be present in 55 hospitals. This section describes the general availability of medicines in the hospitals, but also looks in detail at the available data on ordering and storage conditions for pharmaceutical commodities.

### 10.3.1 Availability of essential medicines and commodities

The score for the availability of medicines across eight treatment categories was 40%. IV fluids were found to be the most widely available (73%). Medicines across the remaining treatment categories all had availability scores below 50%, with mental health medicines having the lowest overall availability, at 14%. Medicine availability in hospitals is consistently low across all treatment categories, suggesting a general failure in the supply chain for pharmaceuticals, which will need to be addressed before pharmaceutical stores return to adequate levels.

Figure 122: Availability of essential medicines and medical materials in hospitals, by treatment category



Notwithstanding the fact that a general failure of the pharmaceutical supply system leads to consistent shortages of medicines across all treatment categories, a more detailed breakdown of medicine availability may be useful, and is provided in Figure 113. This figure shows the proportion of all hospitals (in the columns) that have available a specific proportion of drugs (represented by the colours) for each treatment category. The number of drugs in each treatment category is indicated in brackets after each label. The figure reinforces the findings that IV fluids are the most widely available, with 67% of hospitals reporting availability of 75% of the four types of IV fluids, followed by surgical supplies at a very low 27%. However, surgical supplies are also in very short supply in 38% of hospitals, which suggests that there are not only shortages, but also an inequitable distribution across hospitals. The least widely available medications are those for mental health, where 76% of hospitals report an overall availability below 25% among the 15 medications in this category, and only one hospital, Ali Omar Askar hospital in Sbeia, has a good supply of these medicines. Even the specialist Psychiatric Diseases Hospital has an availability of only 33% for mental health medicines, which is worrying.

Figure 123: Medicines available in hospitals per treatment category

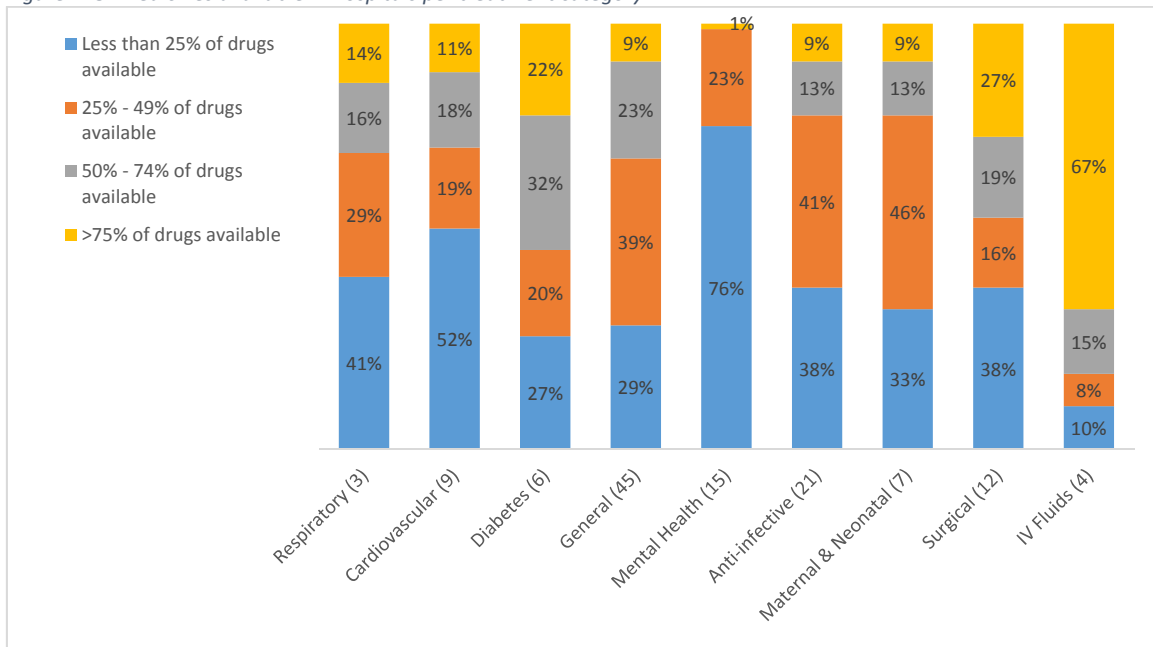


Table 115 indicates that 53% of hospitals have general availability scores falling between 25% and 49%, while 23% have scores below 25%, and only 8% of hospitals have scores of 75% or higher. Ali Omar Askar hospital in Sbeia has the highest availability of medicines, at 92%, although Thuarra hospital, Al Khums

hospital and Sooq Al Khamees hospitals are not far behind, at 91%. Sehat chest hospital, with a score of 8%, has the lowest availability of medicines, with scores of 0% even in those treatment categories that are relevant to its specialization, such as cardiovascular medicines.

Table 115: Availability of medicines, by disease category and hospital

	Respiratory	Cardio-vascular	Diabetes	Other/general	Mental health/neurologic	Anti-infective	Maternal/neonatal	IV fluids	Overall availability
Al Bardi Hospital	33%	11%	33%	42%	0%	33%	0%	100%	32%
Tubruq Medical Center	33%	44%	67%	31%	13%	33%	29%	25%	34%
Al Jaghub hospital	67%	56%	83%	47%	13%	48%	71%	100%	61%
Al Wehda Hospital	0%	11%	33%	24%	7%	43%	14%	0%	17%
Al Quba Hospital	0%	22%	17%	16%	0%	24%	0%	0%	10%
Al Temimi Hospital	0%	78%	100%	62%	20%	48%	86%	100%	62%
Sussa Hospital	0%	22%	17%	24%	0%	19%	0%	0%	10%
Thuarra hospital	100%	100%	100%	98%	47%	81%	100%	100%	91%
Omar Al Mokhtar Hospital	0%	22%	50%	33%	0%	38%	43%	100%	36%
Sehat Chest Hospital	0%	0%	0%	9%	0%	5%	0%	50%	8%
Almarj Hospital	0%	56%	83%	53%	20%	48%	14%	50%	41%
Jardas Al Abeed Hospital	100%	0%	33%	60%	13%	52%	43%	100%	50%
Tukaraa Hospital	0%	11%	33%	24%	7%	33%	29%	0%	17%
Al Abyar Hospital	0%	11%	0%	9%	0%	24%	43%	50%	17%
Gmenis hospital	0%	22%	17%	2%	0%	19%	0%	75%	17%
Slouq hospital	0%	22%	17%	4%	0%	14%	0%	100%	20%
Benghazi medical center	33%	22%	17%	44%	47%	48%	43%	100%	44%
Benghazi hosp peds & surgery	33%	0%	17%	29%	7%	38%	29%	100%	32%
Al Kewefia chest diseases hosp	67%	0%	17%	44%	0%	43%	0%	100%	34%
Al Jalaa hospital – Benghazi	0%	0%	50%	47%	7%	43%	29%	100%	34%
Jalou hospital	0%	44%	33%	62%	0%	52%	29%	75%	37%
Emhamd Al Meqrif Hospital	33%	11%	50%	53%	20%	38%	43%	25%	34%
Tazarbu hospital	0%	0%	0%	44%	33%	19%	0%	0%	12%
Atiya Al Kaseh- Al Kuffra hosp	0%	0%	17%	24%	7%	10%	14%	0%	9%
Bin Jawad hospital	100%	33%	83%	29%	0%	29%	29%	0%	38%
Ali Omar Askar hospital-Sbeia	100%	100%	100%	84%	100%	90%	57%	100%	92%
Murziq hospital	0%	11%	50%	38%	20%	43%	57%	100%	40%
Traghen hospital	0%	11%	50%	40%	13%	33%	29%	100%	35%
Sebha Medical Center	100%	100%	100%	100%	47%	95%	100%	50%	86%
Brak hospital	33%	0%	17%	20%	0%	67%	57%	100%	37%
Bergan hospital	0%	33%	17%	18%	7%	5%	0%	75%	19%
Adri hospital	67%	0%	17%	20%	7%	24%	43%	100%	35%
Bani waleed hospital	100%	100%	100%	98%	47%	81%	100%	100%	91%
Zlitan hospital	0%	56%	33%	56%	13%	19%	43%	75%	37%
Misratah hospital	67%	44%	33%	51%	13%	14%	14%	100%	42%
Chest diseases hosp, Misratah	0%	0%	0%	7%	0%	10%	0%	100%	15%
Oncology Center Misratah	0%	11%	50%	20%	0%	19%	0%	75%	22%
Misslata hospital	0%	56%	50%	31%	40%	24%	43%	25%	34%
Al Qarabouli hospital	0%	0%	0%	11%	0%	24%	0%	100%	17%
Sooq Al Khamees hospital	100%	100%	100%	98%	47%	81%	100%	100%	91%
Al khums hospital	100%	100%	100%	98%	47%	81%	100%	100%	91%
Tarhuna hospital	67%	0%	67%	36%	0%	33%	29%	100%	41%
Al Dawoon hospital	0%	0%	17%	20%	0%	14%	14%	100%	21%
Mitiga hospital	33%	44%	67%	47%	0%	24%	29%	100%	43%
Abi Sitta chest diseases hospital	33%	11%	83%	24%	0%	19%	0%	75%	31%
Ophthalmology hospital	67%	44%	67%	42%	0%	38%	14%	50%	40%
Tripoli central hospital	67%	67%	83%	49%	27%	38%	43%	100%	59%
Burns & plastic surgery hospital	33%	44%	50%	44%	27%	57%	14%	75%	43%
Tripoli pediatric hospital	33%	33%	50%	58%	20%	76%	43%	100%	52%
Al Jalaa gynecology hospital	33%	33%	33%	58%	20%	71%	57%	100%	51%
Tajurra hospital	0%	67%	50%	56%	7%	43%	43%	100%	46%
Be'ar Al Austa Milad hospital	0%	0%	67%	22%	0%	48%	0%	25%	20%
Al Khadra hospital	0%	0%	33%	27%	27%	29%	29%	25%	21%

	Respiratory	Cardio-vascular	Diabetes	Other/general	Mental health/neurologic	Anti-infective	Maternal/neonatal	IV fluids	Overall availability
Abi Sleem trauma hospital	67%	22%	50%	38%	33%	38%	29%	100%	47%
Tripoli medical center	33%	56%	83%	62%	27%	33%	71%	75%	55%
Diabetes & endocrine hospital	100%	100%	100%	98%	47%	81%	100%	100%	91%
Psychiatric Diseases Hospital	33%	22%	67%	22%	33%	24%	0%	50%	31%
Weddan hospital	67%	11%	33%	47%	13%	29%	29%	50%	35%
Al Afia hospital - Houn	100%	11%	33%	36%	27%	48%	57%	50%	45%
Al-Zawia Hospital	0%	56%	50%	53%	20%	43%	14%	50%	36%
Surmann Hospital	33%	44%	33%	38%	0%	19%	29%	50%	31%
Al Jameel Hospital	0%	11%	33%	27%	0%	19%	14%	50%	19%
Zwara Albahree Hospital	67%	100%	100%	56%	33%	14%	14%	100%	61%
Al Aujilat Hospital	100%	89%	83%	82%	0%	14%	29%	100%	62%
Subrata Hospital	33%	33%	83%	53%	40%	38%	29%	75%	48%
National Inst for Oncology	0%	22%	17%	29%	40%	43%	29%	100%	35%
Gharyan hospital	33%	0%	17%	33%	0%	38%	29%	100%	31%
Al Asaabaa hospital	67%	56%	67%	33%	0%	38%	43%	75%	47%
Jado Hospital	100%	0%	50%	42%	0%	43%	29%	50%	39%
Mizda hospital	33%	67%	83%	71%	0%	67%	71%	100%	62%
Al Kuriaat hospital	33%	44%	67%	56%	7%	24%	29%	100%	45%
Al Zintan hospital	33%	56%	33%	13%	0%	0%	43%	25%	25%
Yaffren Hospital	33%	22%	50%	47%	0%	24%	43%	100%	40%
Al Shewarif hospital	33%	67%	67%	18%	0%	0%	57%	50%	36%
Nalout hospital	33%	67%	67%	71%	20%	52%	86%	100%	62%
Al Hraha hospital	33%	44%	33%	49%	27%	57%	43%	100%	48%
Kabaw hospital	0%	33%	17%	36%	0%	52%	29%	100%	33%
Tegi hospital	67%	22%	33%	7%	0%	10%	29%	75%	30%
Ghadames hospital	67%	67%	67%	62%	47%	67%	57%	100%	67%
<b>Total</b>	<b>36%</b>	<b>35%</b>	<b>49%</b>	<b>43%</b>	<b>15%</b>	<b>38%</b>	<b>35%</b>	<b>74%</b>	<b>41%</b>

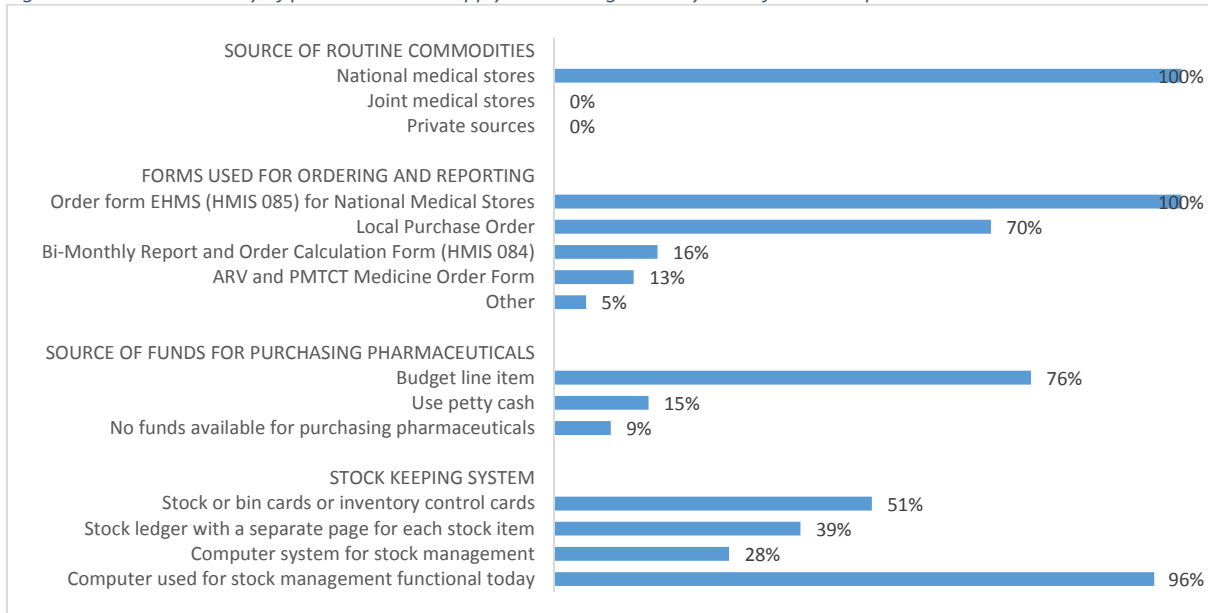
### 10.3.1.1 Administrative processes

The only source of routine pharmaceutical commodity supplies for the hospitals is reported to be the National medical stores, and all hospitals have the corresponding orders forms available. Procurement committees for consumables and services, medical equipment, and drugs and therapeutics exist in 60% of the hospitals, with local purchase order forms available in 70% of the hospitals. Additionally, 65% of the hospitals have written guidelines for the purchase of consumable commodities, 60% have written guidelines for medical equipment, and 66% have written guidelines for drugs and therapeutics, while 76% of hospitals have a budget line item available for the purchase of pharmaceuticals and medical supplies, and another 15% report the use of petty cash for the purchase of medicines. This suggests that local purchase is common across hospitals, which is not surprising given the low overall availability of essential medicines and medical supplies, and there is a general attempt at oversight to reduce the potential for corruption and mismanagement. Nonetheless, there is still considerable room for improvement in terms of strengthening processes and systems to ensure the adequate supply of medicines at the hospital level, and it would be interesting to study the hospitals that have high scores for the availability of medicines to see how they were able to achieve this.

In terms of local stock management in the pharmacies, computerized systems were available in 28% of hospitals, with most computers (96%) functional. The use of stock or bin cards is low at only 51%, and even with the addition of a 39% availability of stock ledgers, there is a strong indication that the quality of stock keeping at pharmacy level requires attention, as preferably at least two of the three systems need to be in place to allow for cross-checks and adequate record-keeping.



Figure 124: The availability of pharmaceutical supply and management systems for the hospitals



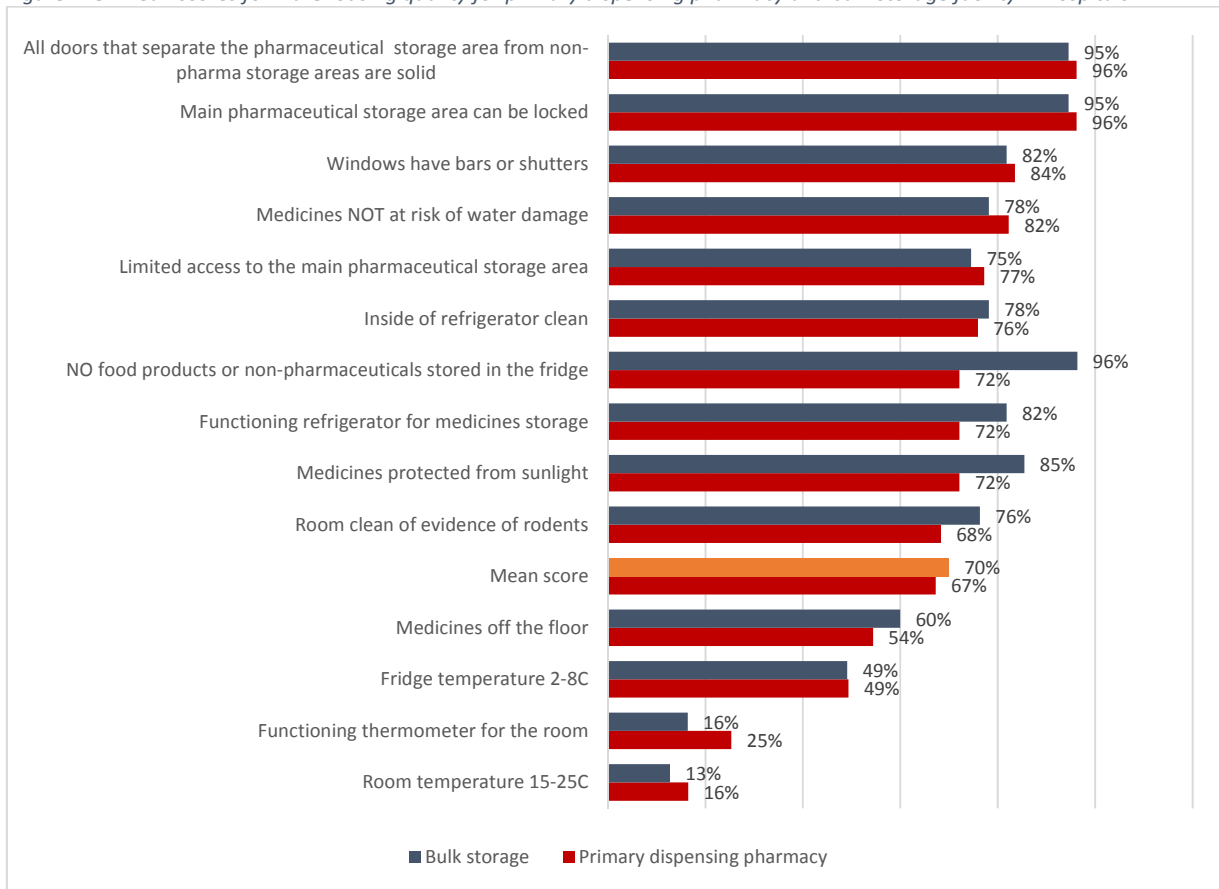
### 10.3.2 Quality of storage facilities

The quality of medicines is not only determined by the quality of the manufacturing process, but is also affected by the storage conditions. Exposure to temperatures that are too high or too low can have adverse effects on the potency of the active ingredients, with medicines such as oxytocin and insulin losing their potency if they are not refrigerated at temperatures between +2°C and +8°C. Medicines such as antibiotics will lose potency if kept in very warm conditions for extended periods, and should be stored in conditions between 15°-25°. Any temperature deviation will result in deterioration of the medicine, an effect which is more dangerous because it is often invisible and can have serious consequences in terms of poor treatment effectiveness. Additional exposures that can affect the quality and potency of medicines include direct sunlight, excessive humidity, and exposure to pests such as rodents or insects. It is imperative that medical storage conditions are optimal.

An index consisting of 14 trace indicators was used to assess overall storage conditions of the 79 primary dispensing pharmacies and 55 bulk medicine storage facilities located in the hospitals. Overall scores are 67% for the dispensing pharmacies and 70% for the bulk storage facilities. These scores are relatively high, but given the context of Libya, there is considerable potential – and need – to improve overall storage conditions, especially in terms of temperature control of the refrigerators (only 49% had temperatures within the recommended range) and storage rooms (only 16% of warehouses and 25% of dispensing pharmacies had thermometers in the room, and only 13% and 16% of storage rooms and pharmacies, respectively, had records indicating that the temperature of the room was within the recommended range). Good security conditions were the main reason for achieving relatively high overall scores.

Al Quba and Slouq hospitals can benefit from assistance with improving their medicines storage capacity, both having scores of 7% for the storage conditions in their dispensing pharmacy, and the bulk storage facility of Al Abyar hospital also requires attention, having received a score of only 8%. The dispensing areas in the three hospitals with perfect scores (Emhamd Al Meqrif Hospital, Tazarbu hospital, and Misratak hospital) could possibly serve as examples of good practices.

Figure 125: Mean scores for warehousing quality for primary dispensing pharmacy and bulk storage facility in hospitals



### 10.3.3 Organization of pharmacy and availability of guidelines

All drugs are routinely stored according to First-Expire-First Out (FEFO) procedures in 81% of the hospital pharmacies, and 72% of pharmacies have a separate storage area for rejected/expired/recalled drugs. The availability of written guidelines on the management of pharmaceutical storage conditions in hospitals is limited, with 64% of hospitals having written guidelines on the disposal of expired medicines and other pharmaceutical waste, 61% with guidelines on the cleaning up of spillage, and 47% with guidelines on pest control in the pharmacy store.

Figure 126: Availability of guidelines on management of pharmaceutical storage conditions in hospitals





	Storage facilities in dispensing pharmacy														Guidelines					Storage facilities in bulk storage														Warehousing score/13 points	Warehousing score							
	Primary pharmacy for inpatient medicines available	Medicines off the floor	Medicines NOT at risk of water damage	Medicines protected from sunlight	Room clean of evidence of rodents	Functioning thermometer for the room	Room temperature 15-25C	Functioning refrigerator for medicines storage	Fridge temperature 2-8C	Inside of refrigerator clean	NO food products or non-pharmaceuticals stored in the fridge	Main pharmaceutical storage area can be locked	Limited access to the main pharmaceutical storage area	All doors that separate the pharmaceutical storage area from non-pharmaceutical storage area have bars or shutters	Warehousing score	Warehousing score	Guideline on disposing of expired or pharmaceutical waste	Guideline on pest control in the pharmacy store	Guideline on cleaning up spillage to remove risk of contamination	Pharmacy routinely stores all drugs according to first-expire-first out (FEFO)	Separate storage area for rejected/expired/recalled drugs	Bulk store for pharmaceuticals in this facility	Medicines off the floor	Medicines NOT at risk of water damage	Medicines protected from sunlight	Room clean of evidence of rodents	Functioning thermometer for the room	Room temperature at the time of the survey 15-25C	Functioning refrigerator for medicines storage	Fridge temperature at the time of the survey 2-8C	Inside of refrigerator clean	Bulk pharmaceutical storage area(s) can be locked	Limited access to the bulk pharmaceutical storage areas			All doors that separate the pharmaceutical storage area from non-pharmaceutical storage area have bars or shutters or other means for security	Warehousing score/13 points	Warehousing score				
Al khums hospital	X		X	X	X				X	X	X	X	X	X	10	71%			X	X	X	X		X	X	X													8	62%		
Tarhuna hospital	X		X	X	X			NF	LOW			X	X	X	7	50%	X	X	X	X	X																					
Al Dawoon hospital	X		X	X	X							X	X	X	7	50%	X		X	X	X																					
Mitiga hospital	X	X	X			X	X	X	X	X	X	X	X	X	12	86%	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	12	92%		
Abi Sitta chest diseases hospital	X		X			NF			X	X	X	X	X	X	8	57%	X		X	X	X																					
Ophthalmology hospital	X		X		X			X	X	X	X	X	X	X	9	64%	X	X	X	X	X				X				X	X	X	X	X	X	X	X	X	X	9	69%		
Tripoli central hospital	X		X	X	X	X	LOW	X	X	X	X	X	X	X	12	86%			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	11	85%		
Burns & plastic surgery hospital	X	X			X							X	X	X	6	43%				X	X	X						X	HIGH										6	46%		
Tripoli pediatric hospital	X		X					X	X	X	X	X	X	X	9	64%	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	10	77%		
Al Jalaa gynecology hospital	X		X					X		X	X	X	X	X	8	57%			X	X	X		X				X													7	54%	
Tajurra hospital	X		X	X	X	X	LOW	X	X	X	X	X	X	X	11	79%	X	X	X	X	X	X	X	X	X	X	X	X	LOW	X	X	X	X	X	X	X	X	X	9	69%		
Be'ar Al Austa Milad hospital	X	X	X		X	NF						X	X	X	7	50%			X	X	X	X					X	X	X	X	X	X	X	X	X	X	X	X	10	77%		
Al Khadra hospital	X							X	X	X	X	X	X	X	7	50%	X	X	X	X	X							X	X	X	X	X	X	X	X	X	X	X	X	7	54%	
Abi Sleem trauma hospital	X	X	X		X			NF				X	X	X	7	50%	X	X	X		X	X	X					NF													7	54%
Tripoli medical center	X	X	X	X				X	X	X	X	X	X	X	11	79%	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	11	85%		
Diabetes and endocrine hosp	X		X	X	X			X		X	X	X	X	X	10	71%			X	X	X				X	X	X													8	62%	
Psychiatric Diseases Hospital	X							X	X		X		X	X	5	36%	X	X	X	X	X																					
Weddan hospital	X		X	X				X	X	X	X	X	X	X	8	57%			X	X	X				X	X	X	X	X	X	X	X	X	X	X	X	X	X	10	77%		
Al Afia hospital - Houn	X	X	X	X	X			X	LOW	X	X	X	X	X	10	71%			X	X	X	X	X	X	X	X	X	X	X	LOW	X	X	X	X	X	X	X	X	9	69%		
Al-Zawia Hospital	X	X	X	X	X			X	X	X	X	X	X	X	12	86%			X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	11	85%		
Surmann Hospital	X	X	X	X	X			X	X	X	X	X	X	X	12	86%			X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	11	85%		
Al Jameel Hospital	X	X	X		X	X		X	X	X	X	X	X	X	11	79%	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	9	69%		
Zwara Albahree Hospital	X	X	X	X		X	X	X	X	X	X	X	X	X	13	93%	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	12	92%		
Al Aujilat Hospital	X	X	X	X		NF		X	X	X	X	X	X	X	8	57%	X	X	X	X																						
Subrata Hospital	X	X	X	X	X				X	X	X	X	X	X	10	71%			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	11	85%		
Nat'l Inst for Oncology, Subrata	X	X	X	X	X			X	X	X	X	X	X	X	12	86%			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	11	85%		
Gharyan hospital	X		X	X	X			NF				X	X	X	7	50%	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	11	85%		
Al Asaabaa hospital	X	X	X		X			X	X	X		X	X	X	10	71%	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	8	62%		
Jado Hospital	X	X	X	X	X			X	X	X		X	X	X	10	71%	X	X	X	X	X				X	X	X	X	X	X	X	X	X	X	X	X	X	X	9	69%		
Mizda hospital	X	X	X	X	X	NF		X	LOW	X	X	X	X	X	10	71%	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	11	85%		
Al Kuriaat hospital	X	X		X	X	X	LOW	X	X	X	X	X	X	X	12	86%	X		X	X	X																					
Al Zintan hospital	X	X	X		X	X	LOW	X	X	X		X	X	X	10	71%			X	X																						
Yaffren Hospital	X	X	X					X	X	X	X	X	X	X	10	71%			X	X																						
Al Shewarif hospital	X	X	X	X	X			X	X	X	X	X	X	X	12	86%	X	X	X	X	X	X	X	X	X	X	X	X	LOW	X	X	X	X	X	X	X	X	X	7	54%		
Nalout hospital	X		X	X	X	X		X	X	X	X	X	X	X	12	86%	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	12	92%		
Al Hraba hospital	X	X	X	X	X	NF	X	X	X	X	X	X	X	X	11	79%			X	X	X	X	X	X	X	X	X	NF	X	X	X	X	X	X	X	X	X	X	10	77%		
Kabaw hospital	X	X		X	X			X	X	X	X	X	X	X	10	71%			X	X	X																			2	15%	
Tegi hospital	X	X	X	X	X			X	X	X	X	X	X	X	11	79%	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	7	54%		
Ghadames hospital	X		X	X	X	X		X	X	X	X	X	X	X	13	93%	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	11	85%		
<b>Total/mean score</b>	<b>79</b>	<b>43</b>	<b>65</b>	<b>57</b>	<b>54</b>	<b>20</b>	<b>13</b>	<b>57</b>	<b>39</b>	<b>60</b>	<b>57</b>	<b>76</b>	<b>61</b>	<b>76</b>	<b>66</b>	<b>9.3</b>	<b>67%</b>	<b>50</b>	<b>37</b>	<b>48</b>	<b>64</b>	<b>57</b>	<b>55</b>	<b>33</b>	<b>43</b>	<b>47</b>	<b>42</b>	<b>9</b>	<b>7</b>	<b>45</b>	<b>27</b>	<b>43</b>	<b>52</b>	<b>41</b>	<b>52</b>	<b>45</b>	<b>8.8</b>	<b>70%</b>				

## 10.4 Medicines and medical materials in medical supply stores/warehouses

There are 52 functional medical stores located across Libya, from which medicines and medical supplies are distributed to the affiliated health facilities. These stores were assessed using the SARA Core questionnaire, which collects only limited data on the availability and administrative functions related to the supply of essential medicines. Even within the limited number of questions on the questionnaire, many existing elements were not completed, leading to a further limitation in the available data.

### 10.4.1 General availability of essential medicines

The availability of essential medicines across the 30 medical stores for which data was collected was 13%, which is only slightly higher than the overall availability of medicines in the PHC facilities.

Table 117: Overall availability of a sample of 80 medicines in the medical stores, by facility and treatment category

Facility number	District	Municipality	7 communicable disease medicines	23 NCD medicines	9 Family planning medicines	19 Maternal health medicines	9 Child health medicines	13 Surgical medicines & materials	Overall availability
111001	Al Jabal Al Akhdar	Shahhat	0%	4%	0%	21%	44%	0%	12%
851001	Al Jabal Al Gharbi	Azzintan	0%	4%	0%	16%	11%	31%	10%
691001	Aljufra	Aljufra	14%	22%	0%	32%	44%	54%	28%
271001	Alkufra	Alkufra	0%	13%	0%	26%	44%	62%	24%
261001	Alkufra	Tazirbu	0%	26%	0%	32%	22%	69%	25%
601001	Almargeb	Alkhums	0%	0%	0%	0%	0%	0%	0%
591001	Almargeb	Garaboli	0%	0%	0%	0%	11%	0%	2%
581001	Almargeb	Gasr Akhyar	57%	0%	0%	0%	0%	0%	10%
611001	Almargeb	Tarhuna	43%	13%	0%	0%	11%	0%	11%
161001	Almarj	Alabyar	0%	0%	0%	0%	0%	0%	0%
151001	Almarj	Toukra	100%	100%	0%	89%	78%	46%	69%
211001	Al Wahat/Ejdabia	Aujala	14%	9%	14%	32%	33%	31%	22%
251001	Al Wahat/Ejdabia	Ejdabia	0%	0%	0%	0%	0%	0%	0%
221001	Al Wahat/Ejdabia	Ejkherra	43%	17%	0%	32%	0%	38%	22%
201001	Al Wahat/Ejdabia	Jalu	29%	26%	0%	32%	22%	38%	24%
701001	Azzawya	Azzawya	0%	4%	0%	0%	11%	46%	10%
781001	Azzawya	Sabratha	14%	39%	0%	16%	0%	31%	17%
721001	Azzawya	Surman	0%	9%	14%	0%	0%	8%	5%
51001	Darnah	Derna	14%	26%	0%	16%	22%	15%	16%
471001	Ghat	Ghat	0%	35%	0%	16%	11%	8%	12%
541001	Misratah	Bani Waleed	29%	35%	0%	11%	44%	8%	21%
561001	Misratah	Misratah	0%	13%	0%	32%	0%	31%	13%
561002	Misratah	Misratah	0%	0%	0%	0%	0%	0%	0%
551001	Misratah	Zliten	0%	4%	0%	16%	11%	38%	12%
1011001	Nalut	Daraj	0%	0%	0%	0%	11%	8%	3%
451001	Sabha	Sebha	14%	0%	0%	5%	0%	46%	11%
281001	Sirt	Khalege Alsedra	0%	0%	0%	5%	0%	0%	1%
971001	Zwara	Baten Aljabal	0%	0%	0%	0%	0%	0%	0%
751001	Zwara	Ziltun	29%	9%	0%	0%	0%	8%	7%
761001	Zwara	Zwara	0%	4%	0%	0%	0%	0%	1%
<b>Average availability</b>			<b>13%</b>	<b>14%</b>	<b>1%</b>	<b>14%</b>	<b>14%</b>	<b>21%</b>	<b>13%</b>

The medical stores in Alkhums, Alabyar, Ejdabia, Misratah, and Baten Aljabal had no medicines in stock at all, with another five stores having stocks of less than 5% of the medicines surveyed. Only the medical store in Toukra, with a score of 69%, seemed to have a reasonable stock of medicines across most treatment categories, except for family planning medicines, which had the lowest overall availability score across all stores, at 1%. Surgical medicines and materials were the most widely available, with an overall

score of 21% across all medical stores. The scores indicate an exceptionally low availability of medicines across all treatment categories at the level of the medical stores.

#### 10.4.2 Administrative processes

Medical supply warehouses employ on average 31 staff per facility, most of which have received pharmaceutical training. In 96% of the medical stores, the person responsible for the management of medical supplies has a pharmacy background.

Figure 127: Person responsible for managing medical supplies in "other" facilities, including medical stores



The main source of pharmaceutical supplies (98%) for the medical supply warehouses are the national or joint medical stores. Order quantities are generally determined by the facility itself (77%) although a significant proportion of facilities (34%) report that quantities are determined by higher level facilities, suggesting that the low availability of medicines is leading to a system that is currently more oriented to distributing the few medicines that are available. Sixty-eight percent of facilities report that their resupply quantities are based on formulas/calculations.

Transport of medicines is done partially through the delivery by local suppliers (in 81% of facilities) but in 66% of medical stores the facility itself may also be required to collect their own orders. Duration between order and delivery is highly variable between facilities, with 25% reporting that orders are processed in less than two weeks, and 36% reporting that delivery of orders takes longer than two months.

Table 118: Summary of ordering and supply data for pharmaceuticals in other facilities

<b>Medicine resupply quantities determined by</b>	
Facility itself	77%
Higher level facility	34%
Other	6%
<b>Medicine resupply quantities determined by</b>	
Formula/calculation	68%
Other	19%
Don't know	13%
<b>Main source of pharmaceutical supplies</b>	
National medical stores	92%
Joint medical stores	6%
NGOs/donors	0%
Other	2%
<b>Transport of medicines</b>	
Local supplier delivers	81%
Higher facility delivers	47%
Facility collects their order	66%
Other	19%
<b>Duration between order and delivery</b>	
Less than two weeks	25%
2 weeks – 1 month	30%
1-2 months	9%
More than 2 months	36%

## 11 Health workforce

Health workers remain one of the most important resources available in a hospital or health facility, and their employment, on average, accounts for nearly 70% of countries' total expenditure on health (37). As such, they are generally the biggest investment of a Ministry of Health. The WHO definition of "health workers" is all people engaged in actions whose primary intent is to enhance health. Therefore, the health workforce includes all staff of a health facility, from specialist doctors to the cleaning staff, as each contributes to overall health and wellbeing of the patient load tended to by a health facility. Access to core health professionals is an essential component of health service delivery. Acute shortages and an uneven geographic distribution of health workers are common problems that lead to inaccessibility or unequal access to essential health services.

The ability of a country to meet its health goals depends largely on the knowledge, skills, motivation and deployment of the people responsible for organizing and delivering health services. A health information system with a strong human resources component can help to build the evidence base in order to plan for availability and accessibility of needed health workers in the right place, at the right time and in the desired quality. Planning requires knowledge of the numbers of health workers who are active in the health sector, their distribution and characteristics. This chapter examines the available data on the health workforce available in Libya at both the hospital level and the PHC facility level. Section 11.1 is a repetition of Section 3.2.2 as these figures are also part of the calculation for General Health Services availability.

### 11.1 Health workforce density

For this survey, the health workforce was defined as only the core medical professionals: physicians, non-physician clinicians, clinical officers, registered nurses and midwives. These staff were included in the calculations for the core health workforce density indicator.

Table 119: Health workforce density per 10,000 population by facility type and district

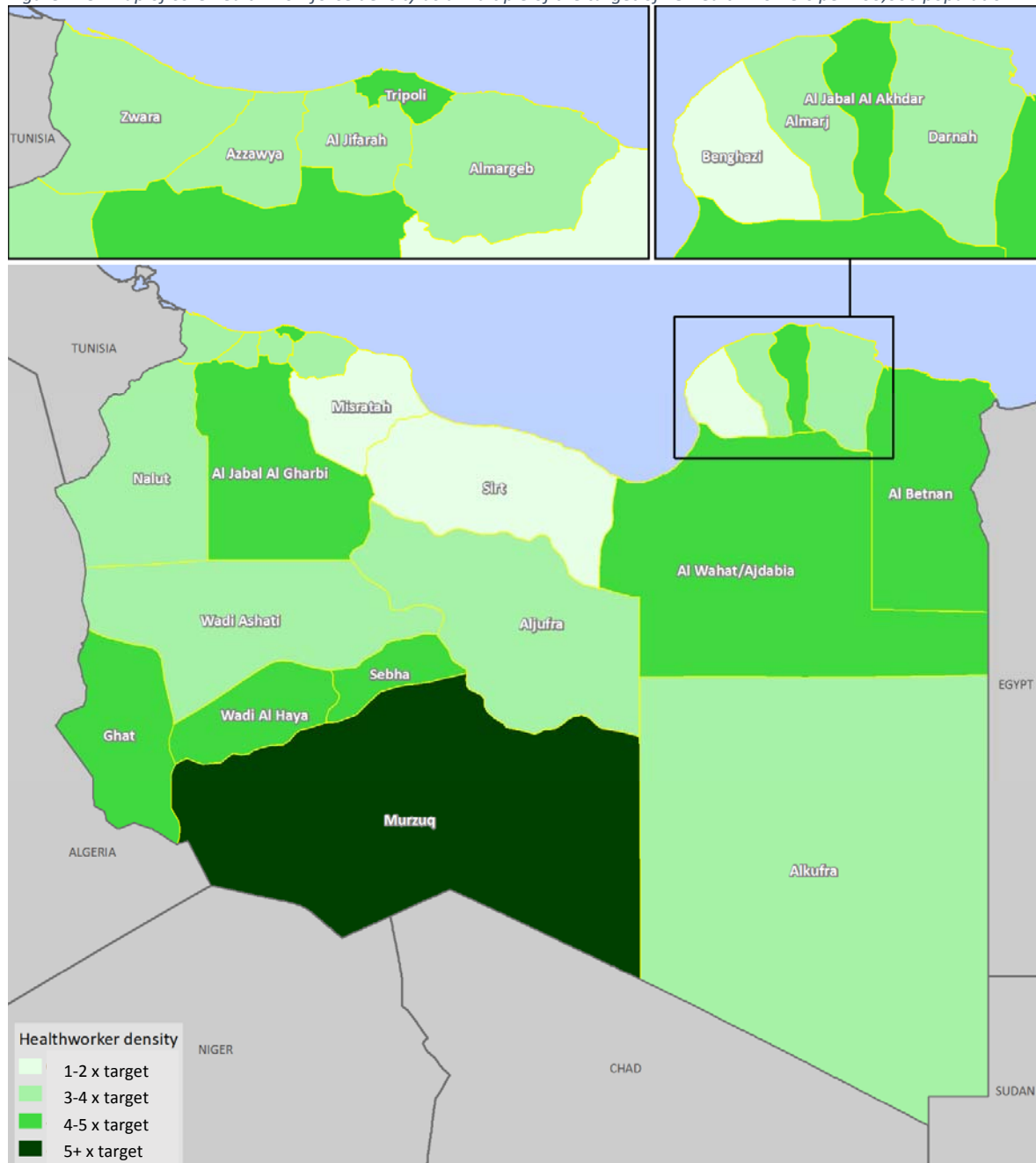
District	Hospitals		Primary Health Care		Total (Hospitals and PHCs)		Health workforce density score**
	N of core health workers*	Health worker density/ 10,000	N of core health workers*	Health worker density/ 10,000	N of core health workers*	Health worker density/ 10,000	
<i>Al Wahat/Ajdabia</i>	652	32	1,337	66	1,989	98	100%
<i>Alkufra</i>	182	34	283	53	465	86	100%
<i>Benghazi</i>	1,956	27	1,094	15	3,050	41	100%
<i>Al Betnan</i>	871	46	1,562	82	2,433	127	100%
<i>Al Jabal Al Akhdar</i>	796	33	1,430	59	2,226	92	100%
<i>Darnah</i>	657	34	1,001	51	1,658	85	100%
<i>Almarj</i>	385	17	1,100	50	1,485	67	100%
<i>Sirt</i>	117	7	287	18	404	25	100%
<i>Aljufra</i>	169	30	237	41	406	71	100%
<i>Misratah</i>	1,216	19	794	13	2,010	32	100%
<i>Almargeb</i>	790	15	2,326	46	3,116	61	100%
<i>Al Jifarah</i>	582	11	1,833	35	2,415	46	100%
<i>Tripoli</i>	6,594	56	4,826	41	11,420	97	100%
<i>Azzawya</i>	667	19	1,570	45	2,237	64	100%
<i>Zwara</i>	1,477	43	1,623	47	3,100	91	100%
<i>Al Jabal Al Gharbi</i>	992	28	2,700	77	3,692	105	100%
<i>Nalut</i>	405	39	379	36	784	75	100%
<i>Wadi Ashati</i>	272	30	377	41	649	71	100%
<i>Sebha</i>	643	41	800	51	1,443	92	100%
<i>Wadi Al Haya</i>	0	0	1,161	132	1,161	132	100%
<i>Murzuq</i>	319	35	2,881	320	3,200	356	100%
<i>Ghat</i>	0	0	274	102	274	102	100%
<b>Total</b>	<b>19,742</b>	<b>30</b>	<b>29,875</b>	<b>46</b>	<b>49,617</b>	<b>76</b>	<b>100%</b>

\* Health workers including physician, nurses and midwives

\*\*The target is 23 health workers per 10,000 population

WHO estimates that countries fewer than 23 core health workers per 10,000 population will be unlikely to achieve adequate coverage rates for key primary health care interventions. The overall core health worker density in Libya of 76 per 10,000 population is more than three times this target, and also well above the recommended 45 core health workers per 10,000 population recommended for achieving the Sustainable Development Goals, indicating that there are no shortages of core staff at the national level.

Figure 128: Map of core health workforce density as a multiple of the target of 23 health workers per 100,000 population





Analysis by district shows that every district achieved the overall health workforce density target. Sirt and Benghazi districts' relatively low score when compared to the other districts can be explained by the ongoing insecurity and associated hospital and health facility closures, and is expected to increase again with the return of a more stable situation. The SARA methodology dictates that percentages above 100% are rounded down to 100%, but it is worth noting that Al Betnan, Al Jabal Al Gharbi, Wadi Al Haya, Murzuq and Ghat all achieved health workforce densities of over 100 health workers per 10,000 population (more than four times the WHO target), with Murzuq district having a reported health workforce density that is 15 times higher than the target.

## 11.2 Hospital workforce availability and training

An average hospital in Libya employs 414 medical and para-medical staff members. Data on administrative staff was not collected. The largest proportion of hospital staff is comprised of professional nurses (32%), followed by generalist medical practitioners (20%) and lab technologists (7%). Table 120: Official and employed hospital staff numbers, by type

also indicates that 89% of the officially available positions in the functional hospitals were filled at time of survey, with the greatest bulk shortages in hospital staff consisting of nurses (68% of available positions filled) and specialists (45% of available positions filled).

Table 120: Official and employed hospital staff numbers, by type

<i>Staff type</i>	<b>Official number of positions (all 97 hospitals)</b>	<b>Official number of positions (80 functional hospitals)</b>	<b>Actually employed (80 functional hospitals)</b>
<i>Nursing professional</i>	19,086	15,660	10,663
<i>Generalist medical practitioners</i>	6,521	5,469	6,715
<i>Specialist medical practitioner</i>	5,200	4,257	1,897
<i>Medical records and health information technician</i>	4,397	3,613	264
<i>Laboratory technologist</i>	1,958	1,636	2,249
<i>Ambulance worker/emergency medical technician</i>	1,429	1,194	390
<i>Medical imaging and therapeutic equipment operator</i>	1,343	1,183	881
<i>Midwifery professional</i>	1,071	826	467
<i>Pharmacist</i>	905	765	900
<i>Physiotherapy technician and assistants</i>	878	751	625
<i>Pharmacy technician and pharmacy assistant</i>	823	659	617
<i>Laboratory technician and laboratory assistant</i>	709	614	884
<i>Dietician and nutritionist</i>	335	289	169
<i>Medical and dental prosthetic technician</i>	316	270	83
<i>Physiotherapist</i>	281	244	305
<i>Dentist</i>	230	207	182
<i>Environmental and occupational health and hygiene professional</i>	205	171	272
<i>Biomedical engineer</i>	94	82	43
<i>Audiologist and speech therapist</i>	69	63	23
<i>Optometrist and ophthalmic optician</i>	27	19	18
<i>Professional nurse midwife (dual trained)</i>	-	-	4
<i>Other health professional</i>	-	-	5,107
<i>Other health associate professional</i>	-	-	372
<b>Total</b>	<b>45,877</b>	<b>37,972</b>	<b>33,130</b>

Figure 129: Total staff allocated to and employed in hospitals, by type

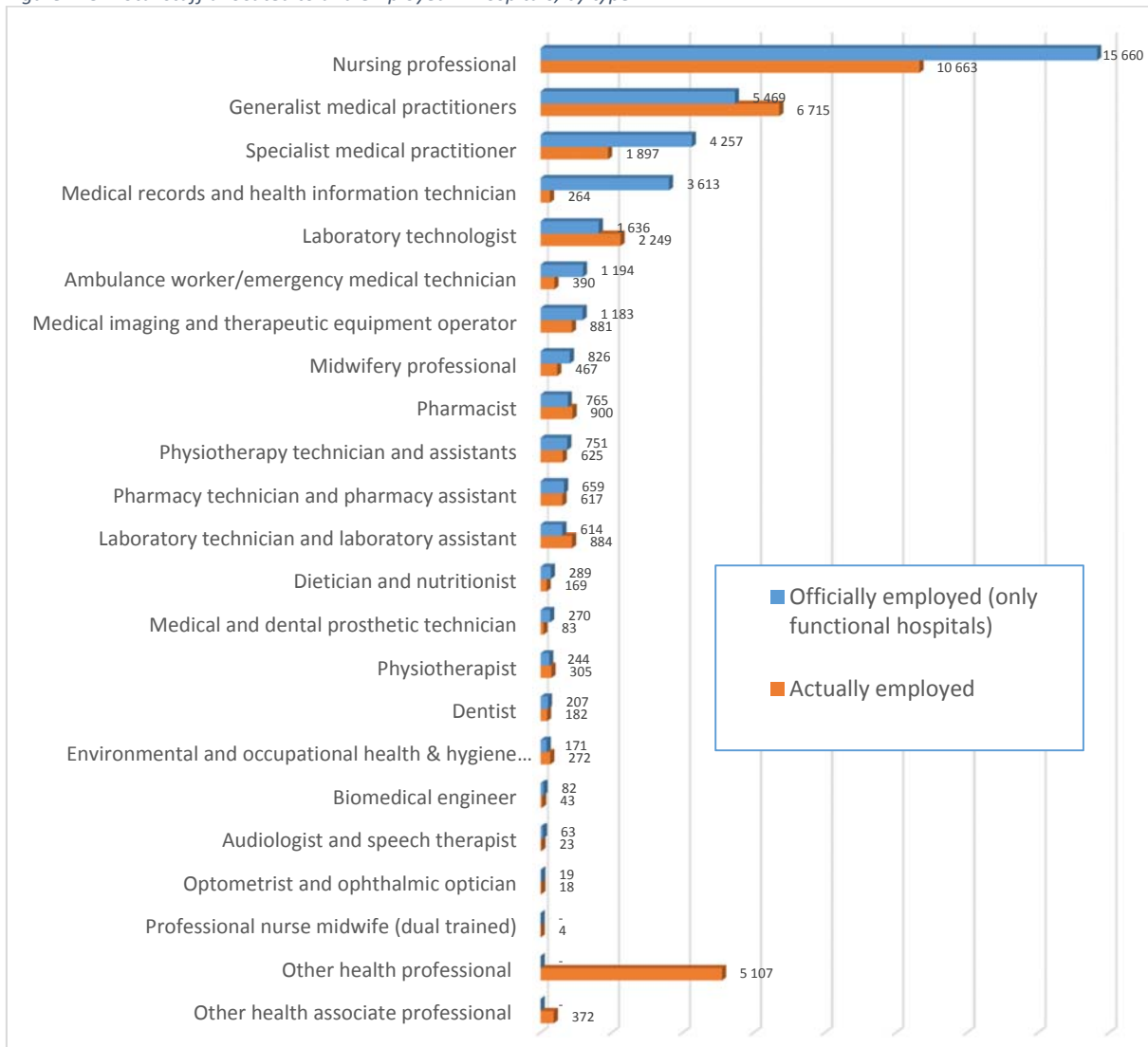


Table 121: Human resources employed by hospital and type

	Specialist medical practitioner	Generalist medical practitioners	Professional nurse midwife (dual trained) Nursing professional	Midwifery professional	Dentist	Pharmacist	Laboratory technologist	Environmental, occupational health hygiene professional Physiotherapist	Dietician and nutritionist	Audiologist and speech therapist	Optometrist and ophthalmic optician	Biomedical engineer	Other health professional	Medical imaging and therapeutic equipment operator	Lab technician and lab assistant	Pharmacy technician	Pharmacy pharmacist	Medical and dental prosthetic technician	Medical records and health information specialist	Physiotherapy technician and assistants	Ambulance worker/EMT technician	Other health associate professional	Total	
Al Bardi Hospital	4	6	-	5	1	1	1	1	-	-	-	-	15	-	-	1	-	2	2	2	-	-	42	
Tubruq Medical Center	50	160	-	600	30	1	40	50	30	30	10	5	-	-	213	15	50	10	-	10	25	15	-	1,344
Al Jaghub hospital	2	4	-	7	2	1	1	12	-	-	-	-	14	2	2	2	-	2	1	2	2	2	-	56
Al Wehda Hospital	20	300	-	185	25	6	20	30	6	2	-	-	238	10	-	10	14	6	2	20	2	2	-	896
Al Quba Hospital	15	13	-	8	-	1	15	16	-	-	-	-	25	7	-	8	-	-	-	-	3	2	-	113
Al Temimi Hospital	-	5	-	86	-	-	-	13	-	-	-	-	35	4	-	10	2	-	10	-	-	2	-	167
Sussa Hospital	9	-	-	82	-	2	4	12	-	-	-	-	96	3	-	2	-	2	-	-	5	-	-	217
Thuarra hospital	112	15	-	400	6	1	25	40	50	2	-	-	12	129	34	1	-	-	32	-	-	-	-	859
Omar Al Makhtar Hospital	6	10	-	60	6	-	5	8	20	-	-	-	2	16	6	-	-	-	8	-	3	-	-	150
Shehat Chest Hospital	2	8	-	80	-	-	8	4	-	-	-	-	19	4	-	4	-	-	-	-	4	-	-	133
Almarj Hospital	19	134	-	162	-	6	53	80	4	-	20	-	93	25	-	-	-	14	23	41	-	-	-	674
Jardas Al Abeed Hospital	1	4	-	16	-	-	-	-	1	-	2	-	9	3	7	7	-	-	-	-	-	-	-	50
Tukaraa Hospital	-	2	-	3	-	3	-	-	-	-	-	-	8	6	23	3	-	-	-	-	-	-	-	48
Al Abyar Hospital	1	2	-	41	-	-	10	16	-	-	2	-	1	20	7	-	-	-	3	4	7	-	-	114
Gmenis hospital	-	-	-	6	-	10	20	30	10	2	4	-	-	106	-	-	-	-	-	-	4	-	-	192
Slouq hospital	-	-	-	4	-	10	20	-	10	2	4	-	-	106	-	-	-	-	-	-	4	-	-	160
Benghazi medical center	164	412	-	285	57	-	43	2	81	4	43	1	2	246	36	132	29	-	-	32	-	-	-	1,569
Benghazi hospital for pediatrics & surgery	97	100	-	191	-	-	14	4	7	-	14	-	80	19	62	9	-	-	14	-	-	-	-	611
Al Kewefia chest diseases hospital	7	30	-	103	-	-	5	-	3	-	4	-	-	15	56	7	-	-	2	-	-	-	-	232
Al Jalaa hospital – Benghazi	34	164	-	302	-	11	15	60	-	-	7	-	-	139	53	-	19	-	12	20	-	-	-	836
Jalou hospital	3	4	-	70	10	-	3	8	-	-	-	-	23	4	-	-	-	2	-	-	-	-	-	127
Emhamd Al Meqrif Hospital Ejdabiya	15	209	-	329	12	1	5	26	-	8	-	-	-	12	8	8	-	12	13	14	-	-	-	672
Tazarbu hospital	4	3	-	58	3	-	1	15	-	-	-	-	20	2	-	3	-	2	-	-	-	-	-	111
Atiya Al Kaseh- Al Kuffra hospital	9	24	-	73	8	1	10	17	-	-	-	-	19	5	-	-	-	6	9	-	-	13	-	194
Bin Jawad hospital	4	6	-	102	5	1	2	17	-	-	-	-	50	-	-	-	-	-	-	-	7	3	-	197
Ali Omar Askar hospital-Sbeia	75	200	-	302	5	-	5	201	-	1	-	-	2	162	1	15	5	-	10	5	5	1	-	995
Murziq hospital	7	10	-	198	8	1	-	37	-	4	-	-	2	8	-	6	-	-	4	-	-	3	-	288
Traghen hospital	3	22	-	69	2	2	6	25	2	5	-	-	24	7	-	4	-	-	2	10	-	-	-	183
Semno Hospital	-	2	-	22	-	-	-	12	-	-	-	-	7	-	-	-	-	-	-	-	3	-	-	46
Sebha Medical Center	28	149	-	410	32	2	30	98	-	-	-	-	87	-	4	27	-	-	9	-	-	-	-	876
Brak hospital	-	8	-	64	8	8	8	28	4	-	-	-	3	-	-	6	4	12	-	20	6	-	-	179
Bergan hospital	1	1	-	5	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9
Adri hospital	1	-	-	184	-	-	7	10	-	13	-	-	-	-	-	-	-	-	-	-	-	-	-	215
Bani waleed hospital	7	30	-	112	12	-	1	35	-	-	-	-	3	33	15	-	12	-	1	6	-	-	-	267
Zlitan hospital	26	30	-	200	8	-	30	40	10	12	-	-	51	17	5	-	-	3	2	13	-	-	-	447
Misratak hospital	70	268	-	188	20	3	10	92	-	40	-	2	-	157	44	-	-	-	-	-	20	-	-	914
Chest diseases hospital, Misratak	11	17	-	60	-	2	-	10	-	-	-	-	14	10	-	10	-	-	-	-	-	-	-	134

	Specialist medical practitioner	Generalist medical practitioners	Professional nurse midwife (dual trained)	Nursing professional	Midwifery professional	Dentist	Pharmacist	Laboratory technologist	Environmental, occupational health hygiene professional	Physiotherapist	Dietician and nutritionist	Audiologist and speech therapist	Optometrist and ophthalmic optician	Biomedical engineer	Other health professional	Medical imaging and therapeutic equipment engineer	Lab technician and lab assistant	Pharmacy technician	Medical and dental prosthetic technician	Medical records and health information technician	Physiotherapy technician and assistants	Ambulance worker/EMT technician	Other health associate professional	Total
Oncology Center Misratah	34	49	-	74	-	-	10	34	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	201
Misslata hospital	10	35	-	90	13	-	24	26	-	17	5	1	-	-	168	23	28	19	14	3	17	5	12	510
Al Qarabouli hospital	3	2	-	137	3	-	8	44	-	15	-	-	-	-	-	-	-	-	-	-	-	12	-	224
Sooq Al Khamees hospital - Al khums	5	7	-	46	-	1	8	12	-	-	-	-	-	-	1	-	10	10	-	-	-	1	3	104
Al khums hospital	23	46	-	110	18	17	19	33	7	20	11	8	-	-	180	33	30	24	17	10	23	18	17	664
Tarhuna hospital	8	43	-	127	8	1	9	32	1	-	1	-	-	-	29	14	-	4	1	3	15	6	1	303
Dawoon hospital	1	-	-	45	10	-	-	15	1	-	-	-	-	1	53	5	-	10	-	-	5	8	-	154
Mitiga hospital	17	56	-	121	-	4	1	11	-	1	-	-	4	-	-	-	-	-	2	2	4	-	-	223
Abi Sitta chest diseases hospital	8	27	-	41	-	-	14	20	-	-	-	-	-	1	-	7	-	14	-	1	2	3	-	138
Ophthalmology hospital - Tripoli	36	84	-	103	-	1	19	32	-	-	1	-	13	-	98	-	-	7	-	4	-	-	-	251
Tripoli central hospital	96	821	-	510	-	-	59	58	-	-	-	-	-	-	343	37	7	3	-	6	76	-	-	2,016
Burns & plastic surgery hospital - Tripoli	8	24	-	145	-	9	10	48	-	21	3	-	-	-	55	16	-	6	3	-	-	-	-	348
Tripoli pediatric hospital	69	173	-	135	-	-	22	68	-	-	4	-	-	2	12	5	-	22	-	6	7	8	-	533
Al Jalaa gynecology hospital - Tripoli	10	303	-	259	40	-	23	121	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	756
Tajurra hospital	45	145	-	330	-	9	7	46	9	12	1	-	-	3	52	13	17	21	4	3	-	-	-	717
Be'ar Al Austa Milad hospital	3	46	-	34	-	-	6	17	-	-	-	-	-	-	-	-	-	7	-	2	-	-	2	117
Al Khadra hospital	37	254	-	260	7	-	11	56	3	14	4	-	-	3	129	32	-	11	-	1	-	9	-	831
Abi Sleem trauma hospital	45	238	-	120	-	16	26	57	11	43	-	-	-	2	406	41	57	26	-	10	43	7	-	1,148
Tripoli medical center	208	1,006	-	393	12	18	47	213	-	11	14	5	-	-	793	64	19	51	3	4	72	-	-	2,933
Diabetes and endocrine hospital - Tripoli	16	102	-	50	-	-	4	10	-	17	5	-	-	-	3	-	10	7	-	5	17	40	-	286
Psychiatric Diseases Hospital - Tripoli	5	12	-	140	-	2	11	5	-	4	1	-	-	6	33	-	-	1	-	1	2	4	2	229
Weddan hospital	2	24	-	37	2	3	4	-	-	1	-	-	-	-	-	4	11	4	3	-	8	8	-	111
Al Afia hospital - Houn	12	15	4	74	3	3	3	-	-	-	1	1	1	1	1	10	17	8	2	-	7	-	2	165
Al-Zawia Hospital	54	247	-	229	12	-	15	-	-	2	4	-	-	-	76	34	53	15	-	6	33	-	-	780
Surmann Hospital	16	39	-	70	-	-	5	-	-	-	1	-	-	-	4	9	34	13	-	1	5	-	23	220
Al Jameel Hospital	28	26	-	180	6	-	40	51	-	-	-	-	-	-	5	-	-	9	-	2	13	13	-	373
Zwara Albahree Hospital	28	37	-	183	1	7	11	25	-	-	-	-	-	-	30	12	22	13	-	5	4	10	-	388
Al Aujilat Hospital	15	44	-	180	8	-	9	25	-	-	1	-	-	-	-	-	4	10	-	3	15	19	-	333
Subrata Hospital	21	208	-	261	11	2	15	-	-	-	2	-	-	-	20	46	130	11	-	7	39	-	25	798
National Institute for Oncology, Subrata	18	83	-	139	-	2	15	-	-	-	-	-	-	-	8	38	48	2	-	8	3	-	-	364
Gharyan hospital	26	67	-	64	4	-	1	-	-	-	-	-	-	-	126	8	-	8	-	3	6	-	-	313
Al Asaabaa hospital	14	21	-	150	8	2	-	16	-	-	-	-	-	-	103	8	1	17	-	5	-	-	-	345
Jado Hospital	13	7	-	24	6	-	-	10	-	-	-	-	-	-	10	4	-	6	-	1	-	-	-	81
Mizda hospital	21	2	-	121	3	-	-	13	-	-	-	-	-	-	20	1	-	6	-	3	8	-	-	198
Al Kuriaat hospital	5	2	-	12	2	2	1	9	-	-	-	-	-	-	10	4	-	2	2	1	-	-	-	52
Al Zintan hospital	29	12	-	150	6	-	1	13	-	-	-	-	-	-	2	5	-	11	-	3	-	-	-	232
Yaffren Hospital	31	15	-	138	7	-	4	34	-	-	-	-	-	1	13	9	-	9	-	3	9	-	-	273
Al Shewarif hospital	5	1	-	24	2	2	-	5	-	-	-	-	-	-	4	5	-	3	1	1	-	-	-	53
Nalout hospital	25	15	-	62	5	-	7	2	-	1	-	-	-	-	6	5	-	3	3	2	4	6	-	146
Al Hraba hospital	8	4	-	35	-	1	-	1	1	-	-	-	-	-	5	3	11	3	3	2	-	2	-	79
Kabaw hospital	11	5	-	22	2	1	2	10	-	1	-	-	-	-	-	2	6	7	-	1	2	3	-	75
Tegi hospital	15	7	-	120	2	1	-	12	-	-	-	-	-	-	45	6	-	10	2	3	-	-	-	223
Ghadames hospital	6	9	-	46	6	3	11	16	-	-	-	-	-	1	5	4	4	2	3	4	1	6	-	127

### 11.2.1 Human resources training in hospitals

Up-to-date training of staff providing key services is essential to successful delivery of care. Across the hospitals, relatively few staff have had any service-specific training during the past two years. These trainings can range from direct patient care to up-to-date understanding of the record-keeping systems. Table 122 provides a summary of the number of hospitals reporting to provide specific services, along with the proportion of hospitals that have at least one staff member who has received training in the provision of this service during the past two years. Proportions range from 0% of the 52 hospitals offering delivery services having staff who received training in essential childbirth care, to 75% of the staff of four hospitals that report according to the International Classification of Diseases (ICD) having received training in the ICD codes, their meanings, and how they are used. Overall, there are considerable gaps not only in coverage of specific services, but also in the availability of staff with up-to-date training in these services.

Table 122: Proportion of Hospitals with staff having received service-specific training in the past two years

<i>Training course</i>	<b>N of Hospitals offering services</b>	<b>% of these hospitals with trained staff</b>
<i>Newborn resuscitation</i>	52	35%
<i>Essential childbirth care</i>	52	0%
<i>Comprehensive Emergency Obstetric Care (CEmOC)</i>	47	17%
<i>Family planning (FP)</i>	0	0%
<i>Adolescent sexual health</i>	0	0%
<i>Antenatal Care (ANC)</i>	37	14%
<i>Prevention of Mother and Child Transmission (PMTCT) for HIV</i>	4	0%
<i>Infant and young child feeding (IYCF)</i>	4	25%
<i>HIV counselling and testing</i>	8	0%
<i>HIV/AIDS prevention/care/management</i>	8	13%
<i>Clinical management HIV/AIDS</i>	0	0%
<i>Sexually transmitted infections (STI) diagnosis and treatment</i>	9	0%
<i>Diabetes diagnosis/management</i>	55	24%
<i>Cardiovascular disease diagnosis/management</i>	55	22%
<i>Chronic respiratory disease diagnosis/management</i>	45	22%
<i>Cervical cancer prevention and control</i>	12	33%
<i>Integrated Management for Emergency &amp; Essential Surgical Care (IMEESC)</i>	47	9%
<i>Emergency services provision</i>	67	18%
<i>Safe blood transfusion practices</i>	53	30%
<i>Infection prevention (by person in charge of infection prevention in hospital)</i>	52	50%
<i>Health care waste management</i>	79	8%
<i>Unit/staff managers trained in completing client data / report forms</i>	20	50%
<i>Person assigning ICD codes formally trained in ICD</i>	4	75%
<i>Person completing morbidity statistics formally trained in ICD</i>	4	50%
<i>Person coding cause of death formally trained in ICD</i>	4	75%
<i>Person selecting underlying cause of death formally trained in ICD</i>	4	75%
<i>Person authorized to determine cause of death received formal training</i>	80	11%
<i>Person authorized to fill death certificate received formal training</i>	68	18%
<i>Records kept of staff having received trainings</i>	78	24%

Approximately 30% of hospitals have a system in place for in-service education for medical staff, although most of these trainings take place infrequently, at no set time. A record of trainings received is kept by 24% of hospitals, for either onsite training only (9%), or for both on- and offsite trainings (15%).

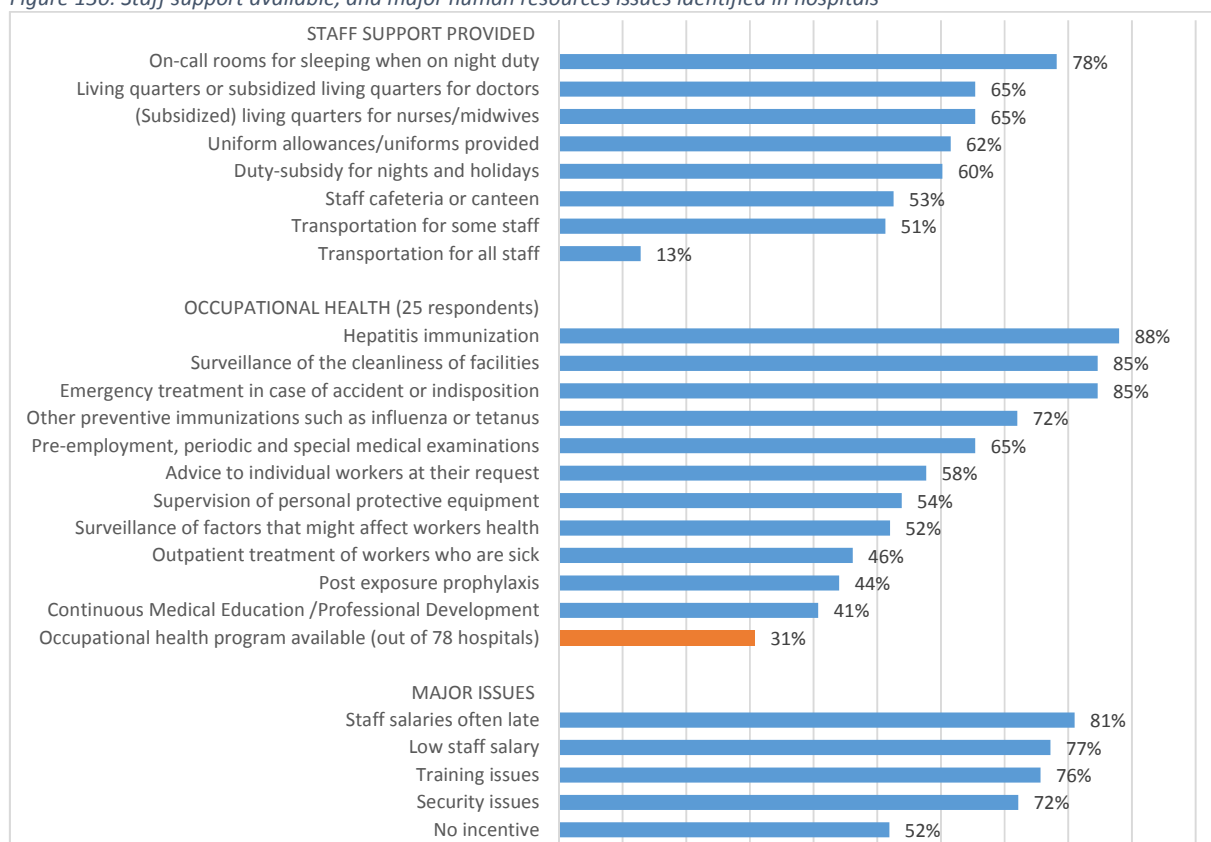
Table 123: Human resources training systems available in hospitals

Routine system for in-service education for nursing or midwifery staff	
at least monthly	5%
at least every 2-3 months	4%
every 4-6 months	3%
every 7-12 months	1%
less often than annually or no set time	18%
no	69%
Routine system for in-service education for physicians or clinical officers	
at least monthly	6%
at least every 2-3 months	3%
every 4-6 months	1%
every 7-12 months	1%
less often than annually or no set time	14%
no	74%
Maintains a written or computerized record for staff who receive training	
for onsite training	9%
for both on and offsite training	15%
no	76%

### 11.2.2 Human resources support and concerns in hospitals

Some basic information on human resources management was collected at hospital level. Results indicated that 68 out of 80 hospitals had a human resources support unit available. Additionally, the availability of job descriptions was shown to be limited. Thirty-five hospitals (44%) had job descriptions available for all staff, 32 (40%) had job descriptions available for some staff only, not for all positions, and 13 hospitals (16%) had no job descriptions available at all.

Figure 130: Staff support available, and major human resources issues identified in hospitals



Support for the improvement of staff welfare is provided in one form or another by all hospitals, with the most frequent support provision being the availability of on-call rooms when staff is on evening or night duty (78%). Transportation provision for some (51%) or all staff (13%) is the least frequently provided staff benefit. In terms of occupational health, only 31% of hospitals had a defined occupational health program available, although it was not necessarily clearly spelled out. Of the 25 hospitals that stated they provided such a program, the most frequently provided preventive measure was hepatitis immunization (88%), while staff in 85% of hospitals could also benefit from emergency treatment in case of accident or indisposition. Least frequently available were post-exposure prophylaxis measures (44%) and support for professional development (41%).

Of potential issues raised, the tardiness of staff salaries was the most frequently identified as a major issue (81%), closely followed by the other three issues: low staff salary (77%), training issues (76%). Surprisingly, security issues – although still receiving a very high proportion of “major issues” votes, was only in fourth place. The lack of incentives was in last place, identified as a major issue in half of the hospitals (52%).

### 11.3 PHC facilities workforce availability and training

A total of 94,832 staff are employed in the 1,072 PHC facilities for which data was available. This is an average of 88 staff members per PHC facility. Table 124 Table 124: Average PHC staff numbers, by facility type

provides an overview of average staffing levels by type of PHC facility, while the ratio of staff to the number of services (such as ANC, NCDs, imaging, and storage/dispensing of medications) provided per facility are presented in Table 125.

Table 124: Average PHC staff numbers, by facility type

	N facilities	Mean N of staff	Max N of staff
Polyclinic	50	224	1,003
Primary Health Care Center	496	112	670
Primary Health Care Unit	526	53	382
<b>Total</b>	<b>1,072</b>	<b>88</b>	<b>1,003</b>

There are no clear standards for staffing being followed, with facility staffing ranging from a handful in some facilities, to over 1,000 staff in a large Polyclinic in Sug Aljumaa in the Tripoli area, where 610 staff were nurses). Mean staff numbers are consistent with facility type, with PHCUs being the smallest with an average of 53 staff per facility, and polyclinics being the largest with an average of 224 staff per facility.

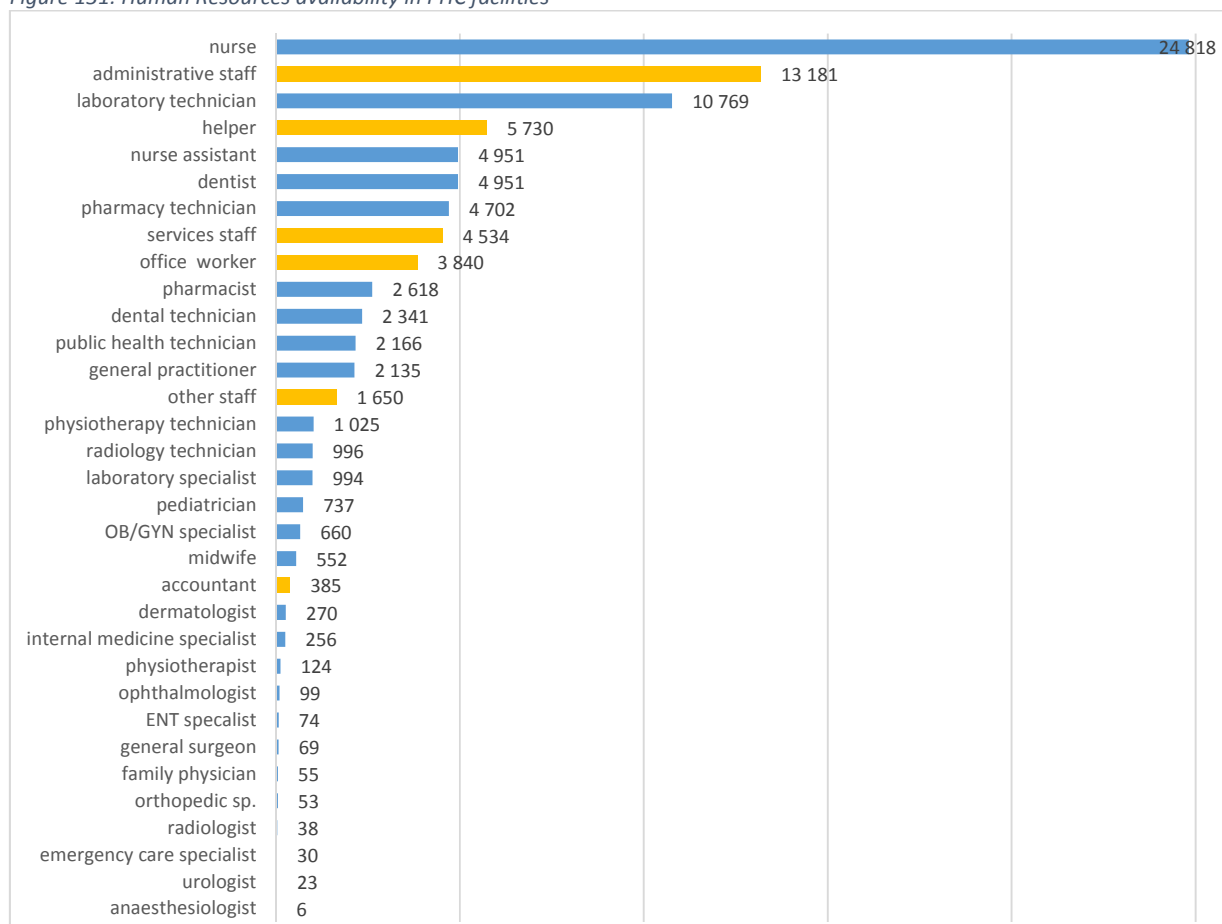
Table 125: Ratio of staff to individual services provided per PHC facility

N services offered	N facilities	Total staff employed	Average N staff/ facility	Ratio of staff to services
0	302	14,598	48	-
1	175	10,697	61	61
2	159	14,129	89	44
3	112	12,251	109	36
4	92	9,395	102	26
5	76	8,545	112	22
6	43	6,318	147	24
7	48	8,444	176	25
8	37	4,949	134	17
9	18	3,906	217	24
10	7	915	131	13
11	2	455	228	21
12	1	95	95	8
14	1	135	135	10

The ratio of staff to services in Table 125 shows a general increase in efficiency, with a decrease in the number of staff members required per service as the number of services provided by a single facility increases. What is concerning is that 14,598 staff members are employed in 302 facilities that state they do not offer any services at all. Furthermore, the need for an average of 61 staff to address a single service such as brucellosis screening or immunization, is excessive when compared to HR requirements for similar services provided in other countries – even when considering that administrative staff is also included in the calculated figures.

Figure 131 shows the numbers of human resources in all the PHC facilities by specialty. At the time of survey, PHC core staff consisted of a total of 2,135 GPs, 1,633 specialists, 24,818 nurses and 552 midwives. They were supported by 21,999 technicians and 1,118 technologists, while 4,951 dentists and 2,618 pharmacists were also part of the PHC health workforce. Non-medical staff are highlighted in yellow. In Figure 131, non-medics consists of a total of 29,320 staff, and represent 31% of the entire PHC workforce.

Figure 131: Human Resources availability in PHC facilities



A breakdown of all health staff at municipality level indicates that there are 12 municipalities that do not have a GP or family physician working in a PHC facility, with 12 municipalities that have only one staff employed, while four municipalities employ over 100 staff. This indicates an inequitable distribution of core service providers, which is further reinforced by the district-level data on the health workforce density presented at the start of this chapter.



Table 126: Numbers of human resources for health by type and municipality

Municipality	general practitioner	family physician	pediatrician	OB/GYN specialist	internal medicine specialist	general surgeon	emergency care	ENT specialist	ophthalmologist	radiologist	anesthesiologist	dentist	pharmacist	dermatologist	urologist	Orthopedic sp. laboratory specialist	physiotherapist	nurse	midwife	radiology technician	laboratory technician	pharmacy technician	physiotherapy technician	dental technician	public health technician	nurse assistant	helper	administrative staff	accountant	office worker	Services staff	other staff	
Abusliem	109	0	48	28	2	6	0	0	7	2	1	426	190	11	1	3	54	12	608	6	5	522	167	21	151	76	263	120	281	13	43	42	115
Ain Zara	93	1	41	32	6	0	0	0	2	1	0	257	134	10	0	2	0	388	3	8	446	97	35	99	13	23	196	294	9	94	0	0	
Al Ajaylat	50	3	11	6	1	0	0	0	7	0	0	77	18	4	1	0	2	0	343	1	14	98	73	54	35	31	48	2	174	3	368	39	0
Al Aziziya	28	0	0	2	0	0	0	0	0	0	0	34	29	0	0	1	0	0	275	1	18	28	71	17	30	103	151	2	113	1	23	68	8
Al Galaa	2	0	0	0	0	0	0	0	0	0	0	11	1	0	0	0	0	0	54	0	2	13	4	1	2	4	7	33	17	0	13	37	4
Al Jagboub	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	1	1	2	2	0	0	0	4	1	
Al Maya	9	0	2	0	0	0	0	0	0	0	0	5	19	0	0	0	0	174	0	7	20	40	1	23	37	108	0	63	15	85	105	0	
Al Shate Al Garbe	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1050	34	15	61	59	5	17	53	218	30	162	0	42	49	5	
Al Shate Al Sharge	0	0	1	2	1	0	0	0	0	0	0	6	1	0	0	0	3	1	357	16	3	30	24	4	8	15	68	10	65	0	15	14	0
Al Swani	45	0	1	2	0	0	0	0	0	0	0	24	11	0	0	0	0	324	7	3	42	61	4	7	70	67	1	42	3	37	48	0	
Alabyar	21	0	4	3	0	0	0	0	0	0	0	85	32	1	1	0	1	0	368	9	2	34	43	6	14	15	74	73	111	9	55	49	14
Alasabaa	13	0	2	1	0	0	0	1	0	0	0	60	10	1	0	0	0	506	19	9	71	61	1	6	27	70	55	84	0	19	68	6	
Albawanees	1	0	0	0	0	0	0	0	0	0	0	7	1	0	0	0	1	0	81	2	0	11	6	0	2	1	10	50	63	0	7	10	1
Albayda	29	0	15	16	30	6	0	5	8	2	0	24	27	8	3	2	0	450	0	19	46	27	0	13	18	69	85	511	11	87	0	0	
Albrayga	10	0	11	4	5	0	0	1	0	0	0	13	11	3	1	0	0	34	0	2	21	13	0	3	1	7	202	24	0	5	15	0	
Aldawoon	0	0	0	0	8	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1	1	16	7	23	0	5	4	6	0	2	11	0
Algatroun	3	0	0	2	0	0	0	0	0	0	0	4	0	0	0	0	0	221	10	8	45	19	6	4	26	0	0	39	0	22	13	0	
Algaygab	8	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	67	2	2	5	15	0	0	0	5	5	5	1	2	0	0	
Alghrayfa	1	0	1	1	1	0	0	0	0	0	0	5	0	2	0	0	0	633	21	1	78	56	5	1	68	104	29	125	0	71	35	0	
Algurdha Ashshati	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	693	20	65	34	32	4	22	26	175	19	137	12	65	38	14	
Alharaba	1	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	55	0	0	3	0	0	0	0	7	1	14	0	8	2	0	
Alhawamid	2	0	0	0	0	0	0	0	0	0	0	6	1	0	0	0	0	54	0	2	30	14	8	17	0	5	0	61	0	28	22	6	
Aljmail	39	0	13	10	3	0	0	1	0	0	0	27	10	3	0	5	0	521	0	74	198	98	40	69	63	0	386	247	0	198	40	41	
Aljuffa	18	1	2	3	5	0	0	0	1	0	0	23	47	0	0	1	1	199	7	18	184	60	34	41	10	27	1	114	0	43	18	29	
Alkhums	93	0	4	4	0	1	0	0	1	0	0	54	40	2	1	0	1	4	722	7	23	271	234	29	26	66	4	9	165	2	93	97	5
Alkufra	12	1	2	6	0	0	0	1	3	0	0	5	28	2	0	0	0	1	219	2	3	100	2	16	1	7	75	7	48	0	24	8	5
Almarj	0	0	14	11	7	0	0	1	0	1	0	33	32	6	0	0	0	232	1	4	98	130	3	5	15	0	87	60	1	4	0	2	
Alqubba	3	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	35	138	3	6	16	10	10	0	4	80	42	41	8	11	3	0
Alsharguiya	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	215	7	3	44	19	4	10	55	16	0	47	0	35	33	0	
Arrajban	5	0	0	1	0	0	0	1	0	0	0	4	1	0	0	0	4	52	0	1	57	12	0	21	0	32	13	33	0	9	12	0	
Arrayayna	19	0	0	2	0	0	0	0	0	0	0	17	0	0	0	0	0	26	0	0	2	1	3	2	1	5	8	5	0	0	4	0	
Arrhaibat	4	0	0	0	0	0	0	0	0	0	0	11	0	0	0	0	0	32	0	0	23	2	0	0	5	22	33	9	0	5	22	0	
Ashshgega	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	39	0	4	9	5	0	4	0	6	13	14	0	19	17	7	
Assahel	11	0	4	2	0	1	0	0	0	0	0	18	18	5	0	2	0	260	2	0	31	1	2	5	19	5	10	39	1	8	19	3	
Aujala	4	0	2	2	0	0	0	0	2	0	1	5	3	3	0	0	1	89	6	5	11	8	1	2	7	31	51	33	6	28	43	0	
Azzahra	15	0	2	0	2	0	0	0	0	0	0	19	16	0	0	0	0	489	2	14	127	51	13	38	78	117	29	216	75	76	113	10	
Azzawya	69	2	45	34	2	5	0	10	8	0	0	97	56	13	2	0	0	401	6	35	220	115	20	32	81	3	93	233	11	67	268	31	
Azzintan	55	3	0	0	0	0	0	0	0	0	0	25	8	0	0	0	0	105	2	5	55	44	1	6	8	40	36	51	3	43	20	6	
Bani Waleed	7	1	9	7	11	3	0	3	3	0	0	40	1	2	1	2	0	139	2	17	108	66	24	60	32	338	8	112	2	27	28	0	
Baten Aljabal	10	0	1	0	0	0	0	0	0	0	0	11	0	0	0	0	0	124	0	2	51	28	0	14	32	0	24	149	0	0	100	21	
Benghazi	101	4	60	68	21	4	13	5	3	19	0	240	159	46	0	1	6	609	2	116	237	119	33	90	104	45	143	672	14	10	57	67	
Bint Bayya	3	0	1	1	1	1	0	1	0	0	0	6	1	0	0	0	5	220	11	3	45	38	8	12	44	33	0	243	0	76	49	0	
Bir Alashhab	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	20	3	0	2	3	1	6	6	1	2	5	1	0	0	0	
Daraj	4	0	0	1	0	0	0	0	0	0	0	2	1	0	0	0	0	19	1	2	12	5	1	5	3	81	4	62	0	59	59	0	
Darnah	39	8	23	19	19	5	0	6	2	1	0	36	254	6	0	1	48	448	19	24	59	48	0	29	27	102	86	98	40	38	33	0	
Ejdabia	13	2	24	22	24	0	0	5	7	0	0	22	13	15	0	1	1	884	26	21	235	143	30	3	6	119	148	346	0	166	26	0	
Ejkherra	5	0	1	1	1	1	0	0	0	0	0	4	0	0	0	0	0	22	3	2	5	2	1	0	4	14	1	13	5	20	16	0	
Emsaed	5	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	28	2	0	8	5	0	0	3	0	0	2	0	0	0	0	
Espeaa	5	0	0	0	0	0	0	0	0	0	0	13	4	0	0	0	3	99	0	1	57	14	3	12	4	91	37	27	5	0	0	147	
Garaballi	42	0	5	9	1	0	0	0	1	0	0	24	2	1	0	1	0	273	2	9	401	97	43	25	33	40	17	105	0	149	88	6	
Gasr Akhyar	13	0	4	2	1	0	0	0	0	0	0	15	11	0	0	1	0	186	0	4	163	90	36	31	13	0	29	92	0	64	46	1	

Municipality	general practitioner	family physician	pediatrician	OB/GYN specialist	internal medicine specialist	general surgeon	emergency care	ENT specialist	ophthalmologist	radiologist	anesthesiologist	dentist	pharmacist	dermatologist	urologist	Orthopedic sp.	laboratory specialist	physiotherapist	nurse	midwife	radiology technician	laboratory technician	pharmacy technician	physiotherapy technician	dental technician	public health technician	nurse assistant	helper	administrative staff	accountant	office worker	Services staff	other staff
Gasr Bin Ghasheer	13	0	2	0	1	0	0	0	0	0	0	14	4	0	0	0	0	211	1	1	1	105	25	2	20	14	197	33	20	5	5	2	123
Gemienis	0	0	1	1	0	0	0	0	0	0	0	10	13	0	0	0	0	29	2	1	20	3	0	5	3	7	48	29	0	15	0	7	
Ghadamis	0	0	0	0	1	0	0	0	0	0	0	2	1	0	0	0	0	0	0	0	2	0	0	3	3	16	0	4	0	5	2	0	
Gharb Azzawya	43	0	10	15	10	0	0	3	4	3	0	49	37	3	0	1	37	0	145	2	10	58	46	9	19	8	26	14	62	0	61	72	29
Ghat	1	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	269	4	2	20	3	3	9	0	43	8	54	0	23	46	0	
Ghiryan	69	2	13	7	2	0	0	1	2	0	0	276	43	7	0	2	3	0	1312	23	34	1895	215	13	86	59	267	787	1006	1	61	345	22
Hai Alandalus	118	3	64	41	6	1	0	2	1	0	0	656	209	16	2	1	622	54	443	56	6	116	177	25	156	30	17	211	130	11	22	110	75
Jadu	2	0	0	0	0	0	0	0	0	0	0	14	0	0	0	0	0	53	0	0	26	10	1	14	4	20	44	27	0	18	28	0	
Jalu	1	0	1	1	0	1	0	1	1	0	0	3	4	1	0	1	0	70	1	1	14	5	0	1	3	15	8	47	0	8	0	0	
Janzour	94	3	14	33	4	0	0	3	2	3	0	211	57	9	0	3	52	0	299	3	4	187	90	13	57	25	107	25	558	28	15	0	0
Jardas Alabeed	6	2	5	5	3	1	1	2	2	3	2	4	13	2	2	3	0	0	285	12	0	96	39	12	4	34	80	56	48	2	15	12	0
Kabaw	1	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	8	1	105	0	1	19	4	0	12	5	5	3	38	4	24	26	3
Khalege Alsedra	14	0	3	3	3	2	1	1	1	1	0	4	3	1	1	2	1	1	70	16	16	35	23	1	11	17	28	34	71	8	74	15	0
Kikkla	2	0	0	0	1	2	0	0	0	0	0	8	0	0	0	0	1	0	50	0	0	20	9	7	8	6	10	21	20	0	12	48	13
Labriq	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25	4	2	4	2	0	0	0	19	11	5	4	2	0	0	
Marada	1	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	19	2	1	6	2	0	2	5	2	2	11	0	1	1	0	
Misrata	46	0	25	26	12	5	0	4	0	0	0	57	33	12	3	1	0	0	216	4	22	163	221	19	56	37	29	250	193	0	29	126	222
Mizda	6	0	1	1	0	0	0	0	0	0	0	6	0	1	0	0	0	64	6	2	9	9	0	3	6	12	7	20	0	11	16	0	
Msallata	14	0	2	6	0	0	0	0	0	0	0	23	0	2	0	0	0	126	0	10	169	51	29	54	9	8	0	39	0	59	7	0	
Murzuq	5	0	0	0	0	0	0	0	0	0	0	8	1	0	0	0	0	192	10	5	33	38	6	23	38	4	1	56	0	43	32	0	
Nalut	7	0	0	0	1	0	0	0	0	0	0	11	1	0	0	0	0	50	0	1	33	0	0	15	9	0	0	57	0	28	11	3	
Nesma	6	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	17	0	0	0	2	0	0	2	10	9	9	0	10	17	0	
Rigdalen	22	0	1	3	2	0	0	0	3	0	0	23	2	1	0	2	0	179	0	14	80	30	19	44	1	7	44	147	4	52	8	17	
Sabratha	25	0	8	16	0	1	6	0	1	0	0	142	36	4	0	0	6	2	451	1	40	236	139	21	57	22	28	76	511	2	70	29	189
Sebha	14	2	20	8	2	1	0	2	3	0	0	84	9	2	1	1	11	0	633	27	14	236	91	28	29	40	20	401	943	3	75	82	14
Shahhat	7	0	10	2	5	6	0	0	1	0	0	1	10	1	0	1	0	2	429	1	9	46	89	32	6	90	46	56	119	21	0	236	0
Sidi Assayeh	4	0	0	0	0	0	0	0	0	0	0	12	2	0	0	0	0	58	0	1	26	8	0	5	0	48	10	5	0	0	0	80	
Sirt	8	1	3	2	3	0	1	2	0	0	0	15	11	1	0	0	3	0	81	0	9	27	30	3	11	5	21	107	33	0	6	33	0
Sug Aljumaa	195	4	61	81	9	5	0	4	11	1	0	623	309	29	0	4	77	9	924	15	11	664	159	26	204	40	126	153	223	4	48	87	48
Sug Alkhamees	1	0	0	0	0	0	0	0	0	0	0	12	0	0	0	0	0	57	0	0	55	14	2	5	13	42	0	14	0	0	0	87	
Suloug	7	1	1	2	3	2	0	0	0	0	0	22	15	1	0	0	0	88	0	7	37	11	1	2	4	20	28	30	1	7	4	0	
Surman	11	0	17	16	7	0	0	2	5	0	0	34	5	2	0	1	0	158	2	17	91	97	16	6	35	0	57	93	0	14	247	46	
Tajoura	74	1	18	18	1	1	0	0	3	0	2	112	111	5	0	0	9	0	310	1	9	285	127	18	91	26	28	172	73	0	12	43	31
Taraghin	0	0	1	1	0	0	0	0	0	0	0	4	2	0	0	0	0	143	6	1	38	19	4	15	49	13	0	32	5	25	15	0	
Tarhuna	24	1	3	2	6	0	0	1	0	0	0	58	49	5	0	0	8	0	743	5	14	398	122	62	68	24	324	73	644	0	69	295	0
Tazirbu	1	0	0	0	0	0	0	0	0	0	0	2	4	0	0	0	0	24	10	0	2	6	0	1	3	47	0	20	0	200	20	0	
Thaher Aljabal	5	0	2	2	2	2	0	0	0	0	0	23	1	1	1	0	0	82	2	5	25	23	0	3	5	33	40	28	0	14	45	15	
Tobruk	34	0	10	9	9	4	0	0	1	0	0	14	116	6	2	4	2	1384	37	85	162	51	34	3	37	191	116	508	16	21	11	9	
Toukra	11	4	3	1	0	1	0	0	1	0	0	14	5	0	0	0	0	63	0	0	6	5	0	0	0	45	1	21	1	2	0	0	
Tripoli	98	1	62	41	8	1	0	1	0	1	0	433	219	11	0	1	16	0	188	1	7	415	102	10	116	39	3	128	103	2	47	53	20
Ubari	1	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	253	7	7	35	21	3	13	17	54	11	32	0	12	31	0	
Umm arrazam	9	0	3	0	1	0	0	1	0	0	0	1	6	0	0	0	0	232	14	4	11	12	2	1	11	52	26	70	0	7	5	0	
Wadi Etba	5	0	3	4	0	0	0	0	0	0	0	6	1	1	0	0	0	243	9	0	67	31	14	40	36	28	10	60	0	37	50	0	
Wazin	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	21	0	3	5	7	0	7	1	6	3	13	0	11	6	4	
Yefren	0	0	2	0	0	0	0	1	0	0	0	21	1	0	0	0	0	56	0	6	41	10	4	21	3	11	31	27	0	9	16	1	
Zamzam	3	0	1	1	0	0	0	0	0	0	0	2	0	0	0	0	0	61	0	2	24	11	3	4	8	7	20	14	0	8	18	15	
Ziltun	6	0	2	0	0	0	0	0	0	0	0	4	3	0	0	2	0	1	76	0	3	35	12	26	3	1	10	203	65	0	69	11	2
Zliten	85	3	5	5	0	0	0	0	0	0	0	110	62	1	0	0	5	0	151	0	27	157	140	0	2	24	7	150	726	4	120	375	13
Zwara	14	0	5	3	2	0	8	2	1	0	0	10	25	1	0	0	2	1	131	0	0	67	13	22	0	0	6	449	8	1	10	7	
Total	2135	55	737	660	256	69	30	74	99	38	6	4951	2618	270	23	53	994	124	24818	552	996	10769	4702	1025	2341	2166	4951	5730	13181	385	3840	4534	1650

Libya's sizeable health workforce has received limited specialist training in services that are commonly offered at PHC facilities in the past two years. This includes maternal and child care topics such as antenatal care (ANC), with trained staff available in only 18% of facilities providing these services, and immunization service delivery (58%), integrated management of childhood illnesses (IMCI, 7% of facilities). Some topics, such as intermittent preventive therapy in pregnancy (IPTp) for malaria are not relevant as Libya is a low-burden malaria country and IPTp is therefore not implemented, but low proportions of facilities with specialist training received in the diagnosis and treatment of NCDs is a worrying finding, in the face of the ever-increasing burden of these diseases. Furthermore, even if PHC facilities do not offer diagnosis and treatment for TB, they are potentially the first point of contact for suspected cases of TB, and should therefore have staff available with training in detection and referral.

Table 127: Proportion of PHCs with staff having received service-specific training in the past two years

<i>Training course</i>	<b>N of PHCs offering services</b>	<b>% of these PHCs with trained staff</b>
<i>Family planning (FP)</i>	18	28%
<i>Adolescent sexual health</i>	18	11%
<i>Antenatal Care (ANC)</i>	184	18%
<i>Intermittent preventive therapy (for malaria) in pregnancy (IPTp)</i>	184	1%
<i>Newborn resuscitation</i>	17	12%
<i>Essential childbirth care</i>	17	6%
<i>Comprehensive Emergency Obstetric Care (CEmOC)</i>	1	0%
<i>Immunization service delivery</i>	467	58%
<i>Vaccine management and cold chain</i>	467	61%
<i>Data reporting and monitoring of immunization service delivery</i>	467	54%
<i>Vaccine-preventable disease surveillance and reporting</i>	467	50%
<i>Vaccine injection safety and waste management</i>	467	53%
<i>Reach Every District (Immunization program planning)</i>	467	33%
<i>New vaccine prior to introduction</i>	467	61%
<i>Management of adverse events following immunization (AEFI)</i>	467	55%
<i>Integrated Management of Childhood Illnesses (IMCI)</i>	326	7%
<i>Growth monitoring</i>	326	5%
<i>Prevention of Mother and Child Transmission (PMTCT) for HIV</i>	0	
<i>Infant and young child feeding (IYCF)</i>	0	
<i>HIV counselling and testing</i>	3	0%
<i>HIV/AIDS prevention/care/management adolescents</i>	3	33%
<i>Anti-retroviral therapy (ART)</i>	0	
<i>Clinical management HIV/AIDS</i>	0	
<i>Sexually transmitted infections (STI) diagnosis and treatment</i>	6	17%
<i>Tuberculosis (TB) diagnosis and treatment</i>	22*	86%
<i>Management of HIV/TB coinfection</i>	22*	55%
<i>Multi-drug resistant (MDR) TB</i>	22*	55%
<i>TB infection control</i>	22*	73%
<i>Diabetes diagnosis/management</i>	550	9%
<i>Cardiovascular disease diagnosis/management</i>	510	6%
<i>Chronic respiratory disease diagnosis/management</i>	478	4%
<i>Cervical cancer prevention and control</i>	34	15%
<i>Mental Health and Psychosocial Support</i>	564	2%
<i>Integrated Management for Emergency &amp; Essential Surgical Care (IMEESC)</i>	172	6%
<i>Surgery</i>	172	13%
<i>Anesthesia</i>	172	13%
<i>Safe blood transfusion practices</i>	4	25%
<i>Dental health training</i>	223	27%

\*NCDC clinics

## 11.4 Other facilities workforce availability

Other health facilities cover a wide variety of services, from infertility clinics to ambulance centers. Due to this variety, we provide only an overview of total staff for these facilities. Data on staff training was not collected, except for training on TB for the staff of the NCDC facilities, which is described in Section 5.1.2.

Table 128: Staffing of "other" facilities, by staff type and facility type

	Ambulance Service Center	Blood Bank	CDC & Immunology	Dental Clinic	Diabetes Treatment Center	Diagnostics & Imaging center	Dialysis Center	Infertility Centre	Medical Supply Warehouse	Mental clinic	NCDC Branches	Oncology Center	Physiotherapy Centre	Referral Medical Laboratory	Grand Total
<i>family physician</i>	-	-	-	-	-	-	-	-	-	-	2	-	-	-	2
<i>general practitioner</i>	44	15	5	3	7	-	148	6	2	2	22	10	2	1	267
<i>pediatrician</i>	3	-	4	-	3	-	4	1	-	-	-	-	-	-	15
<i>OB/GYN specialist</i>	1	-	3	-	2	-	-	29	-	-	1	-	-	-	36
<i>internal medicine specialist</i>	-	-	-	-	7	-	10	2	-	-	8	7	-	-	34
<i>orthopedic specialist</i>	2	-	1	-	-	-	-	-	-	-	-	2	-	-	5
<i>general surgeon</i>	-	-	11	-	9	-	1	-	1	-	-	-	-	-	22
<i>dermatologist</i>	-	-	3	-	1	-	-	-	-	-	1	-	-	5	10
<i>emergency care</i>	2	-	-	-	-	-	12	-	-	-	-	-	-	-	14
<i>ENT specialist</i>	-	-	3	-	-	-	-	-	-	-	-	-	-	-	3
<i>anesthesiologist</i>	-	-	3	-	-	2	11	2	-	-	-	-	-	-	18
<i>ophthalmologist</i>	-	-	2	-	4	-	-	-	-	-	-	-	-	-	6
<i>nurse</i>	138	29	33	226	50	20	566	57	25	3	103	48	2	39	1,339
<i>nurse assistant</i>	52	4	-	25	9	-	44	2	5	1	12	-	-	9	163
<i>midwife</i>	-	-	-	-	-	11	-	8	-	-	-	3	-	-	22
<i>radiologist</i>	-	-	2	-	-	32	6	2	-	-	-	-	-	-	42
<i>radiology technician</i>	31	-	7	26	11	15	20	3	16	-	57	3	-	-	189
<i>laboratory specialist</i>	68	81	1	-	-	-	40	15	6	-	7	5	-	52	275
<i>laboratory technician</i>	18	195	24	31	34	23	157	45	87	-	89	21	1	230	955
<i>urologist</i>	1	-	1	-	1	-	34	3	-	-	-	1	-	-	41
<i>dentist</i>	1	-	3	612	10	-	-	-	17	-	-	-	-	-	643
<i>dental technicians</i>	7	-	4	202	7	-	2	-	31	-	1	1	-	-	255
<i>physiotherapist</i>	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1
<i>physiotherapist technicians</i>	8	-	5	4	-	-	-	-	-	-	-	-	27	-	44
<i>pharmacist</i>	9	2	1	18	20	-	64	13	297	3	7	2	-	2	438
<i>pharmacy technicians</i>	5	-	8	12	21	-	40	7	222	3	23	-	-	4	345
<i>sanitarian</i>	199	2	9	62	21	7	94	15	11	-	4	14	-	7	445
<i>public health technician</i>	1	-	1	18	2	-	30	2	18	-	14	3	-	-	89
<i>administrator</i>	436	85	53	204	98	87	287	125	414	6	114	27	11	80	2,027
<i>accountant</i>	27	25	8	22	13	13	71	13	17	-	24	4	2	30	269
<i>office worker</i>	253	7	-	25	49	5	59	11	164	-	56	2	-	15	646
<i>services staff</i>	295	8	24	47	33	5	140	24	168	-	47	3	3	16	813
<i>other staff</i>	482	11	8	25	17	-	138	13	103	4	8	7	1	6	823
<b>Total</b>	<b>2,083</b>	<b>464</b>	<b>227</b>	<b>1,562</b>	<b>429</b>	<b>220</b>	<b>1,978</b>	<b>398</b>	<b>1,604</b>	<b>22</b>	<b>600</b>	<b>163</b>	<b>50</b>	<b>496</b>	<b>10,296</b>
<b>Number of facilities</b>	<b>47</b>	<b>5</b>	<b>1</b>	<b>12</b>	<b>3</b>	<b>2</b>	<b>26</b>	<b>5</b>	<b>52</b>	<b>1</b>	<b>23</b>	<b>1</b>	<b>1</b>	<b>7</b>	<b>186</b>
<b>Average N of staff/facility</b>	<b>44</b>	<b>93</b>	<b>227</b>	<b>130</b>	<b>143</b>	<b>110</b>	<b>76</b>	<b>80</b>	<b>31</b>	<b>22</b>	<b>26</b>	<b>163</b>	<b>50</b>	<b>71</b>	<b>-</b>

## 12 Hospital record keeping systems

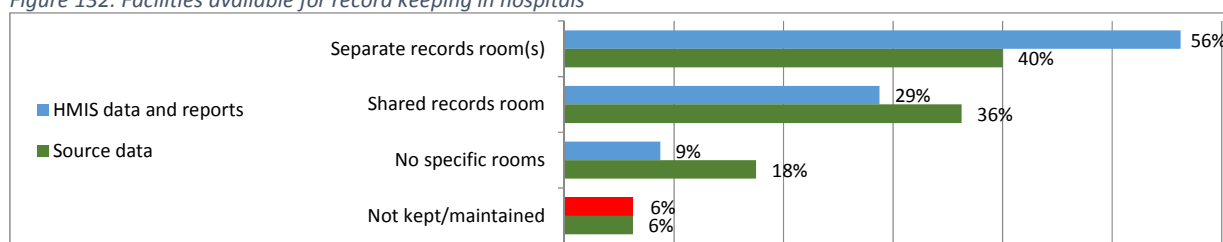
Health information systems are essential for decision making, with the available data informing most health management processes, such as financial planning, human resources planning, and orders for pharmaceutical supplies. They are also needed for monitoring and evaluation, to determine the success or failure of health interventions based on routine information such as service utilization data, disease prevalence, surveillance for outbreaks of vaccine-preventable diseases, as well as indicators of general population health such as mortality rates. Functional and reliable health reporting systems are imperative for the effective and efficient delivery of health services.

Since the onset of the conflict in Libya, the country's health information system has suffered setbacks in its capacity to provide routine reporting, partially due to movement of staff and population, and partially due to unreliable communication systems and the inability to conduct regular supervision. A more in-depth understanding of the functioning of the health information systems in place in the public health facilities would therefore be useful. Regrettably, the availability of data on health information systems in the SARA Core questionnaire used for the PHC facilities and the "other" facilities was very scant, and the questions were skipped in nearly all facilities so no representative data is available at this level. On the other hand, the SARA Hospital questionnaire included a specific module that focused on Facility information systems and statistics. This chapter provides a brief overview of relevant results.

### 12.1 Record keeping facilities

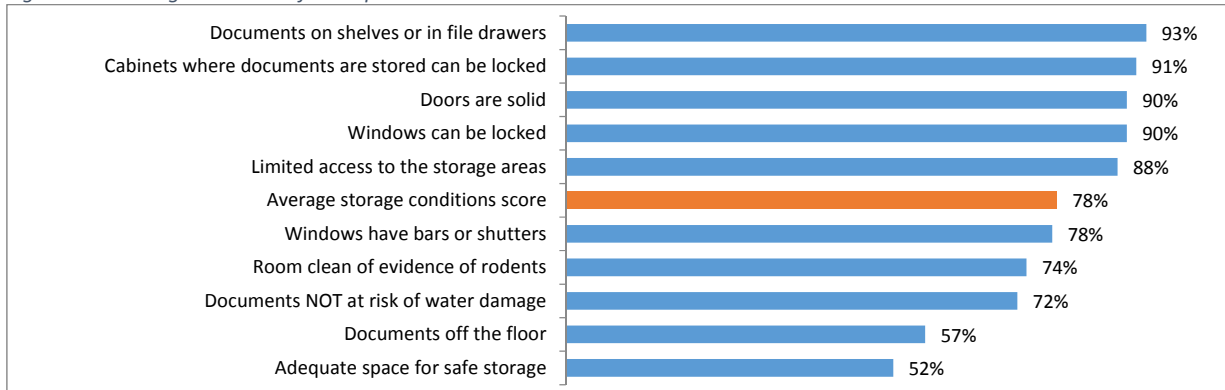
Of the 68 hospitals that reported on their record-keeping facilities, 6% stated that they did not keep or maintain records. HMIS data and reports were stored in separate records rooms in 56% of facilities, with source data such as patient files stored in a separate room in 40% of the hospitals. Shared records rooms were available in about one-third of hospitals, 29% for HMIS data and 36% for source data, while 9% of hospitals had no specific room available for the storage of HMIS data and reports, and 18% did not have a specific room available for the storage of source data.

Figure 132: Facilities available for record keeping in hospitals



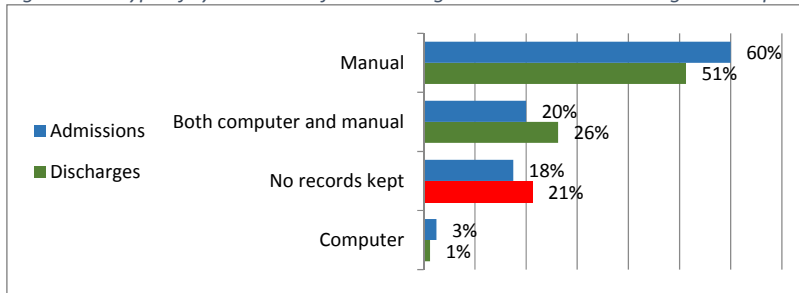
Of the storage rooms checked in the 68 hospitals surveyed, storage conditions for the records were generally quite good, with a median score for 10 indicators of 78% (Figure 133). Over 90% of records were kept in lockable cabinets with either shelves or drawers, in secure rooms with solid doors, lockable windows, and limited access to the storage area. The main challenges were that in only 52% of hospitals there was adequate space available for records storage, and at least some documentation was stored directly on the floor in 57% of facilities.

Figure 133: Storage conditions for hospital records



Admission records are kept in 83% of hospitals, while 74% of hospitals keep records on discharges. Around one-fifth of hospitals report that no records are kept on admissions (18%) and discharges (21%). Twenty-eight percent of the hospitals report that they maintain computerized databases. Most hospitals still rely solely on manual systems for record-keeping however, with 60% of admissions records and 51% of hospital discharge records kept using a paper-based system. A combination of computer and manual systems is maintained for admissions and discharges in 20% and 26% of hospitals, respectively, with computerized systems in use as the primary record-keeping system for only 3% of admissions and 1% of discharge cases in hospitals. Capacity for rolling out computer-based reporting using the internet is limited, as only 36% of hospitals report having internet access.

Figure 134: Type of systems used for recording admissions and discharges in hospitals



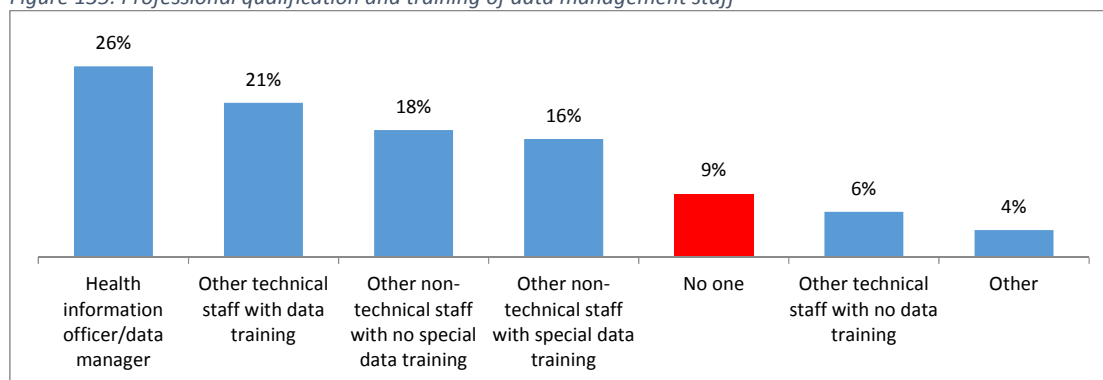
Records on all patients referred to the hospital area kept in 39% of hospitals, while 34% maintain records for all patients referred by the hospital to another facility. Only 60% of these records are compiled for routine reporting.

Approximately half of the facilities report that they submit mortality data to an external agency on a regular basis, with 25% reporting it as part of the HMIS. Around one-fourth of hospitals report that they supply mortality statistics to the local police authorities, civil registries, and local health authorities.

## 12.2 Staff and training

At least one dedicated staff member responsible for filing/receiving medical records is available in 74% of hospitals, and 78% of facilities report having a dedicated staff member for compiling health data. Eleven hospitals do not employ full-time HMIS staff, although on average, hospitals employ four full-time staff members to work with health information.

Figure 135: Professional qualification and training of data management staff



Data managers are not available in 9% of the hospitals (Figure 135), while HMIS staff in the remaining hospitals is a mixture of health information officers/data managers (26%) and other technical staff with data training (21%). Non-technical staff are responsible for data management in 34% of the hospitals, with only half of these having received special data training.

Only 5% of hospitals use ICD-10 (International Classification of Diseases 10th Revision) classifications for coding patient morbidity for in or outpatients and/or certified causes of death, and at least half of these facilities have staff trained in its use. Ideally, this system would be expanded to include all hospitals.

Table 129: Availability of staff trained in reporting and coding in hospitals

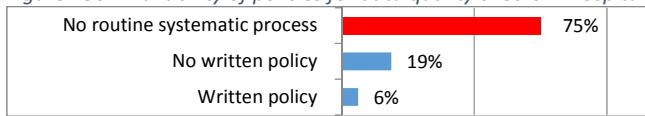
Training course	N hospitals reporting	% of staff with training
Person assigning ICD codes formally trained in ICD	4	75%
Person completing morbidity statistics formally trained in ICD	4	50%
Person coding cause of death formally trained in ICD	4	75%
Person selecting underlying cause of death formally trained in ICD	4	75%
Unit/staff managers trained in completing client data / report forms	20	50%
Person authorized to determine cause of death received formal training	80	11%
Person authorized to fill death certificate received formal training	68	18%

Less than half of hospitals have staff formally trained in routine reporting. Only half of a small number of hospitals reporting stated that they had unit managers trained in the completion of reporting forms. Formal training on cause-of-death-reporting was received by staff in only 11% of hospitals, whilst only 18% of hospitals reported that the person authorized to fill in death certificates received formal training on how to do this. Further staff training and the roll-out of ICD-10 coding is likely to improve the quality of morbidity and mortality reporting through the hospital system.

### 12.3 Data quality

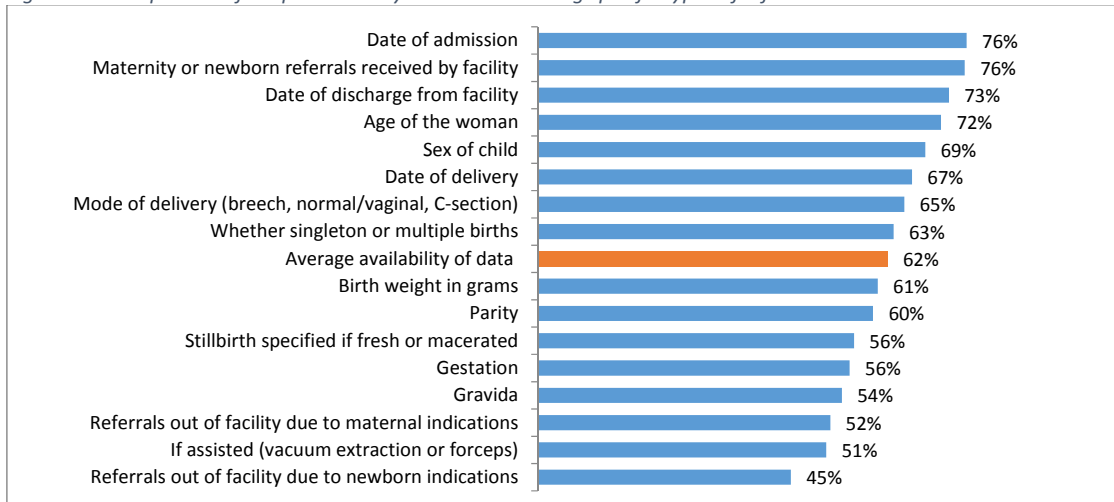
Most hospitals (75%) had no routine or systematic process in place for data quality checks for their reporting. Six percent had a written policy in place, while 19% of hospitals reported not having a written policy, but still conducting data quality management on an occasional basis (Figure 136). Evidence of quality checks done by either internal or external supervisors was reportedly available in 11 hospitals (14%).

Figure 136: Availability of policies for data quality checks in hospitals



A random check for data verification was done on delivery records in those hospitals which offered delivery services. The average availability of 16 trace indicators to be correctly recorded in the charts for a delivery case was 62%, which is considerably lower than the minimum acceptable level of 80%. The most commonly noted information in these records included date of admission, and whether it was a referral case or not, while the records were generally not clear at all as to whether maternal (52%) or newborn (45%) indications had led to referral out of the facility, and whether it had been an assisted delivery or not (51%). If the quality of patient records is reflective of the overall quality of patient care, these data suggest that there is still considerable room for improvement.

Figure 137: Proportion of hospital delivery records containing specific types of information





## 13 Hospital organizational structure and management

The SARA Hospital questionnaire included an entire module devoted to the governance and management of hospitals. This chapter provides a summary overview of many of the systems that were examined, while **Error! Reference source not found.** provides a comprehensive overview of all the questions asked for each hospital.

### 13.1 Governance and management

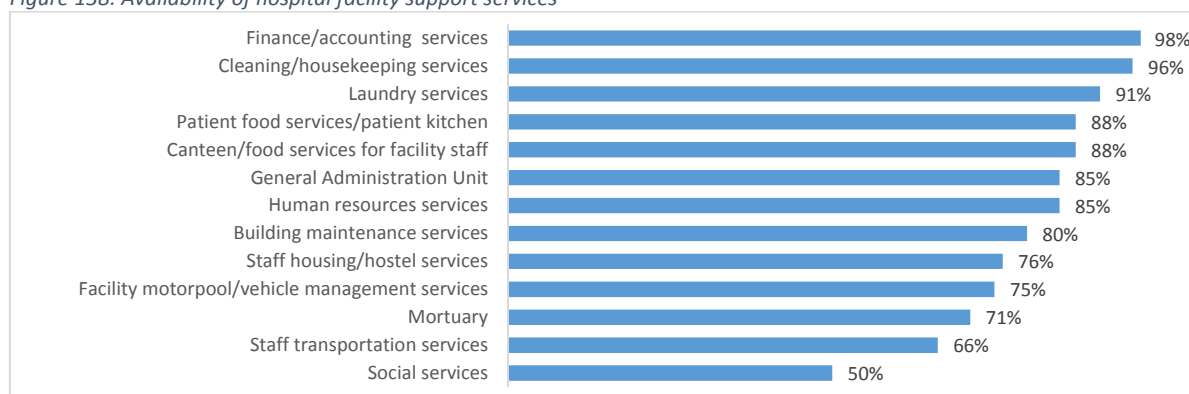
Of the functional hospitals, 59% reported having a core management team/committee. Of the management team members, 35% of the nursing and medical directors reportedly had received training in management, while 50% of the facility administrators and medical superintendents had received management training. Written management structures were available in 76% of the hospitals, while written job descriptions were present in 84% of the hospitals. Sixty-four percent of the hospitals reported having received any external supervision.

Manual or paper-based inventories for equipment were available in 49% of the hospitals, while 15% had computerized equipment inventories and 24% used a combination of both. No written inventories were available in 13% of the hospitals. Only 36 of the hospitals provided clear criteria, such as the cost of an item, for inclusion in the inventory lists.

### 13.2 Facility support services

The most widely available facility support services in the hospitals were the finance/accounting services (98%) while facility support systems for social services were the least available (50%).

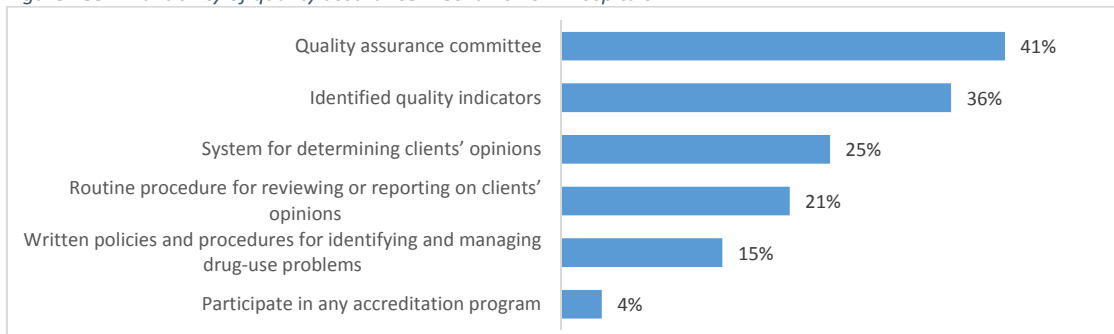
Figure 138: Availability of hospital facility support services



### 13.3 Quality Assurance/Improvement

The implementation of quality assurance mechanisms in hospitals in Libya is limited. Only 41% of the hospitals have quality assurance committees, and 4% participate in an accreditation programme. While 25% reported having any system for determining client's opinions, only 21% of the hospitals have routine procedures in place to review and report on these opinions.

Figure 139: Availability of quality assurance mechanisms in hospitals



Quality improvement by systematically assessing clinical practices against accepted standards is not frequently done in the hospital facilities in Libya. Routine implementation of formal case reviews is done in 16% of the hospitals. Death reviews are conducted in 36% of hospitals, with 11% of the facilities carrying out maternal and neonatal death reviews on a routine basis, and 21% routinely including pediatric patients.

Figure 140: Availability of case reviews and death reviews for quality assurance in hospitals



#### 13.4 Disaster Planning, facility Safety and Security.

Hospital safety measures are lacking in most hospitals. No smoking policies are in place in only 58% of facilities, while 30% of facilities have a written safety plan. Written emergency response plans were available in a mere 4% of hospitals.

#### 13.5 Standard Precautions for Infection Prevention.

Infection control committees were available in 39% of the hospitals, and 26% of the facilities had a person assigned for infection control, but no committee, with 35% of facilities having no infection control oversight in place. Half of the staff responsible for infection control have received training on infection control. Among those responsible for infection control, 41% were doctors, 25% were clinical officers, and 15% were nursing/midwifery staff, with 19% of the hospitals reporting other types of staff in charge.

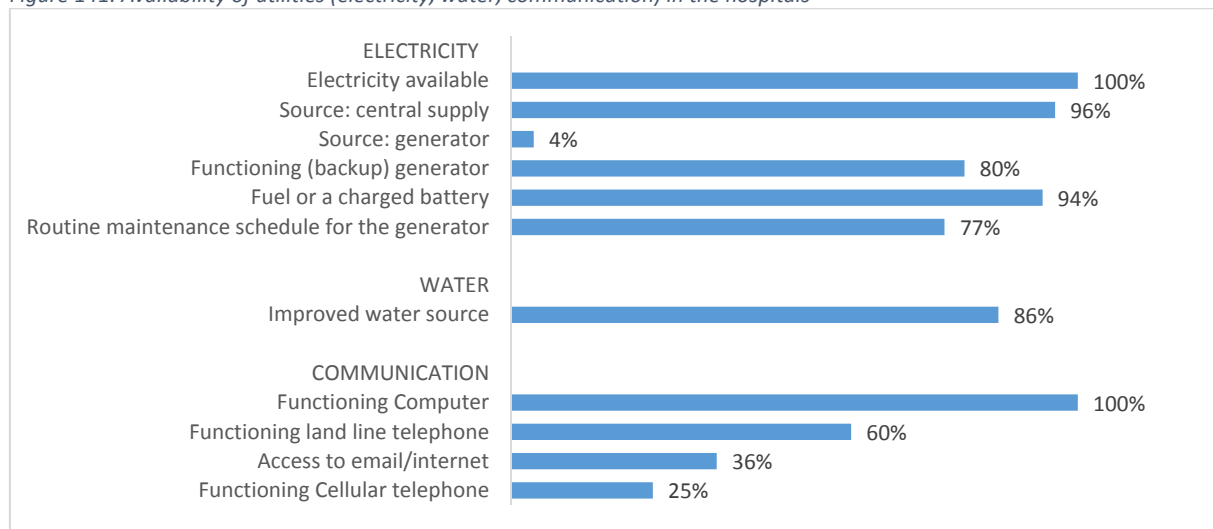
#### 13.6 Building and utilities

The hospital buildings used for emergency, surgery, and ICU were inspected in terms of the condition of walls, roof, and floors. On average, 24% of the buildings were found to be in good condition, 12% required at least one major repair, and the vast majority (64%) of buildings were in need of at least one medium-size repair.

Electricity was available in 100% of the hospitals, with 96% of the facilities reliant on the central supply, although there were regular power outages reported across the country occasionally lasting for more than two hours. Functional generators were available in 80% of the hospitals, with nearly all of them (94%) having fuel and/or a charged battery available. Routine maintenance schedules for the generators were available in 77% of the hospitals.

An improved source of clean water was available in 86% of the hospitals, while the availability of communication equipment was more limited. Although all the hospitals reported having functional computers, only 36% had access to email/internet. Functional land line telephones were available in 60% of facilities, while cell phones were available in 25%. This suggests that hospital staff are probably reliant on their own telephones for professional communication with external stakeholders such as suppliers.

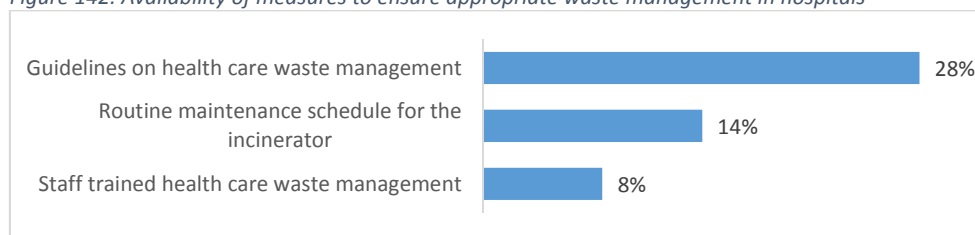
Figure 141: Availability of utilities (electricity, water, communication) in the hospitals



### 13.7 Waste management

The implementation of safe final disposal of sharps, and of medical waste other than sharps, was reported by 51% of the hospitals. Guidelines on health waste care management were available in 28% of the hospitals, while staff trained in health care waste management was available in 8% of the facilities.

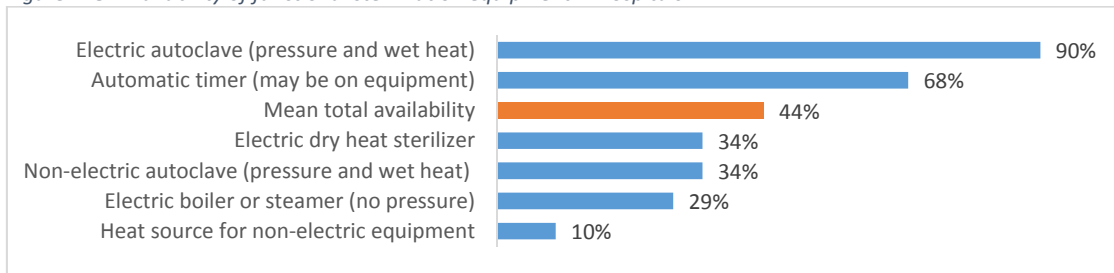
Figure 142: Availability of measures to ensure appropriate waste management in hospitals



### 13.8 Sterilization of equipment

The location where sterilization of equipment takes place in hospitals is usually in a central site (51%), although 44% of hospitals report that it is done in the surgical service area, and 5% of the hospitals have this service located in the area where delivery services are provided. Routine decontamination of equipment in a chlorine based solution prior to sterilization is reportedly practiced in 81% of the hospitals, while routine brush-scrubbing takes place in 73% of facilities. Sterilization is most frequently done using an electric autoclave, which is available and functional in 90% of the hospitals. The mean availability of functional sterilization equipment is 44%, largely due to a lack of a heat source for non-electric equipment (10%), and limited availability of electric boilers or steamers (29%), which may not always be essential.

Figure 143: Availability of functional sterilization equipment in hospitals



### 13.9 Transport

Vehicles are available in 83% of the hospitals, with the availability being lowest in the southern districts of the country. Routine maintenance schedules for these vehicles are in place in 48% of the hospitals, with the hospitals in the eastern part of the country being the most diligent in the maintenance of the available vehicles, likely because they are scarcer, and therefore more essentially to be in working condition.

### 13.10 Maintenance and repair of grounds, buildings and equipment

Grounds and building maintenance is implemented in various ways, with only 65% of hospitals reporting having an organized grounds/building maintenance service with designated maintenance personnel, of which 41% provide both grounds and building maintenance, 14% provide only grounds maintenance, and 10% offer only building maintenance.

Preventive and corrective equipment maintenance is carried out in 63% of the hospitals. Recalibration of sphygmomanometers is done in 29% of hospitals, while clear processes for repair and replacement of small medical equipment were reportedly in place for 55% of hospitals.

Figure 144: Availability of routine maintenance activities in hospitals

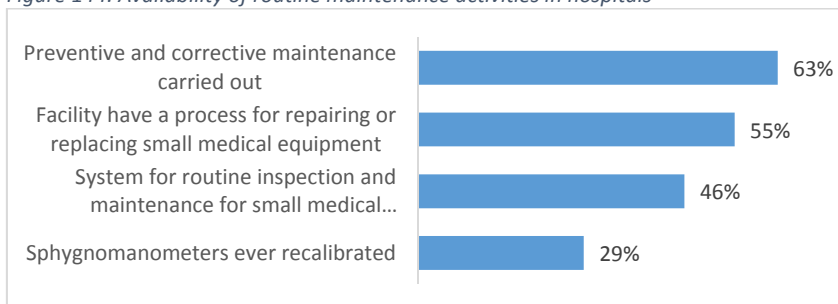


Table 130: Overview of hospital governance and management systems, by hospital

Hospital name		National Institute for Oncology - Subrata	Benghazi medical center	Sebha Medical Center	Tubruq Medical Center	Tripoli medical center	Oncology Center Misratah	Tajurra hospital	Adri hospital	Abi Sita chest diseases hospital	Al Abyar Hospital	Tripoli pediatric hospital	Chest diseases hospital, Misratah	Al Asarabaa hospital	Al Baradi Hospital	Al Temimi Hospital	Thuarra hospital	Al Jaghub hospital	Al Jalaa hospital - Benghazi	Al Jalaa gynecology hospital - Tripoli	Al Jameel Hospital	Al Hraha hospital	Burns & plastic surgery hospital - Tripoli	Abi Sleem trauma hospital	Al khums hospital	Psychiatric Diseases Hospital - Tripoli	Al-Zawia Hospital	Al Zintan hospital	
<b>SERVICE LEVELS</b>																													
Available service levels	Outpatient only									X				X	X							X							
	Inpatient only								X				X																
	Both out and inpatient	X	X	X	X	X	X	X		X		X	X				X	X	X	X	X		X	X	X	X	X	X	X
<b>MANAGEMENT</b>																													
Management team	Available	X			X	X	X	X	X	X	X	X	X	X	X					X	X	X	X		X	X		X	X
Finance committee	Available	X	X	X	X	X	X	X		X	X		X	X			X	X	X	X	X	X	X		X	X	X	X	X
Procurement committee for goods and services	Available	X	X	X		X	X	X		X	X		X	X		X	X		X	X	X	X			X	X		X	X
<b>PROCUREMENT AND INVENTORY</b>																													
Written procurement procedures for consumable commodities and services	Available	X		X		X	X	X		X	X	X	X	X		X	X		X	X		X			X	X	X	X	X
Written procurement procedures for medical equipment	Available	X		X		X	X	X	X		X	X	X	X		X	X		X	X	X	X					X	X	
Written procurement of drugs and therapeutics	Available	X	X	X		X	X	X	X		X	X	X	X		X	X		X	X	X	X		X	X		X	X	
Written inventory for equipment	Computerized							X	X	X																			X
	Manual/paper based	X	X			X	X				X			X	X	X	X	X	X	X	X	X					X	X	
	Both computerized & paper-based				X								X											X	X	X			
<b>ADMINISTRATIVE AND SUPPORT SERVICES</b>																													
Human resources services	Available	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Finance/accounting services	Available	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Social services	Available		X	X	X	X		X	X	X		X		X	X	X	X	X	X	X			X			X			
Staff transportation services	Available		X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X			X	X					X
Facility motorpool/vehicle management services	Available	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X
Staff housing/hostel services	Available	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Canteen/food services for facility staff	Available	X	X	X	X	X	X	X	X		X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Building maintenance services	Available	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Cleaning/housekeeping services	Available	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Laundry services	Available	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Patient food services/patient kitchen	Available	X	X	X	X	X	X	X	X		X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X
Mortuary	Available	X	X	X	X	X		X	X		X				X	X	X	X	X			X		X	X		X		
General Administration Unit	Available		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
<b>ADMINISTRATIVE STAFF</b>																													
Facility director/Medical superintendent	Available			X		X				X	X	X	X			X		X		X	X				X		X		
Facility administrator	Available	X	X	X		X				X	X	X	X					X		X	X				X	X			
Medical director	Available			X		X											X	X					X						
Nursing director	Available			X		X		X								X	X			X	X				X				
<b>QUALITY ASSURANCE</b>																													
Written management structure	Available			X		X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X			X	X	X	X
Written job descriptions	Available			X	X		X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
External supervision	Available	X	X	X	X	X	X		X	X	X	X		X			X	X					X	X		X	X	X	X
Participation in any accreditation program	Available			X	X								X																
	Unknown																						X						
Quality assurance committee	Available	X			X	X				X		X	X				X	X	X	X	X					X		X	X
Identified quality indicators	Available		X		X	X	X		X		X								X					X	X	X	X		

	Hospital name	National Institute for Oncology - Subrata	Benghazi medical center	Sebha Medical Center	Tubruq Medical Center	Tripoli medical center	Oncology Center Misratah	Tajurra hospital	Adri hospital	Abi Sitta chest diseases hospital	Al Abyar Hospital	Tripoli pediatric hospital	Chest diseases hospital, Misratah	Al Asaabaa hospital	Al Bardi Hospital	Al Temimi Hospital	Thuarra hospital	Al Jaghubub hospital	Al Jalaa hospital – Benghazi	Al Jalaa gynecology hospital - Tripoli	Al Jameel Hospital	Al Hraaba hospital	Burns & plastic surgery hospital - Tripoli	Abi Sleem trauma hospital	Al khums hospital	Psychiatric Diseases Hospital – Tripoli	Al –Zawia Hospital	Al Zintan hospital
Written policies and procedures for identifying and managing drug-use problems	Available					X		X	X										X							X		
A system for client feedback	Available		X				X	X				X	X							X	X	X			X			X
Routinely carries out formal case reviews	Available	X				X	X	X											X	X	X							
Death reviews carried out on a routine basis	Available	X	X	X	X	X	X	X				X				X				X	X	X					X	
Maternal and neonatal death reviews carried out on a routine basis	Available		X		X															X								
	Never had a maternal death	X					X	X		X		X	X			X			X			X		X		X		
Reviews routinely include pediatric patients	Available		X		X	X		X				X							X	X								
	Never had a pediatric death	X														X												
<b>SAFETY AND SECURITY</b>																												
"No Smoking" policy for facility grounds	Available	X		X	X	X			X	X		X	X		X			X	X	X	X	X	X	X	X			X
Written fire safety plan	Available		X		X	X	X	X	X			X	X		X			X	X	X	X				X		X	
Most recent drill for following the fire safety plan	Within past 6 months																											
	Within past 7-12 months																											
	Within past 13-24 months		X				X						X															
	More than 24 months																	X										
	Never			X		X		X	X						X					X					X		X	X
	Unknown				X							X									X							
Written emergency response plan	Available							X				X																
Infection prevention committee/person	Committee				X	X	X	X		X		X	X						X	X	X			X	X	X		
	Person assigned but no committee	X	X	X					X			X	X				X									X	X	
Person responsible for infection prevention received specific training	Available		X	X			X			X		X	X							X				X	X	X		
	Unable to confirm	X			X		X					X	X								X			X	X	X		
Qualification of the person responsible for infection prevention	Doctor		X		X	X	X	X	X								X			X				X	X	X		X
	Clinical officer												X											X	X	X		
	Nurse/midwife																				X				X			
	Other	X		X								X							X									

	Hospital name	Diabetes and endocrine hospital - Emhamd Al Meqrif Hospital Eidabiya	Al Shewarif hospital	Al Afia hospital - Houn	Al Aujiat Hospital	Ophthalmology hospital - Tripoli	Al Quba Hospital	Al Qarabouli hospital	Al Kuriaat hospital	Al Kewefa chest diseases hospital	Almarj Hospital	Al Khadra hospital	Al Wehda Hospital	Weedan hospital	Mitiga hospital	Be ar Al Austa Millad hospital	Brak hospital	Bergan hospital	Bin Jawad hospital	Bani waleed hospital	Tazarbu hospital	Traghen hospital	Tarhuna hospital	Tukaraa Hospital	Tegi hospital	Jado Hospital	Jardas Al Abeer Hospital	
<b>SERVICE LEVELS</b>																												
Available service levels	Outpatient only			X																								X
	Inpatient only							X									X	X										
	Both out and inpatient	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	
<b>MANAGEMENT</b>																												
Management team	Available			X		X	X	X	X		X		X	X		X		X		X						X		
Finance committee	Available	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	
Procurement committee for goods and services	Available	X	X	X	X				X	X	X		X	X	X	X	X			X	X	X		X	X	X		
<b>PROCUREMENT AND INVENTORY</b>																												
Written procurement procedures for consumable commodities and services	Available	X	X	X	X		X		X	X	X	X	X			X	X			X	X	X		X	X	X		

	Hospital name	Diabetes and endocrine hospital - Emhamd Al Meqrif Hospital -Eilatbiva	Al Shewarif hospital	Al Afia hospital - Houn	Al Aujiat Hospital	Ophthalmology hospital - Tripoli	Al Quba Hospital	Al Qarabouli hospital	Al Kuriaat hospital	Al Kewefia chest diseases hospital	Almarj Hospital	Al Khadra hospital	Al Wehda Hospital	Weddan hospital	Mitiga hospital	Be ar Al Austa Miliad hospital	Brak hospital	Bergan hospital	Bin Jawad hospital	Bani waleed hospital	Tazarbu hospital	Traghen hospital	Tarhuna hospital	Tukaraa Hospital	Tegi hospital	Jado Hospital	Jardas Al Abeed Hospital
Written procurement procedures for medical equipment	Available	X	X	X					X	X	X				X	X	X		X	X	X		X	X	X		
Written procurement of drugs and therapeutics	Available	X	X	X	X		X		X	X	X		X		X	X	X	X	X	X	X		X	X	X		
Written inventory for equipment	Computerized	X	X						X															X			
	Manual/paper based		X		X	X	X							X						X	X	X			X	X	
	Both computerized and paper-based				X					X		X	X			X	X	X					X				
<b>ADMINISTRATIVE AND SUPPORT SERVICES</b>																											
Human resources services	Available	X	X		X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Finance/accounting services	Available	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Social services	Available	X						X		X	X	X	X	X	X					X			X				
Staff transportation services	Available	X	X		X			X	X	X		X	X		X	X	X	X		X	X	X	X	X		X	
Facility motorpool/vehicle management services	Available	X	X		X			X	X	X		X	X		X	X	X	X		X	X	X	X	X	X	X	
Staff housing/hostel services	Available	X	X		X			X	X	X		X	X	X	X	X	X	X		X	X	X	X	X	X	X	
Canteen/food services for facility staff	Available	X	X	X	X		X	X	X	X	X	X	X		X	X	X	X		X	X	X	X	X	X	X	
Building maintenance services	Available	X	X	X	X		X	X		X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	
Cleaning/housekeeping services	Available	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	
Laundry services	Available	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	
Patient food services/patient kitchen	Available	X	X	X	X	X	X		X	X	X	X	X		X	X	X	X		X	X	X	X	X	X	X	
Mortuary	Available	X	X		X	X	X			X	X	X	X	X			X	X	X	X	X	X	X	X		X	
General Administration Unit	Available	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
<b>ADMINISTRATIVE STAFF</b>																											
Facility director/Medical superintendent	Available	X			X	X	X	X			X	X	X	X	X				X	X	X	X				X	
Facility administrator	Available	X			X	X	X	X		X	X		X	X	X				X	X		X				X	
Medical director	Available	X			X	X	X	X			X		X	X					X	X		X	X				
Nursing director	Available	X	X			X	X	X			X								X	X		X	X				
<b>QUALITY ASSURANCE</b>																											
Written management structure	Available	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Written job descriptions	Available	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X
External supervision	Available			X				X		X			X	X	X					X			X		X	X	
Participation in any accreditation program	Available																										
	Unknown							X											X				X				
Quality assurance committee	Available			X	X	X		X	X		X		X					X	X	X					X		
Identified quality indicators	Available		X							X	X					X	X	X	X	X	X				X		
Written policies and procedures for identifying and managing drug-use problems	Available					X					X				X	X			X								
A system for client feedback	Available				X											X			X								
Routinely carries out formal case reviews	Available	X													X	X											
Death reviews carried out on a routine basis	Available	X			X		X							X				X	X	X		X					
Maternal and neonatal death reviews carried out on a routine basis	Available						X	X	X					X	X				X			X			X		
	Never had a maternal death	X		X		X	X	X	X					X	X									X			
Reviews routinely include pediatric patients	Available				X						X							X	X								
	Never had a pediatric death	X												X													
<b>SAFETY AND SECURITY</b>																											
"No Smoking" policy for facility grounds	Available	X	X		X				X	X	X	X		X		X	X	X		X	X					X	
Written fire safety plan	Available				X	X					X		X			X											
Most recent drill for following the fire safety plan	Within past 6 months																										
	Within past 7-12 months																										

	Hospital name	Diabetes and endocrine hospital - Enhamd Al Meqrif Hospital-Elaabiva	Al Shewarif hospital	Al Afia hospital - Houn	Al Aujliat Hospital	Ophthalmology hospital - Tripoli	Al Quba Hospital	Al Qarabouli hospital	Al Kuriaat hospital	Al Kewefia chest diseases hospital	Almarj Hospital	Al Khadra hospital	Al Wehda Hospital	Weddan hospital	Mitiga hospital	Be ar Al Austa Milhad hospital	Brak hospital	Bergan hospital	Bin Jawad hospital	Bani waleed hospital	Tazarbu hospital	Traghen hospital	Tarhuna hospital	Tukaraa Hospital	Tegi hospital	Jado Hospital	Jardas Al Abeed Hospital
	Within past 13-24 months															X											
	More than 24 months				X	X					X		X														
	Never																										
	Unknown											X															
Written emergency response plan	Available																										
Infection prevention committee/person	Committee			X						X	X	X			X					X		X	X		X		
	Person assigned but no committee	X	X	X	X	X		X	X							X	X	X			X						
Person responsible for infection prevention received specific training	Available	X		X					X	X		X			X	X	X					X			X		
	Unable to confirm										X										X						
Qualification of the person responsible for infection prevention	Doctor		X	X						X		X			X	X											
	Clinical officer	X				X														X			X				
	Nurse/midwife			X		X			X								X								X		
	Other							X			X										X	X					

	Hospital name	Dawoon hospital	Zitan hospital	Zwara Albahree Hospital	Siouq hospital	Semno Hospital	Sussa Hospital	Sooq Al Khamees hospital - Al khums	Shehat Chest Hospital	Subrata Hospital	Surmann Hospital	Benghazi hospital for pediatrics and	Tripoli central hospital	Atiya Al Kaseh- Al Kuffra hospital	Ali Omar Askar hospital-Sbeia	Omar Al Mokhtar Hospital	Ghadames hospital	Gharyan hospital	Gmenis hospital	Kabaw hospital	Murziq hospital	Mizda hospital	Misslata hospital	Misratah hospital	Nalout hospital	Yaffren Hospital	Jalou hospital	Total	
<b>SERVICE LEVELS</b>																													
Available service levels	Outpatient only	X				X		X			X									X									12
	Inpatient only			X	X															X								X	9
	Both out and inpatient		X				X		X	X		X	X	X	X	X	X	X	X			X	X	X	X	X	X		59
<b>MANAGEMENT</b>																													
Management team	Available				X		X			X	X		X	X	X	X	X	X		X			X	X	X	X	X		47
Finance committee	Available	X	X		X		X			X	X	X		X	X	X	X	X		X	X	X	X	X	X	X	X		65
Procurement committee for goods and services	Available									X	X	X	X		X		X	X		X		X	X	X	X	X	X		48
<b>PROCUREMENT AND INVENTORY</b>																													
Written procurement procedures for consumable commodities and services	Available						X			X		X			X	X	X	X	X	X	X	X	X		X	X	X		52
Written procurement procedures for medical equipment	Available				X					X		X			X	X	X	X	X	X	X	X		X	X	X	X		48
Written procurement of drugs and therapeutics	Available						X			X		X		X	X	X	X	X	X	X	X	X	X		X	X	X		53
Written inventory for equipment	Computerized				X							X		X								X							12
	Manual/paper based			X						X	X			X		X	X	X		X			X		X	X	X		39
	Both computerized & paperbased		X				X		X			X							X				X						19
<b>ADMINISTRATIVE AND SUPPORT SERVICES</b>																													
Human resources services	Available	X		X	X	X	X			X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	68
Finance/accounting services	Available	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	78
Social services	Available	X	X	X	X	X	X			X		X	X	X	X				X		X			X					40
Staff transportation services	Available		X		X	X	X					X	X	X	X		X		X		X	X	X		X	X	X		53
Facility motorpool/vehicle management services	Available		X			X	X			X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X		60
Staff housing/hostel services	Available		X	X		X	X			X	X	X	X	X	X	X	X	X		X		X	X	X	X	X	X		61
Canteen/food services for facility staff	Available		X	X	X	X	X		X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X		70
Building maintenance services	Available	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X		64
Cleaning/housekeeping services	Available	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		77



	Hospital name	Dawoon hospital	Zitan hospital	Zwara Albahree Hospital	Siouq hospital	Semmo Hospital	Sussa Hospital	Sooq Al Khamees hospital - Al khums	Shehat Chest Hospital	Subrata Hospital	Surmann Hospital	Benghazi hospital for pediatrics and	Tripoli central hospital	Atiya Al Kaseh- Al Kuffra hospital	Al Omar Asker hospital- Spela	Omar Al Mokhtar Hospital	Ghadames hospital	Gharyan hospital	Gmenis hospital	Kabaw hospital	Murzliq hospital	Mizda hospital	Misslata hospital	Misratah hospital	Nalout hospital	Yaffren Hospital	Jalou hospital	Total
Laundry services	Available	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	73
Patient food services/patient kitchen	Available		X	X	X	X	X		X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	70
Mortuary	Available	X	X	X	X	X	X			X		X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	57
General Administration Unit	Available	X	X	X	X	X	X		X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	68
<b>ADMINISTRATIVE STAFF</b>																												
Facility director/Medical superintendent	Available	X	X	X	X	X	X		X	X							X		X			X		X	X			40
Facility administrator	Available	X	X	X	X	X	X		X		X				X				X				X	X				40
Medical director	Available		X	X	X	X	X		X							X			X		X							28
Nursing director	Available	X	X	X	X	X			X		X								X	X	X							28
<b>QUALITY ASSURANCE</b>																												
Written management structure	Available		X		X	X	X			X		X	X		X	X	X	X		X	X	X	X		X	X	X	61
Written job descriptions	Available	X	X	X	X	X	X		X	X		X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	67
External supervision	Available	X				X	X	X		X		X	X		X	X	X	X		X	X		X	X	X	X	X	51
Participation in any accreditation program	Available																											3
	Unknown			X		X							X			X												9
Quality assurance committee	Available				X						X			X			X	X	X			X	X			X		33
Identified quality indicators	Available		X	X								X	X									X	X	X	X			29
Written policies and procedures for identifying and managing drug-use problems	Available											X																12
A system for client feedback	Available									X		X					X			X		X		X	X			2
Routinely carries out formal case reviews	Available									X		X								X		X			X			13
Death reviews carried out on a routine basis	Available			X			X					X	X	X			X				X				X			29
Maternal and neonatal death reviews carried out on a routine basis	Available		X																X		X				X			9
	Never had a maternal death	X			X							X	X							X							X	26
Reviews routinely include pediatric patients	Available					X						X		X			X				X				X			17
	Never had a pediatric death											X							X									6
<b>SAFETY AND SECURITY</b>																												
"No Smoking" policy for facility grounds	Available	X		X						X		X		X	X			X	X	X	X	X	X	X	X	X	X	46
Written fire safety plan	Available			X								X										X	X					24
Most recent drill for following the fire safety plan	Within past 6 months																											0
	Within past 7-12 months																											0
	Within past 13-24 months																											4
	More than 24 months																								X			3
	Never			X								X											X	X				17
Unknown																												4
Written emergency response plan	Available			X																								3
Infection prevention committee/person	Committee		X	X						X			X	X	X		X					X		X	X			31
	Person assigned but no committee				X							X													X			21
Person responsible for infection prevention received specific training	Available									X		X	X	X	X						X		X	X				26
	Unable to confirm																											10
Qualification of the person responsible for infection prevention	Doctor		X										X		X		X								X			21
	Clinical officer			X	X					X				X												X		13
	Nurse/midwife																						X					8
	Other											X									X							10

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# Annexes

## Annex I: Master Facility List, with staffing and services reported for each facility

### HOSPITALS

Facility number	Region	District	Municipality	Hospital name	Functionality	Reason for closure	Facility type	N medical staff employed	Out/Inpt Services available	ANC	Delivery services	CT/ONC	Immunization	Child Health	Tuberculosis	VCT and/or PMTCT	SITI	Diabetes	CVD	Chron Resp Disease	Cervical cancer	Mental health	Dental health	Blood transfusion	Emergency	Minor surgery	Major surgery	Diagnostic testing	Imaging	Pharmacy stores	N of services offered	
1	270501	Benghazi	Alkufra	Alkufra	Atiya Al Kaseh- Al Kuffra hospital	Open		General Hospital or Medical Hospital	473	Both	X	X	X	X																		13
2	260401	Benghazi	Alkufra	Tazirbu	Tazarbu hospital	Open		Rural Hospital	246	Both	X	X	X	X					X	X												12
3	240401	Benghazi	Al Wahat/Ajdabia	Albrayga	Al Brega Hospital	Closed	Under maintenance	General Hospital or Medical Hospital	135																						0	
4	250501	Benghazi	Al Wahat/Ajdabia	Ejdabia	Emhamd Al Meqrif Hospital Ejdabiya	Open		General Hospital or Medical Hospital	1,529	Both	X	X	X	X					X	X			X	X	X	X	X	X	X	X	15	
5	200501	Benghazi	Al Wahat/Ajdabia	Jalu	Jalou hospital	Open		General Hospital or Medical Hospital	262	Inp't	X	X	X	X										X	X	X	X	X	X	X	10	
6	190504	Benghazi	Benghazi	Benghazi	Al Hawari General hospital	Closed	Damaged	General Hospital or Medical Hospital	998																							
7	190609	Benghazi	Benghazi	Benghazi	Benghazi Psychiatric hospital	Closed	Damaged	Specialized Hospital	751																							
8	190605	Benghazi	Benghazi	Benghazi	Cardiology center Benghazi	Closed	Damaged	Specialized Hospital	150																							
9	190603	Benghazi	Benghazi	Benghazi	ENT and Urology Hospital Al Hawari	Closed	Damaged	Specialized Hospital	252																							
10	190607	Benghazi	Benghazi	Benghazi	Kidney center Benghazi.	Closed	Damaged	Specialized Hospital	242																							
11	190505	Benghazi	Benghazi	Benghazi	7th October hospital Benghazi	Closed	Not accessible	General Hospital or Medical Hospital	520																							
12	190502	Benghazi	Benghazi	Benghazi	Al Jumhuriya hospital	Closed	Not accessible	General Hospital or Medical Hospital	998																							
13	190604	Benghazi	Benghazi	Benghazi	Benghazi Ophthalmology hospital	Closed	Not accessible	Specialized Hospital	253																							
14	190506	Benghazi	Benghazi	Benghazi	Benghazi medical center	Open		General Hospital or Medical Hospital	3,783	Both	X	X	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	18	
15	190608	Benghazi	Benghazi	Benghazi	Al Jalaa hospital – Benghazi	Open		Specialized Hospital	1,686	Both														X	X	X	X	X	X	X	7	
16	190602	Benghazi	Benghazi	Benghazi	Al Kewefia chest diseases hospital	Open		Specialized Hospital	643	Both					X					X				X	X	X	X	X	X	X	6	
17	190601	Benghazi	Benghazi	Benghazi	Benghazi hosp for pediatrics & surgery	Open		Specialized Hospital	1,217	Both				X					X	X	X			X	X	X	X	X	X	X	11	
18	170401	Benghazi	Benghazi	Gemienis	Gmenis hospital	Open		Rural Hospital	327	Inp't	X		X	X										X	X	X	X	X	X	X	8	
19	180401	Benghazi	Benghazi	Suloug	Slouq hospital	Open		Rural Hospital	315	Inp't	X		X	X												X	X	X	X	X	7	
20	690501	Central	Aljufra	Aljufra	Al Afia hospital Houn	Open		General Hospital or Medical Hospital	461	Both	X	X	X	X	X				X	X	X		X	X	X	X	X	X	X	X	15	
21	690401	Central	Aljufra	Aljufra	Weddan hospital	Open		Rural Hospital	246	Both	X	X	X	X	X				X	X	X		X	X	X	X	X	X	X	X	13	
22	540501	Central	Misratah	Bani Waleed	Bani waleed hospital	Open		General Hospital or Medical Hospital	563	Both	X	X	X	X	X				X	X	X			X	X	X	X	X	X	X	15	
23	560401	Central	Misratah	Misrata	Tawergha hospital	Closed	Damaged	Rural Hospital	135																							
24	560501	Central	Misratah	Misrata	Misratah hospital	Open		General Hospital or Medical Hospital	1,767	Both	X	X	X	X	X				X	X	X		X	X	X	X	X	X	X	X	17	
25	560601	Central	Misratah	Misrata	Chest diseases hospital Misratah	Open		Specialized Hospital	322	Both	X				X									X		X	X	X	X	X	7	
26	560602	Central	Misratah	Misrata	Oncology Center Misratah	Open		Specialized Hospital	515	Both									X	X	X	X	X	X	X	X	X	X	X	X	12	
27	550501	Central	Misratah	Zlitan	Zlitan hospital	Open		General Hospital or Medical Hospital	1,311	Both	X	X	X	X	X				X	X			X	X	X	X	X	X	X	X	14	
28	280401	Central	Sirt	Hrawa	Bin Jawad hospital	Open		Rural Hospital	332	Both				X					X	X	X		X	X	X	X	X	X	X	X	10	
29	290501	Central	Sirt	Sirt	Bin Sinaa hospital	Closed	Not accessible	General Hospital or Medical Hospital	526																							
30	100502	East	Al Jabal Al Akhdar	Albayda	Omar Al Mokhtar Hospital	Open		General Hospital or Medical Hospital	283	Both	X	X	X	X	X				X	X	X		X	X	X	X	X	X	X	X	15	
31	100501	East	Al Jabal Al Akhdar	Albayda	Thuarra hospital	Open		General Hospital or Medical Hospital	1,690	Both	X	X	X	X	X				X	X	X		X	X	X	X	X	X	X	X	14	
32	100401	East	Al Jabal Al Akhdar	Derna	Sussa Hospital	Open		Rural Hospital	352	Both	X	X	X	X					X	X	X		X	X	X	X	X	X	X	X	13	
33	110601	East	Al Jabal Al Akhdar	Shahhat	Shehat Chest Hospital	Open		General Hospital or Medical Hospital	369	Both					X					X											5	
34	160401	East	Almarj	Alabyar	Al Abyar Hospital	Open		Rural Hospital	249	Outp't	X	X	X	X					X	X				X	X	X	X	X	X	X	9	
35	120501	East	Almarj	Almarj	Almarj Hospital	Open		General Hospital or Medical Hospital	1,365	Both	X	X	X	X	X				X	X	X			X	X	X	X	X	X	X	15	
36	130401	East	Almarj	Assahel	Jardas Al Abeer Hospital	Open		Rural Hospital	185	Outp't				X					X				X								6	
37	150401	East	Almarj	Assahel	Tukaraa Hospital	Open		Rural Hospital	175	Outp't				X										X	X	X	X	X	X	X	6	
38	60401	East	Darnah	Alqubba	Al Quba Hospital	Open		General Hospital or Medical Hospital	248	Both	X	X	X	X	X				X	X	X			X	X	X	X	X	X	X	14	
39	90402	East	Darnah	Assahel	Al Temimi Hospital	Open		Rural Hospital	302	Outp't	X	X	X	X					X	X	X			X	X	X	X	X	X	X	12	
40	50501	East	Darnah	Derna	Al Wehda Hospital	Open		General Hospital or Medical Hospital	1,760	Both	X	X	X	X	X				X	X			X	X	X	X	X	X	X	X	15	
41	40401	East	Al Betnan	Al Jagboub	Al Jaghub hospital	Open		Rural Hospital	191	Both	X	X	X	X	X				X	X	X		X	X	X	X	X	X	X	X	13	
42	20501	East	Al Betnan	Tobruk	Tubruq Medical Center	Open		General Hospital or Medical Hospital	2,208	Both	X	X	X	X	X				X	X	X	X	X	X	X	X	X	X	X	X	19	
43	10401	East	Al Betnan	Tobruk	Al Bardi Hospital	Open		Rural Hospital	177	Outp't																						4
44	510501	South	Wadi Ashati	Al Shate Al Sharge	Brak hospital	Open		General Hospital or Medical Hospital	460	Inp't	X	X	X	X										X	X	X	X	X	X	X	10	
45	531603	South	Wadi Ashati	Al Shate Al Sharge	Adri hospital	Open		Rural Hospital	349	Inp't	X	X	X	X										X	X	X	X	X	X	X	8	
46	530401	South	Wadi Ashati	Al Shate Al Sharge	Bergan hospital	Open		Rural Hospital	144	Inp't	X	X	X	X										X	X	X	X	X	X	X	11	
47	470501	South	Ghat	Ghat	Ghatt hospital	Closed	Under maintenance	General Hospital or Medical Hospital	295																							

Facility number	Region	District	Municipality	Hospital name	Functionality	Reason for closure	Facility type	N medical staff employed	Out/Imp't Services available	ANC	Delivery services	C-EmONC	Immunization	Child Health	Tuberculosis	VCT and/or PMTCT	STI	Diabetes	CVD	Chron. Resp. Disease	Cervical cancer	Mental health	Dental health	Blood transfusion	Emergency	Minor surgery	Major surgery	Diagnostic testing	Imaging	Pharmacy stores	N of services offered	
48	430501	South	Murzuq	Murzuq	Murziq hospital	Open		General Hospital or Medical Hospital	584	Both	X	X	X	X	X					X	X	X	X	X	X	X	X	X	X	14		
49	440401	South	Murzuq	Taraghin	Traghen hospital	Open		Rural Hospital	318	Both	X	X	X	X	X		X		X	X					X	X	X	X	X	X	14	
50	450501	South	Sabha	Sabha	Sebha Medical Center	Open		General Hospital or Medical Hospital	1,707	Both	X	X	X	X	X									X	X	X	X	X	X	X	14	
51	450401	South	Sabha	Sabha	Semno Hospital	Open		Rural Hospital	181	Outp't																					2	
52	480501	South	Wadi Al Haya	Ubari	Ubari hospital	Closed	Damaged	General Hospital or Medical Hospital	296																							
53	320501	Tripoli	Al Jifarah	Azzahra	Al Zaharra hospital	Closed	Damaged	General Hospital or Medical Hospital	530																							
54	340501	Tripoli	Al Jifarah	Espeaa	Ali Omar Askar hospital Sbeia	Open		General Hospital or Medical Hospital	1,514	Both		X	X	X	X					X			X	X	X	X	X	X	X	X	13	
55	620401	Tripoli	Almargeb	Alhawamid	Al Dawoon hospital	Open		Rural Hospital	289	Outp't									X	X					X	X	X	X	X	X	7	
56	600501	Tripoli	Almargeb	Alkhums	Al khums hospital	Open		General Hospital or Medical Hospital	1,378	Both	X	X	X	X	X		X	X	X	X			X	X	X	X	X	X	X	X	17	
57	590401	Tripoli	Almargeb	Garabolli	Al Qarabouli hospital	Open		Rural Hospital	359	Imp't		X	X	X	X									X	X	X	X	X	X	X	9	
58	570501	Tripoli	Almargeb	Msallata	Misslata hospital	Open		General Hospital or Medical Hospital	1,048	Both	X	X	X	X	X				X	X	X	X		X	X	X	X	X	X	X	16	
59	600402	Tripoli	Almargeb	Sug Alkhamees	Sooq Al Khamees hospital Al khums	Open		Rural Hospital	239	Outp't					X				X	X	X			X	X	X	X	X	X	X	9	
60	610501	Tripoli	Almargeb	Tarhuna	Tarhuna hospital	Open		General Hospital or Medical Hospital	747	Both	X	X	X	X	X				X	X	X			X	X	X	X	X	X	X	15	
61	660502	Tripoli	Tripoli	Abusliem	Al Khadra hospital	Open		General Hospital or Medical Hospital	1,883	Both	X	X	X	X	X				X	X	X	X	X	X	X	X	X	X	X	X	17	
62	660601	Tripoli	Tripoli	Abusliem	Abi Sleem trauma hospital	Open		Specialized Hospital	2,018	Both														X	X	X	X	X	X	X	7	
63	670502	Tripoli	Tripoli	Ain Zara	Salahuddin hospital (closed)	Closed	Under maintenance	General Hospital or Medical Hospital	970																							
64	670601	Tripoli	Tripoli	Ain Zara	Diabetes and endocrine hospital	Open		Specialized Hospital	554	Both							X										X	X	X	X	4	
65	680601	Tripoli	Tripoli	Hai Alandalus	Psychiatric Diseases Hospital Tripoli	Open		Specialized Hospital	747	Both									X	X	X	X						X	X	X	6	
66	630501	Tripoli	Tripoli	Sug Aljumaa	Mitiga hospital	Open		General Hospital or Medical Hospital	741	Both	X				X				X	X	X	X	X	X	X	X	X	X	X	X	14	
67	630601	Tripoli	Tripoli	Sug Aljumaa	Abi Sitta chest diseases hospital	Open		Specialized Hospital	535	Both						X			X	X	X			X			X	X	X	X	9	
68	650602	Tripoli	Tripoli	Tajoura	Be'ar Al Austa Milad hospital	Open		General Hospital or Medical Hospital	348	Both							X	X	X	X						X	X	X	X	X	8	
69	650601	Tripoli	Tripoli	Tajoura	Tajurra hospital	Open		General Hospital or Medical Hospital	1,590	Both	X	X	X	X	X				X	X	X	X	X	X	X	X	X	X	X	X	16	
70	640501	Tripoli	Tripoli	Tripoli	Tripoli central hospital	Open		General Hospital or Medical Hospital	5,021	Both						X	X	X	X	X			X	X	X	X	X	X	X	X	12	
71	670501	Tripoli	Tripoli	Tripoli	Tripoli medical center	Open		General Hospital or Medical Hospital	6,260	Both	X	X	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	19
72	640603	Tripoli	Tripoli	Tripoli	Al Jaaa gynecology hospital Tripoli	Open		Specialized Hospital	1,605	Both	X	X	X	X	X				X	X	X	X			X	X	X	X	X	X	X	15
73	640601	Tripoli	Tripoli	Tripoli	Burns & plastic surgery hospital	Open		Specialized Hospital	893	Both									X				X	X	X	X	X	X	X	X	9	
74	630602	Tripoli	Tripoli	Tripoli	Ophthalmology hospital Tripoli	Open		Specialized Hospital	1,102	Both															X	X	X	X	X	X	5	
75	640602	Tripoli	Tripoli	Tripoli	Tripoli pediatric hospital	Open		Specialized Hospital	1,040	Both					X				X	X	X	X			X	X		X	X	X	10	
76	800501	West	Al Jabal Al Gharbi	Alasabaa	Al Asaabaa hospital	Open		General Hospital or Medical Hospital	627	Imp't		X	X	X	X									X	X	X	X	X	X	X	11	
77	930401	West	Al Jabal Al Gharbi	Ashshwayrif	Al Shewarif hospital	Open		Rural Hospital	188	Outp't	X				X				X	X	X		X	X	X	X	X	X	X	X	11	
78	850501	West	Al Jabal Al Gharbi	Azzintan	Al Zintan hospital	Open		General Hospital or Medical Hospital	475	Both	X	X	X	X			X		X	X	X		X	X	X	X	X	X	X	X	14	
79	790501	West	Al Jabal Al Gharbi	Ghiryran	Gharyan hospital	Open		General Hospital or Medical Hospital	1,177	Both	X	X	X	X										X	X	X	X	X	X	X	11	
80	820401	West	Al Jabal Al Gharbi	Jadu	Jado Hospital	Open		Rural Hospital	216	Both	X	X	X	X	X				X	X	X			X	X	X	X	X	X	X	14	
81	830501	West	Al Jabal Al Gharbi	Mizda	Mizda hospital	Open		General Hospital or Medical Hospital	494	Both	X	X	X	X	X			X	X	X		X		X	X	X	X	X	X	X	14	
82	850401	West	Al Jabal Al Gharbi	Nesma	Al Kuriaat hospital	Open		Rural Hospital	187	Both	X	X		X	X								X	X	X	X	X	X	X	X	12	
83	880401	West	Al Jabal Al Gharbi	Yefren	Al Awinia hospital	Closed	Damaged	Rural Hospital	135																							
84	880501	West	Al Jabal Al Gharbi	Yefren	Yaffren Hospital	Open		General Hospital or Medical Hospital	569	Both	X	X	X	X	X				X	X	X			X	X	X	X	X	X	X	15	
85	770501	West	Zwara	Al Ajaylat	Al Aujilat Hospital	Open		General Hospital or Medical Hospital	629	Both	X	X	X	X	X				X	X	X			X	X	X	X	X	X	X	15	
86	730501	West	Zwara	Aljmail	Al Jameel Hospital	Open		General Hospital or Medical Hospital	669	Both	X	X	X	X	X				X	X	X			X	X	X	X	X	X	X	15	
87	780501	West	Zwara	Sabratha	Subrata Hospital	Open		General Hospital or Medical Hospital	1,330	Both	X	X	X	X	X				X	X	X			X	X	X	X	X	X	X	16	
88	780601	West	Zwara	Sabratha	National Institute for Oncology	Open		Specialized Hospital	664	Both											X		X	X	X	X	X	X	X	X	8	
89	760502	West	Zwara	Zwara	Zwara Hospital (closed)	Closed	Under maintenance	General Hospital or Medical Hospital	719																							
90	760501	West	Zwara	Zwara	Zwara Albahree Hospital	Open		General Hospital or Medical Hospital	694	Imp't	X	X	X	X	X				X	X	X			X	X	X	X	X	X	X	15	
91	700501	West	Azzawya	Azzawya	Al -Zawia Hospital	Open		General Hospital or Medical Hospital	1,638	Both	X	X	X	X	X				X					X	X	X	X	X	X	X	13	
92	720501	West	Azzawya	Surman	Surmann Hospital	Open		General Hospital or Medical Hospital	516	Outp't	X				X				X	X	X			X	X	X	X	X	X	X	11	
93	950401	West	Nalut	Alharaba	Al Hrabaa hospital	Open		Rural Hospital	214	Outp't					X				X	X			X	X	X	X	X	X	X	X	9	
94	970401	West	Nalut	Baten Aljabal	Tegi hospital	Open		Rural Hospital	358	Both	X	X	X	X	X				X	X	X			X	X	X	X	X	X	X	16	
95	990501	West	Nalut	Ghadamis	Ghadames hospital	Open		General Hospital or Medical Hospital	408	Both	X	X	X	X	X				X	X			X	X	X	X	X	X	X	X	15	
96	960401	West	Nalut	Kabaw	Kabaw hospital	Open		Rural Hospital	210	Outp't					X								X	X	X	X	X	X	X	X	8	
97	940501	West	Nalut	Nalut	Nalout hospital	Open		General Hospital or Medical Hospital	633	Both		X	X	X	X				X	X	X			X	X	X	X	X	X	X	14	

PHC FACILITIES

N	Facility number	Region	District	Municipality	Facility full name	Facility Status	Closure reason	Type of facility	Total staff employed	Number inpatient beds	Number of maternity beds	Family planning services	ANC services	Delivery services	Immunization services	Preventative and curative	HIV counselling and testing	STI services	Leishmaniasis skin	Leishmaniasis internal	Brucellosis diagnostics	NCD services	Treatment for mental	Surgical services	Blood transfusion services	Diagnostic testing	Diagnostic imaging	Stocks medicines, vaccines	Dental health care	Number of services	
1	270208	Benghazi	Alkufra	Alkufra		Closed	Not accessible	Primary Health Center																							
2	270101	Benghazi	Alkufra	Alkufra	وحدة رعاية الحرية - الكفرة	Open		Primary Health Unit	22					X										X				X		3	
3	270102	Benghazi	Alkufra	Alkufra	وحدة رعاية شهداء الاجير - الكفرة	Open		Primary Health Unit	38															X						1	
4	270103	Benghazi	Alkufra	Alkufra	وحدة رعاية 17 فبراير - الكفرة	Open		Primary Health Unit	9															X						1	
5	270104	Benghazi	Alkufra	Alkufra	وحدة رعاية الشفاء - الكفرة	Open		Primary Health Unit	11															X						1	
6	270105	Benghazi	Alkufra	Alkufra	وحدة رعاية حي المطار - الكفرة	Open		Primary Health Unit	34															X				X		2	
7	270106	Benghazi	Alkufra	Alkufra	وحدة رعاية حي المختار - الكفرة	Open		Primary Health Unit	38	6	3													X						1	
8	270201	Benghazi	Alkufra	Alkufra	مركز صحي الشهيد سليمان بو مطاوي - الكفرة	Open		Primary Health Center	41								X						X			X	X			4	
9	270202	Benghazi	Alkufra	Alkufra	مركز صحي شهداء الهوارية - الكفرة	Open		Primary Health Center	51					X	X								X							3	
10	270203	Benghazi	Alkufra	Alkufra	مركز صحي بزيمة الجديدة - الكفرة	Open		Primary Health Center	34	5	2				X								X	X	X	X	X	X	X	6	
11	270204	Benghazi	Alkufra	Alkufra	مركز صحي الفضيل ابو عمر - الكفرة	Open		Primary Health Center	25														X							1	
12	270205	Benghazi	Alkufra	Alkufra	مركز صحي ليبيا - الكفرة	Open		Primary Health Center	71					X									X			X	X			4	
13	270206	Benghazi	Alkufra	Alkufra	مركز صحي شهداء عفون - الكفرة	Open		Primary Health Center	54	2			X		X								X	X	X	X	X	X	X	6	
14	270207	Benghazi	Alkufra	Alkufra	مركز صحي شهداء الهوارية - الكفرة	Open		Primary Health Center	23	14	3												X	X			X			2	
15	271501	Benghazi	Alkufra	Alkufra	مركز الكفرة للعلاج الطبيعي - الكفرة	Open		Primary Health Center	28														X							1	
16	271502	Benghazi	Alkufra	Alkufra	مركز الكفرة للعلاج السكري والغدد الصماء - الكفرة	Open		Primary Health Center	38														X				X	X		3	
17	271503	Benghazi	Alkufra	Alkufra	مركز الكفرة للنساء والولادة - الكفرة	Open		Primary Health Center	52			X	X			X							X	X	X	X	X	X	X	7	
18	271504	Benghazi	Alkufra	Alkufra	مركز الكفرة للصحة النفسية - الكفرة	Open		Primary Health Center	9														X	X	X	X	X	X	X	2	
19	260201	Benghazi	Alkufra	Tazirbu	مركز صحي تازيربو	Open		Primary Health Center	340					X								X	X	X	X	X	X	X	X	6	
20	240101	Benghazi	Al Wahat	Albrayga	وحدة صحية شطوط بشر - البريقة	Closed	Under Maintenance	Primary Health Unit																							
21	240201	Benghazi	Al Wahat	Albrayga	المركز الصحي العروقوب - البريقة	Open		Primary Health Center	62					X	X							X					X	X		4	
22	240202	Benghazi	Al Wahat	Albrayga	المركز الصحي البريقة الجديدة - البريقة	Open		Primary Health Center	120			X		X	X							X			X	X	X	X	X	7	
23	240203	Benghazi	Al Wahat	Albrayga	المركز الصحي مرسى البريقة - البريقة	Open		Primary Health Center	74			X		X	X							X			X	X	X	X		5	
24	240204	Benghazi	Al Wahat	Albrayga	المركز الصحي بشر - البريقة	Open		Primary Health Center	109					X	X							X			X	X	X	X	X	5	
25	240205	Benghazi	Al Wahat	Albrayga	مركز صحي العقيلة - البريقة	Open		Primary Health Center	21					X	X							X					X			4	
26	210101	Benghazi	Al Wahat	Aujala	وحدة الرعاية الصحية السنواي - اوجله	Open		Primary Health Unit	32					X																1	
27	210102	Benghazi	Al Wahat	Aujala	وحدة الرعاية الصحية النهر الصناعي - اوجله	Open		Primary Health Unit	17																					0	
28	210103	Benghazi	Al Wahat	Aujala	وحدة الرعاية الصحية الفضيل بو عمر - اوجله	Open		Primary Health Unit	23																					0	
29	210104	Benghazi	Al Wahat	Aujala	وحدة الرعاية الصحية عبد الله بن أبي السرح - اوجله	Open		Primary Health Unit	33						X	X						X	X							4	
30	210105	Benghazi	Al Wahat	Aujala	وحدة الرعاية الصحية تلقزي - اوجله	Open		Primary Health Unit	35																					0	
31	210106	Benghazi	Al Wahat	Aujala	وحدة الرعاية الصحية سباح - اوجله	Open		Primary Health Unit	22																					0	
32	210201	Benghazi	Al Wahat	Aujala	المركز الصحي اوجله - اوجله	Open		Primary Health Center	141	8	4		X	X		X						X	X	X	X	X	X	X	X	8	
33	210202	Benghazi	Al Wahat	Aujala	المركز الصحي بو عطف - اوجله	Open		Primary Health Center	41					X									X					X		3	
34	250103	Benghazi	Al Wahat	Ejdabia	وحدة الرعاية الصحية العبيات - اجدابيا	Closed	Closed due to damage	Primary Health Unit																							
35	250213	Benghazi	Al Wahat	Ejdabia	المركز الصحي القنان - اجدابيا	Closed	Closed due to damage	Primary Health Center																							
36	250205	Benghazi	Al Wahat	Ejdabia	المركز الصحي الوحدة العربية - اجدابيا	Closed	Under Maintenance	Primary Health Center																							
37	250212	Benghazi	Al Wahat	Ejdabia	المركز الصحي التنبلات - اجدابيا	Closed	Under Maintenance	Primary Health Center																							
38	250214	Benghazi	Al Wahat	Ejdabia	مركز صحي زويتينة و سلطان - اجدابيا	Closed	Under Maintenance	Primary Health Center																							
39	250101	Benghazi	Al Wahat	Ejdabia	وحدة الرعاية الصحية صالح مذكور - اجدابيا	Open		Primary Health Center	89						X	X						X								3	
40	250201	Benghazi	Al Wahat	Ejdabia	المركز الصحي حي 7 أكتوبر - اجدابيا	Open		Primary Health Center	390					X								X								2	
41	250202	Benghazi	Al Wahat	Ejdabia	المركز الصحي الشهيد امحمد الدر - اجدابيا	Open		Primary Health Center	223					X	X							X			X	X	X	X	X	7	
42	250203	Benghazi	Al Wahat	Ejdabia	المركز الصحي شهداء اجدابيا - اجدابيا	Open		Primary Health Center	187					X	X							X			X		X	X		5	
43	250204	Benghazi	Al Wahat	Ejdabia	المركز الصحي العقيلة بو شطة - اجدابيا	Open		Primary Health Center	247					X	X							X								3	
44	250206	Benghazi	Al Wahat	Ejdabia	المركز الصحي عبد الحفيظ الفرقة - اجدابيا	Open		Primary Health Center	310					X	X							X			X					4	
45	250207	Benghazi	Al Wahat	Ejdabia	مركز صحي سلطان - اجدابيا	Open		Primary Health Center	137					X	X							X								3	
46	250208	Benghazi	Al Wahat	Ejdabia	المركز الصحي سيدي شهبان - اجدابيا	Open		Primary Health Center	39														X								1
47	250209	Benghazi	Al Wahat	Ejdabia	المركز الصحي الزويتينة المدنية - اجدابيا	Open		Primary Health Center	241						X							X								2	
48	250210	Benghazi	Al Wahat	Ejdabia	مركز صحي الرمسة - اجدابيا	Open		Primary Health Center	85						X	X						X								3	
49	250211	Benghazi	Al Wahat	Ejdabia	مركز الرعاية الصحية عبد الله الطافري - اجدابيا	Open		Primary Health Center	65							X						X								2	
50	250301	Benghazi	Al Wahat	Ejdabia	مجمع عيادات اجدابيا - اجدابيا	Open		Polyclinic	289													X			X	X	X	X	X	4	
51	220102	Benghazi	Al Wahat	Ejkherra	وحدة الرعاية الصحية حي السلام - اجخره	Closed	Under Maintenance	Primary Health Unit																							
52	220202	Benghazi	Al Wahat	Ejkherra	مركز الرعاية الصحية شهداء الكوز - اجخره	Closed	Under Maintenance	Primary Health Center																							
53	220101	Benghazi	Al Wahat	Ejkherra	وحدة الرعاية الصحية حي المختار - اجخره	Open		Primary Health Unit	21																						0



N	Facility number	Region	District	Municipality	Facility full name	Facility Status	Closure reason	Type of facility	Total staff employed	Number inpatient beds	Number of maternity beds	Family planning services	ANC services	Delivery services	Immunization services	Preventative and curative	HIV counselling and testing	STI services	Leishmaniasis skin	Leishmaniasis internal	Bruceellosis diagnostics	NCD services	Treatment for mental	Surgical services	Blood transfusion services	Diagnostic testing	Diagnostic imaging	Stocks medicines, vaccines	Dental health care	Number of services	
54	220201	Benghazi	Al Wahat	Ejkherra	المركز الصحي اجخرة الجديدة -اجخره	Open		Primary Health Center	100				X	X	X	X						X	X			X	X			8	
55	200101	Benghazi	Al Wahat	Jalu	وحدة الرعاية الصحية الشرف جالو	Open		Primary Health Unit	18					X																1	
56	200102	Benghazi	Al Wahat	Jalu	وحدة الرعاية الصحية الحي الشعبي جالو	Open		Primary Health Unit	18						X															0	
57	200103	Benghazi	Al Wahat	Jalu	وحدة الرعاية الصحية رائدة جالو	Open		Primary Health Center	16													X								1	
58	200104	Benghazi	Al Wahat	Jalu	وحدة الرعاية الصحية الغربي جالو	Open		Primary Health Unit	18					X																1	
59	200105	Benghazi	Al Wahat	Jalu	وحدة الرعاية الصحية المشيطي جالو	Open		Primary Health Unit	17													X								0	
60	200106	Benghazi	Al Wahat	Jalu	وحدة الرعاية الصحية المحيريق جالو	Open		Primary Health Unit	9																					0	
61	200201	Benghazi	Al Wahat	Jalu	مركز الرعاية الصحية العروق جالو	Open		Primary Health Center	56						X	X						X	X			X				5	
62	200202	Benghazi	Al Wahat	Jalu	المركز الصحي للثة جالو	Open		Primary Health Center	22					X								X								2	
63	201501	Benghazi	Al Wahat	Jalu	مركز علاج السكر والغدد الصماء جالو	Open		Primary Health Center	14													X								1	
64	230101	Benghazi	Al Wahat	Marada	وحدة الرعاية الصحية المشروع الزراعي مرادة	Closed	Under Maintenance	Primary Health Unit																							
65	230102	Benghazi	Al Wahat	Marada	وحدة الرعاية الصحية مرادة المدينة -مرادة	Closed	Under Maintenance	Primary Health Unit																							
66	230201	Benghazi	Al Wahat	Marada	المركز الصحي الضمان مرادة	Open		Primary Health Center	57				X	X	X							X			X		X			6	
67	190101	Benghazi	Benghazi	Benghazi	وحدة الصحة المدرسية -بنغازي	Closed	Not accessible	Primary Health Unit																							
68	190102	Benghazi	Benghazi	Benghazi	وحدة الصحة المدرسية والتثقيف الصحي -بنغازي	Closed	Not accessible	Primary Health Unit																							
69	190104	Benghazi	Benghazi	Benghazi	وحدة رعاية الصحية التامة -بنغازي	Closed	Not accessible	Primary Health Unit																							
70	190111	Benghazi	Benghazi	Benghazi	وحدة رعاية صحية الفعكات -بنغازي	Closed	Not accessible	Primary Health Unit																							
71	190114	Benghazi	Benghazi	Benghazi	وحدة الرعاية الصحية تيكا -بنغازي	Closed	Not accessible	Primary Health Unit																							
72	190115	Benghazi	Benghazi	Benghazi	وحدة الرعاية الصحية التربة -بنغازي	Closed	Not accessible	Primary Health Unit																							
73	190116	Benghazi	Benghazi	Benghazi	وحدة الرعاية الصحية بواخزة -بنغازي	Closed	Not accessible	Primary Health Unit																							
74	190117	Benghazi	Benghazi	Benghazi	وحدة الرعاية الصحية قنفودة -بنغازي	Closed	Not accessible	Primary Health Unit																							
75	190118	Benghazi	Benghazi	Benghazi	وحدة رعاية صحية الحليس -بنغازي	Closed	Not accessible	Primary Health Unit																							
76	190202	Benghazi	Benghazi	Benghazi	مركز صحي بنغازي المدينة -بنغازي	Closed	Not accessible	Primary Health Center																							
77	190213	Benghazi	Benghazi	Benghazi	مركز صحي قار يونس -بنغازي	Closed	Not accessible	Primary Health Center																							
78	190214	Benghazi	Benghazi	Benghazi	المركز الصحي القوارشة -بنغازي	Closed	Not accessible	Primary Health Center																							
79	190216	Benghazi	Benghazi	Benghazi	المركز الصحي الصابري الشرقي -بنغازي	Closed	Not accessible	Primary Health Center																							
80	190301	Benghazi	Benghazi	Benghazi	العيادة المجمع الصابري -بنغازي	Closed	Not accessible	Polyclinic																							
81	190110	Benghazi	Benghazi	Benghazi	وحدة رعاية الهوارى -بنغازي	Closed	Under Maintenance	Primary Health Unit																							
82	190119	Benghazi	Benghazi	Benghazi	وحدة رعاية صحية دار العربيات -بنغازي	Closed	Under Maintenance	Primary Health Unit																							
83	190230	Benghazi	Benghazi	Benghazi	شهداء بنغازي -بنغازي	Closed	Under Maintenance	Primary Health Center																							
84	190304	Benghazi	Benghazi	Benghazi	العيادة المجمع خالد بن الوليد -بنغازي	Closed	Under Maintenance	Polyclinic																							
85	190103	Benghazi	Benghazi	Benghazi	وحدة رعاية الصحية حي المختار -بنغازي	Open		Primary Health Unit	137					X	X										X					3	
86	190105	Benghazi	Benghazi	Benghazi	وحدة الرعاية الصحية السلماني -بنغازي	Open		Primary Health Center	77			X		X	X							X									4
87	190108	Benghazi	Benghazi	Benghazi	وحدة رعاية وادي القطاره -بنغازي	Open		Primary Health Unit	12																						0
88	190109	Benghazi	Benghazi	Benghazi	وحدة رعاية بنغازي الجديدة -بنغازي	Open		Primary Health Center	187			X		X	X							X	X		X	X	X	X	X		9
89	190112	Benghazi	Benghazi	Benghazi	وحدة الرعاية الصحية ابودريسة -بنغازي	Open		Primary Health Unit	18																						1
90	190120	Benghazi	Benghazi	Benghazi	وحدة رعاية صحية اللويقية -بنغازي	Open		Primary Health Unit	21																		X				1
91	190131	Benghazi	Benghazi	Benghazi	وحدة رعاية صحية بوالصن -بنغازي	Open		Primary Health Unit	12					X																	1
92	190205	Benghazi	Benghazi	Benghazi	مركز صحي السلاوي -بنغازي	Open		Primary Health Center	347					X	X							X			X	X	X	X			7
93	190207	Benghazi	Benghazi	Benghazi	مركز صحي سيدي يونس -بنغازي	Open		Primary Health Center	130					X	X							X			X	X	X	X			6
94	190208	Benghazi	Benghazi	Benghazi	مركز صحي الكويقية -بنغازي	Open		Primary Health Center	71					X	X							X			X	X	X	X			7
95	190209	Benghazi	Benghazi	Benghazi	مركز صحي بنيينا -بنغازي	Open		Primary Health Center	151			X		X	X							X			X	X	X	X			8
96	190210	Benghazi	Benghazi	Benghazi	مركز صحي الحادق -بنغازي	Open		Primary Health Center	90					X	X							X			X						4
97	190211	Benghazi	Benghazi	Benghazi	مركز صحي بن زهر -بنغازي	Open		Primary Health Center	77			X		X	X							X			X	X	X	X			8
98	190212	Benghazi	Benghazi	Benghazi	مركز صحي الوهباء -بنغازي	Open		Primary Health Center	75					X	X							X			X	X					5
99	190215	Benghazi	Benghazi	Benghazi	المركز الصحي الليبي -بنغازي	Open		Primary Health Center	160					X	X							X			X	X	X	X			7
100	190231	Benghazi	Benghazi	Benghazi	مركز رعاية صحية سيدي عبيد -بنغازي	Open		Primary Health Center	137					X	X																2
101	190232	Benghazi	Benghazi	Benghazi	المركز الصحي النواقية -بنغازي	Open		Primary Health Center	68			X		X	X							X	X		X	X	X	X	X		8
102	190233	Benghazi	Benghazi	Benghazi	المركز الصحي سيدي احسين -بنغازي	Open		Primary Health Center	67					X											X						2
103	190234	Benghazi	Benghazi	Benghazi	مركز رعاية الصحية المتزحة -بنغازي	Open		Primary Health Center	101			X		X								X			X	X	X	X			5
104	190235	Benghazi	Benghazi	Benghazi	مركز رعاية صحية سيدي خليفة -بنغازي	Open		Primary Health Center	74					X											X	X	X	X			5
105	190302	Benghazi	Benghazi	Benghazi	عيادة مجمع راس اعبيدة -بنغازي	Open		Polyclinic	237			X		X	X						X		X		X	X	X	X			10
106	190303	Benghazi	Benghazi	Benghazi	العيادة المجمع الكيش -بنغازي	Open		Polyclinic	243					X	X							X			X	X	X	X			7
107	190305	Benghazi	Benghazi	Benghazi	العيادة المجمع رقم 1 -بنغازي	Open		Polyclinic	190			X		X	X							X			X	X	X	X			8
108	190306	Benghazi	Benghazi	Benghazi	عيادة بو عظمي المجمع -بنغازي	Open		Polyclinic	190			X		X	X							X			X	X	X	X			8



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109	191501	Benghazi	Benghazi	Benghazi	العيادة علاج السكرى سيدى حسين -بنغازي	Open		Primary Health Center	196													X						X	X	4		
110	170208	Benghazi	Benghazi	Gemienis	مركز صحي شعماش -قمينس	Closed	Closed due to damage	Primary Health Center																	X							
111	170210	Benghazi	Benghazi	Gemienis	مركز صحي يوسف ابو رحيل -قمينس	Closed	Not accessible	Primary Health Center																								
112	170207	Benghazi	Benghazi	Gemienis	مركز صحي حمد ابو لوطف -قمينس	Closed	Under Maintenance	Primary Health Center																								
113	170101	Benghazi	Benghazi	Gemienis	وحدة الرعاية الصحية شط البدن -قمينس	Open		Primary Health Unit	8																						0	
114	170102	Benghazi	Benghazi	Gemienis	وحدة الرعاية الصحية جروثة -قمينس	Open		Primary Health Unit	10					X																	1	
115	170201	Benghazi	Benghazi	Gemienis	مركز صحي قمينس -قمينس	Open		Primary Health Center	50					X	X							X			X	X					5	
116	170202	Benghazi	Benghazi	Gemienis	مركز صحي المقرون -قمينس	Open		Primary Health Center	46					X								X									2	
117	170203	Benghazi	Benghazi	Gemienis	مركز صحي الرقطة -قمينس	Open		Primary Health Center	19					X								X									2	
118	170204	Benghazi	Benghazi	Gemienis	مركز صحي سيدى عبدالعاطي -قمينس	Open		Primary Health Unit	37																						0	
119	170205	Benghazi	Benghazi	Gemienis	مركز صحي كركورة -قمينس	Open		Primary Health Unit	15					X											X						2	
120	170206	Benghazi	Benghazi	Gemienis	مركز صحي امطيفة -قمينس	Open		Primary Health Unit	9																						0	
121	180101	Benghazi	Benghazi	Suloug	وحدة الرعاية الصحية زاوية الطليمون -حلقو	Open		Primary Health Unit	8																			X			1	
122	180102	Benghazi	Benghazi	Suloug	وحدة رعاية صحية السلك -حلقو	Open		Primary Health Unit	9																			X			1	
123	180130	Benghazi	Benghazi	Suloug	وحدة رعاية صحية وادي الباب -حلقو	Open		Primary Health Unit	93					X																	1	
124	180201	Benghazi	Benghazi	Suloug	مركز صحي جردينة (الخصراء) -حلقو	Open		Primary Health Center	34				X									X			X	X		X			4	
125	180202	Benghazi	Benghazi	Suloug	مركز صحي سلوق -حلقو	Open		Primary Health Center	150				X	X								X		X			X	X			6	
126	690102	Central	Aljufra	Aljufra	وحدة الرعاية المقرون -الجفرة	Closed	used by other entity	Primary Health Unit																								
127	690101	Central	Aljufra	Aljufra	وحدة الرعاية القصير -الجفرة	Open		Primary Health Unit	28																						0	
128	690103	Central	Aljufra	Aljufra	وحدة الرعاية الحمام -الجفرة	Open		Primary Health Unit	30																						0	
129	690104	Central	Aljufra	Aljufra	وحدة الرعاية زلة -الجفرة	Open		Primary Health Unit	30					X																	1	
130	690105	Central	Aljufra	Aljufra	وحدة الرعاية الصوان -الجفرة	Open		Primary Health Unit	39					X																	1	
131	690106	Central	Aljufra	Aljufra	وحدة الرعاية شهداء تارقفت -الجفرة	Open		Primary Health Unit	29																						0	
132	690107	Central	Aljufra	Aljufra	وحدة الرعاية الخارجية -الجفرة	Open		Primary Health Unit	13					X																	1	
133	690108	Central	Aljufra	Aljufra	وحدة الرعاية الفرجان -الجفرة	Open		Primary Health Unit	50																						0	
134	690201	Central	Aljufra	Aljufra	مركز الرعاية الصحية هون -الجفرة	Open		Primary Health Center	155				X												X		X				3	
135	690202	Central	Aljufra	Aljufra	مركز الرعاية الصحية ودان -الجفرة	Open		Primary Health Center	141						X							X									2	
136	690203	Central	Aljufra	Aljufra	مركز الرعاية الصحية سوكنة -الجفرة	Open		Primary Health Center	135					X								X									2	
137	690204	Central	Aljufra	Aljufra	مركز الرعاية الصحية زلة -الجفرة	Open		Primary Health Center	186						X							X									1	
138	690205	Central	Aljufra	Aljufra	مركز الرعاية الصحية الفقهاء -الجفرة	Open		Primary Health Center	47					X								X									2	
139	691501	Central	Aljufra	Aljufra	مركز علاج السكر - هون -الجفرة	Open		Primary Health Center	4													X									1	
140	540101	Central	Misratah	Bani Waleed	وحدة الرعاية الصحية القارة بني وليد	Open		Primary Health Unit	13																						0	
141	540102	Central	Misratah	Bani Waleed	وحدة الرعاية الصحية العطيات بني وليد	Open		Primary Health Unit	5																						0	
142	540103	Central	Misratah	Bani Waleed	وحدة الرعاية الصحية الحصنة بني وليد	Open		Primary Health Unit	26				X																		1	
143	540104	Central	Misratah	Bani Waleed	وحدة الرعاية الصحية تلمات بني وليد	Open		Primary Health Unit	16																						0	
144	540105	Central	Misratah	Bani Waleed	وحدة الرعاية الصحية ام لايد بني وليد	Open		Primary Health Unit	55																						0	
145	540106	Central	Misratah	Bani Waleed	وحدة الرعاية الصحية المغاربة بني وليد	Open		Primary Health Unit	18																		X				1	
146	540107	Central	Misratah	Bani Waleed	وحدة الرعاية الصحية الحدادة بني وليد	Open		Primary Health Unit	41																						0	
147	540201	Central	Misratah	Bani Waleed	المركز الصحي المردوم بني وليد	Open		Primary Health Center	100					X								X			X						3	
148	540202	Central	Misratah	Bani Waleed	المركز الصحي تينيتاي بني وليد	Open		Primary Health Center	57					X								X				X					2	
149	540203	Central	Misratah	Bani Waleed	المركز الصحي الشميخ بني وليد	Open		Primary Health Center	33					X						X		X				X					4	
150	540204	Central	Misratah	Bani Waleed	المركز الصحي الظهرة بني وليد	Open		Primary Health Center	130			X	X	X							X	X	X		X	X	X	X	X	X	10	
151	540205	Central	Misratah	Bani Waleed	المركز الصحي الشمالية بني وليد	Open		Primary Health Center	78			X			X						X				X	X					5	
152	540206	Central	Misratah	Bani Waleed	المركز الصحي الخزامي بني وليد	Open		Primary Health Center	223					X								X									2	
153	540207	Central	Misratah	Bani Waleed	المركز الصحي السحن بني وليد	Open		Primary Health Unit	25											X											1	
154	540208	Central	Misratah	Bani Waleed	المركز الصحي الجملة بني وليد	Open		Primary Health Center	60				X	X							X		X		X						6	
155	540301	Central	Misratah	Bani Waleed	مجمع بني وليد للعيادات التخصصية بني وليد	Open		Polyclinic	90				X		X						X	X		X	X		X	X	X	7		
156	541509	Central	Misratah	Bani Waleed	مركز علاج السكر والغدد الصماء بني وليد	Open		Primary Health Center	83												X				X	X					3	
157	561502	Central	Misratah	Misrata	مركز علاج امراض الجهاز الهضمي -مصراته	Closed	Not accessible	Primary Health Center																								
158	560204	Central	Misratah	Misrata	المركز الصحي قصر أحمد -مصراته	Closed	Under Maintenance	Primary Health Center																								
159	560213	Central	Misratah	Misrata	المركز الصحي المحبوب -مصراته	Closed	Under Maintenance	Primary Health Center																								
160	561503	Central	Misratah	Misrata	مركز علاج الطبيعي -مصراته	Closed	Under Maintenance	Primary Health Center																								
161	560101	Central	Misratah	Misrata	وحدة الرعاية الصحية كرزاز الساحل -مصراته	Open		Primary Health Unit	20																			X			1	
162	560102	Central	Misratah	Misrata	وحدة الرعاية الصحية أبو روية -مصراته	Open		Primary Health Center	107				X		X	X						X									4	
163	560103	Central	Misratah	Misrata	وحدة الرعاية الصحية المرسي -مصراته	Open		Primary Health Unit	29																	X					1	

N	Facility number	Region	District	Municipality	Facility full name	Facility Status	Closure reason	Type of facility	Total staff employed	Number inpatient beds	Number of maternity beds	Family planning services	ANC services	Delivery services	Immunization services	Preventative and curative	HIV counselling and testing	STI services	Leishmaniasis skin	Leishmaniasis internal	Bruceellosis diagnostics	MCD services	Treatment for mental	Surgical services	Blood transfusion services	Diagnostic testing	Diagnostic imaging	Stocks medicines, vaccines	Dental health care	Number of services
164	560104	Central	Misratah	Misrata	وحدة الرعاية الصحية أقرير -مصراته	Open		Primary Health Center	32				X									X							4	
165	560105	Central	Misratah	Misrata	وحدة الرعاية الصحية الرويسات -مصراته	Open		Primary Health Unit	33																X				1	
166	560106	Central	Misratah	Misrata	وحدة الرعاية الصحية شاطبي النخيل -مصراته	Open		Primary Health Unit	34						X										X				2	
167	560107	Central	Misratah	Misrata	وحدة الرعاية الصحية الجزيرة -مصراته	Open		Primary Health Unit	67						X										X				2	
168	560201	Central	Misratah	Misrata	المركز الصحي طمينة -مصراته	Open		Primary Health Unit	31																		X		1	
169	560202	Central	Misratah	Misrata	المركز الصحي رأس الهجمة -مصراته	Open		Primary Health Center	66																X				1	
170	560203	Central	Misratah	Misrata	المركز الصحي الدافقية -مصراته	Open		Primary Health Center	52						X								X						2	
171	560205	Central	Misratah	Misrata	المركز الصحي السكيرات -مصراته	Open		Primary Health Center	61						X	X							X					X	4	
172	560207	Central	Misratah	Misrata	المركز الصحي رأس الطوبة -مصراته	Open		Primary Health Center	96						X	X							X						4	
173	560208	Central	Misratah	Misrata	المركز الصحي سيدي إيمبارك -مصراته	Open		Primary Health Unit	99																				0	
174	560209	Central	Misratah	Misrata	المركز الصحي مرباط -مصراته	Open		Primary Health Center	163						X										X				2	
175	560210	Central	Misratah	Misrata	المركز الصحي شهداء الرملة -مصراته	Open		Primary Health Center	66						X	X							X						3	
176	560211	Central	Misratah	Misrata	المركز الصحي كرزاز الطبي -مصراته	Open		Primary Health Center	58						X	X							X			X	X		5	
177	560212	Central	Misratah	Misrata	المركز الصحي شهداء السواوة -مصراته	Open		Primary Health Unit	66																X				1	
178	560214	Central	Misratah	Misrata	المركز الصحي شهداء المقاصية -مصراته	Open		Primary Health Unit	115						X														1	
179	560215	Central	Misratah	Misrata	المركز الصحي الشهداء -مصراته	Open		Primary Health Unit	79																X				1	
180	560216	Central	Misratah	Misrata	المركز الصحي الأسواك -مصراته	Open		Primary Health Center	36														X			X	X		3	
181	560217	Central	Misratah	Misrata	المركز الصحي ابوقرين -مصراته	Open		Primary Health Unit	96						X														1	
182	560219	Central	Misratah	Misrata	مركز صبي قصر أحمد -مصراته	Open		Primary Health Center	7	26														X			X	X	3	
183	560302	Central	Misratah	Misrata	مجمع العيادات الزروق -مصراته	Open		Polyclinic	50													X				X	X	X	5	
184	560303	Central	Misratah	Misrata	مجمع المحبوب للعيادات التخصصية -مصراته	Open		Polyclinic	111				X		X	X						X				X	X	X	7	
185	560304	Central	Misratah	Misrata	مجمع العيادات الغيران -مصراته	Open		Polyclinic	237						X	X							X			X	X	X	6	
186	550210	Central	Misratah	Zliten	مركز صحي الجمعة -زليتن	Closed	Under Maintenance	Primary Health Center																						
187	550211	Central	Misratah	Zliten	مركز صحي نعيمة للجوانث -زليتن	Closed	Under Maintenance	Primary Health Center																						
188	55040	Central	Misratah	Zliten	مركز صحي اندواو -زليتن	Open		Primary Health Center	1				X			X													8	
189	550101	Central	Misratah	Zliten	وحدة الرعاية الصحية الشيخ -زليتن	Open		Primary Health Unit	73	2					X							X		X	X	X	X	X	4	
190	550102	Central	Misratah	Zliten	وحدة الرعاية الصحية الجهاد -زليتن	Open		Primary Health Unit	66													X		X	X				3	
191	550103	Central	Misratah	Zliten	وحدة الرعاية الصحية عبد النور -زليتن	Open		Primary Health Unit	82						X							X		X	X				4	
192	550104	Central	Misratah	Zliten	وحدة الرعاية الصحية القانسية -زليتن	Open		Primary Health Unit	88	2					X							X		X	X				4	
193	550105	Central	Misratah	Zliten	وحدة الرعاية الصحية الدافقية -زليتن	Open		Primary Health Unit	49	4	1		X									X		X	X				4	
194	550106	Central	Misratah	Zliten	وحدة الرعاية الصحية أولاد كريم -زليتن	Open		Primary Health Unit	47													X		X	X				3	
195	550107	Central	Misratah	Zliten	وحدة الرعاية الصحية مفرغرين -زليتن	Open		Primary Health Unit	32															X					1	
196	550108	Central	Misratah	Zliten	وحدة الرعاية الصحية الشاطبي -زليتن	Open		Primary Health Unit	50															X		X			2	
197	550109	Central	Misratah	Zliten	وحدة الرعاية الصحية الحرشاء -زليتن	Open		Primary Health Unit	103	2			X		X	X						X		X	X				5	
198	550110	Central	Misratah	Zliten	وحدة الرعاية الصحية أزدانو -زليتن	Open		Primary Health Unit	38													X		X	X				3	
199	550111	Central	Misratah	Zliten	وحدة الرعاية الصحية زليتن (تطعيمات) -زليتن	Open		Primary Health Unit	79						X										X				2	
200	550201	Central	Misratah	Zliten	المركز الصحي القاعة -زليتن	Open		Primary Health Center	69													X		X	X	X	X	X	5	
201	550202	Central	Misratah	Zliten	المركز الصحي طبطبت -زليتن	Open		Primary Health Center	87	1	1		X		X							X		X	X	X	X	X	7	
202	550203	Central	Misratah	Zliten	المركز الصحي المألحة -زليتن	Open		Primary Health Center	97	3	1					X						X		X	X	X	X		5	
203	550204	Central	Misratah	Zliten	المركز الصحي ثلث الشهداء -زليتن	Open		Primary Health Center	61				X		X	X						X		X	X	X	X	X	8	
204	550205	Central	Misratah	Zliten	المركز الصحي حي المعلمين -زليتن	Open		Primary Health Center	128				X		X							X		X	X	X	X	X	7	
205	550206	Central	Misratah	Zliten	المركز الصحي أنس بن مالك -زليتن	Open		Primary Health Center	59	2					X							X		X	X	X	X		5	
206	550207	Central	Misratah	Zliten	المركز الصحي الغويولات -زليتن	Open		Primary Health Center	116	6			X		X	X						X		X	X	X	X	X	8	
207	550208	Central	Misratah	Zliten	المركز الصحي القزاحية -زليتن	Open		Primary Health Center	80						X							X		X	X	X	X		5	
208	550209	Central	Misratah	Zliten	المركز الصحي ازنو الجنوبية -زليتن	Open		Primary Health Center	84	2					X							X		X	X				3	
209	550301	Central	Misratah	Zliten	مجمع عيادات سوق الثلاثاء -زليتن	Open		Polyclinic	131	1					X	X						X		X	X	X	X	X	8	
210	550302	Central	Misratah	Zliten	مجمع عيادات الحوريات -زليتن	Open		Polyclinic	297	4			X		X							X		X	X	X	X	X	9	
211	550303	Central	Misratah	Zliten	مجمع عيادات ازنو -زليتن	Open		Polyclinic	92				X		X	X						X		X	X	X	X	X	9	
212	550304	Central	Misratah	Zliten	مجمع عيادات القصبة -زليتن	Open		Polyclinic	163	4			X		X	X						X		X	X	X	X	X	9	
213	280107	Central	Sirt	Khalege Alsedra	وحدة الرعاية الصحية العامرة -خليج السدرة	Closed	Under Maintenance	Primary Health Unit																						
214	280109	Central	Sirt	Khalege Alsedra	وحدة الرعاية الصحية هراوة الجنوبي -خليج السدرة	Closed	Under Maintenance	Primary Health Unit																						
215	280202	Central	Sirt	Khalege Alsedra	مركز صحي هراوة خليج السدرة	Closed	Under Maintenance	Primary Health Center																						
216	280101	Central	Sirt	Khalege Alsedra	وحدة الرعاية الصحية الوطية -خليج السدرة	Open		Primary Health Unit	71	5					X														1	
217	280102	Central	Sirt	Khalege Alsedra	وحدة الرعاية الصحية رأس لانوف -خليج السدرة	Open		Primary Health Unit	61						X														1	
218	280103	Central	Sirt	Khalege Alsedra	وحدة الرعاية الصحية المجاهد الجرم -خليج السدرة	Open		Primary Health Unit	53	2					X									X					2	

N	Facility number	Region	District	Municipality	Facility full name	Facility Status	Closure reason	Type of facility	Total staff employed	Number inpatient beds	Number of maternity beds	Family planning services	ANC services	Delivery services	Immunization services	Preventative and curative	HIV counselling and testing	STI services	Leishmaniasis skin	Leishmaniasis internal	Brucellosis diagnostics	NCD services	Treatment for mental	Surgical services	Blood transfusion services	Diagnostic testing	Diagnostic imaging	Stocks medicines, vaccines	Dental health care	Number of services
219	280104	Central	Sirt	Khalege Alsedra	وحدة الرعاية الصحية الوسط خليج السدرة	Open		Primary Health Unit	44				X	X															2	
220	280105	Central	Sirt	Khalege Alsedra	وحدة الرعاية الصحية فوار المشاشي خليج السدرة	Open		Primary Health Unit	28																					0
221	280106	Central	Sirt	Khalege Alsedra	وحدة الرعاية الصحية الوادي الأحمر خليج السدرة	Open		Primary Health Unit	60						X									X					2	
222	280108	Central	Sirt	Khalege Alsedra	وحدة الرعاية الصحية ابوسعد خليج السدرة	Open		Primary Health Unit	36																					0
223	280201	Central	Sirt	Khalege Alsedra	مركز صحي بن جواد خليج السدرة	Open		Primary Health Center	108	2	2											X							1	
224	290106	Central	Sirt	Sirt	وحدة الرعاية الصحية جمال عبد الناصر سرت	Closed	Closed due to damage	Primary Health Unit																						
225	290109	Central	Sirt	Sirt	وحدة الرعاية الصحية الظهيره سرت	Closed	Closed due to damage	Primary Health Unit																						
226	290110	Central	Sirt	Sirt	وحدة الرعاية الصحية الزعفران سرت	Closed	Closed due to damage	Primary Health Unit																						
227	290201	Central	Sirt	Sirt	مركز صحي الربط الامامي سرت	Closed	Closed due to damage	Primary Health Center																						
228	290203	Central	Sirt	Sirt	مركز صحي سرت المركز سرت	Closed	Closed due to damage	Primary Health Center																						
229	290204	Central	Sirt	Sirt	مركز صحي عمر المختار سرت	Closed	Closed due to damage	Primary Health Center																						
230	290206	Central	Sirt	Sirt	مركز صحي خالد بن الوليد سرت	Closed	Closed due to damage	Primary Health Center																						
231	290301	Central	Sirt	Sirt	مجمع العيادات سرت سرت	Closed	Closed due to damage	Polyclinic																						
232	290101	Central	Sirt	Sirt	وحدة الرعاية الصحية سلطان سرت	Closed	Under Maintenance	Primary Health Unit																						
233	290102	Central	Sirt	Sirt	وحدة الرعاية الصحية سكرة سرت	Closed	Under Maintenance	Primary Health Unit																						
234	290104	Central	Sirt	Sirt	وحدة الرعاية الصحية ابوزاهية سرت	Closed	Under Maintenance	Primary Health Unit																						
235	290107	Central	Sirt	Sirt	وحدة الرعاية الصحية جامعة التحدى سرت	Closed	Under Maintenance	Primary Health Unit																						
236	290112	Central	Sirt	Sirt	وحدة الرعاية الصحية الحنوية سرت	Closed	Under Maintenance	Primary Health Unit																						
237	290115	Central	Sirt	Sirt	وحدة الرعاية الصحية جارف السد سرت	Closed	Under Maintenance	Primary Health Unit																						
238	290116	Central	Sirt	Sirt	وحدة الرعاية الصحية ازكبر سرت	Closed	Under Maintenance	Primary Health Unit																						
239	290117	Central	Sirt	Sirt	وحدة الرعاية الصحية امراح سرت	Closed	Under Maintenance	Primary Health Unit																						
240	291508	Central	Sirt	Sirt	مركز علاج السكر والغدد الصماء سرت	Closed	Under Maintenance	Primary Health Center																						
241	290111	Central	Sirt	Sirt	وحدة الرعاية الصحية صفور القرضابية سرت	Closed	used by other entity	Primary Health Unit																						
242	290103	Central	Sirt	Sirt	وحدة الرعاية الصحية ابن الهيثم سرت	Open		Primary Health Unit	33					X							X									2
243	290105	Central	Sirt	Sirt	وحدة الرعاية الصحية ابن النفيس سرت	Open		Primary Health Center	54	4				X	X						X		X		X					5
244	290113	Central	Sirt	Sirt	وحدة الرعاية الصحية الغريبات سرت	Open		Primary Health Center	35	1				X							X									2
245	290114	Central	Sirt	Sirt	وحدة الرعاية الصحية القبيبة سرت	Open		Primary Health Unit	25					X																1
246	290202	Central	Sirt	Sirt	مركز صحي هراوة سرت	Open		Primary Health Center	62					X	X						X		X							4
247	290205	Central	Sirt	Sirt	مركز صحي ابو هادي سرت	Open		Primary Health Center	162	6		X	X	X	X					X		X		X						7
248	290207	Central	Sirt	Sirt	مركز صحي جارف سرت	Open		Primary Health Center	45					X							X									2
249	300104	Central	Sirt	Zamzam	وحدة الرعاية الصحية قرزة زمزم	Closed	Closed due to damage	Primary Health Unit																						
250	300101	Central	Sirt	Zamzam	وحدة الرعاية الصحية لويجيح زمزم	Open		Primary Health Unit	19						X													X		2
251	300102	Central	Sirt	Zamzam	وحدة الرعاية الصحية وادي بي زمزم	Open		Primary Health Unit	33																		X			1
252	300103	Central	Sirt	Zamzam	وحدة الرعاية الصحية ام التمام زمزم	Open		Primary Health Unit	25						X												X			2
253	300105	Central	Sirt	Zamzam	وحدة الرعاية الصحية الغرائية زمزم	Open		Primary Health Unit	38						X												X			2
254	300203	Central	Sirt	Zamzam	مركز صحي القناحية زمزم	Open		Primary Health Center	87	4			X	X	X	X						X					X			6
255	100101	East	Al Jabal Al Akhdar	Albayda	وحدة الرعاية الصحية قلمبية البيضاء	Closed	Under Maintenance	Primary Health Unit																						
256	100115	East	Al Jabal Al Akhdar	Albayda	وحدة الرعاية الصحية الكرم والخليطة قندولة -البيضاء	Closed	Under Maintenance	Primary Health Unit																						
257	100117	East	Al Jabal Al Akhdar	Albayda	وحدة الرعاية الصحية الزحيف -البيضاء	Closed	Under Maintenance	Primary Health Unit																						
258	100209	East	Al Jabal Al Akhdar	Albayda	مركز الرعاية الصحية وردامة البيضاء	Closed	Under Maintenance	Primary Health Center																						
259	100213	East	Al Jabal Al Akhdar	Albayda	مركز صحي قرنانة لعلاج جرحي الحروب والحوادث -البيضاء	Closed	Under Maintenance	Primary Health Center																						
260	101502	East	Al Jabal Al Akhdar	Albayda	مركز علاج سكر - البيضاء البيضاء	Closed	Under Maintenance	Primary Health Center																						
261	100105	East	Al Jabal Al Akhdar	Albayda	وحدة الرعاية الصحية الغريقة البيضاء	Closed	used by other entity	Primary Health Unit																						
262	100107	East	Al Jabal Al Akhdar	Albayda	وحدة الرعاية الصحية سيدي عبد الواحد -البيضاء	Closed	used by other entity	Primary Health Unit																						
263	100113	East	Al Jabal Al Akhdar	Albayda	وحدة الرعاية الصحية طرغونية -البيضاء	Closed	used by other entity	Primary Health Unit																						
264	10034	East	Al Jabal Al Akhdar	Albayda	العيادة المعمعة اسنطة -البيضاء	Open		Polyclinic	79				X	X	X	X					X		X		X		X	X		9
265	100102	East	Al Jabal Al Akhdar	Albayda	وحدة الرعاية الصحية 7 -البيضاء	Open		Primary Health Unit	39																	X	X			2
266	100103	East	Al Jabal Al Akhdar	Albayda	وحدة الرعاية الصحية رقم 8 -البيضاء	Open		Primary Health Unit	23							X						X						X		3
267	100106	East	Al Jabal Al Akhdar	Albayda	وحدة الرعاية الصحية الكون -البيضاء	Open		Primary Health Unit	32																					0
268	100109	East	Al Jabal Al Akhdar	Albayda	وحدة الرعاية الصحية الوسيطة -البيضاء	Open		Primary Health Unit	51													X					X			2
269	100110	East	Al Jabal Al Akhdar	Albayda	الوحدة الصحية يانديس البيضاء	Open		Primary Health Unit	42							X						X								2
270	100112	East	Al Jabal Al Akhdar	Albayda	وحدة رعاية صحية/حمد بو سلوح -البيضاء	Open		Primary Health Unit	13																					0
271	100118	East	Al Jabal Al Akhdar	Albayda	وحدة الرعاية الصحية الخويمات -البيضاء	Open		Primary Health Unit	13																					0
272	100201	East	Al Jabal Al Akhdar	Albayda	مركز الرعاية الصحية رقم 2 -البيضاء	Open		Primary Health Center	94				X		X	X						X				X	X	X	X	8
273	100203	East	Al Jabal Al Akhdar	Albayda	مركز الرعاية الصحية رقم 5 -البيضاء	Open		Primary Health Center	35																					0

N	Facility number	Region	District	Municipality	Facility full name	Facility Status	Closure reason	Type of facility	Total staff employed	Number inpatient beds	Number of maternity beds	Family planning services	ANC services	Delivery services	Immunization services	Preventative and curative	HIV counselling and testing	STI services	Leishmaniasis skin	Leishmaniasis internal	Brucellosis diagnostics	MCD services	Treatment for mental	Surgical services	Blood transfusion services	Diagnostic testing	Diagnostic imaging	Stocks medicines, vaccines	Dental health care	Number of services
274	100204	East	Al Jabal Al Akhdar	Albayda	المركز الصحي رقم 6 - البيضاء	Open		Primary Health Center	120																				5	
275	100207	East	Al Jabal Al Akhdar	Albayda	مركز الرعاية الصحية/مراد- البيضاء	Open		Primary Health Center	82				X	X	X	X										X	X	X	X	8
276	100208	East	Al Jabal Al Akhdar	Albayda	مركز الرعاية الصحية الجهاد- البيضاء	Open		Primary Health Center	19																			X	X	3
277	100210	East	Al Jabal Al Akhdar	Albayda	مركز الرعاية الصحية جردس الحراري -البيضاء	Open		Primary Health Center	41				X		X	X									X	X	X	X	9	
278	100211	East	Al Jabal Al Akhdar	Albayda	مركز الرعاية الصحية/قندولة -البيضاء	Open		Primary Health Center	80				X		X	X										X	X	X	X	8
279	100212	East	Al Jabal Al Akhdar	Albayda	مركز الرعاية الصحية/الستلو ته -البيضاء	Open		Primary Health Center	45																			X		2
280	100301	East	Al Jabal Al Akhdar	Albayda	العيادة المجمعة/رقم 3 -البيضاء	Open		Polyclinic	195				X		X	X								X	X	X	X	X	X	8
281	100302	East	Al Jabal Al Akhdar	Albayda	العيادة المجمع 4 -البيضاء	Open		Polyclinic	190				X		X	X								X	X	X	X	X	X	8
282	100303	East	Al Jabal Al Akhdar	Albayda	العيادة المجمع ١/مينة -البيضاء	Open		Polyclinic	158				X		X	X								X	X	X	X	X	X	8
283	100305	East	Al Jabal Al Akhdar	Albayda	العيادة المجمع/رقم 1 -البيضاء	Open		Polyclinic	149				X		X	X								X	X	X	X	X	X	7
284	1001222	East	Al Jabal Al Akhdar	Albayda	وحدة الرعاية بواصفية-البيضاء	Open		Primary Health Unit	11															X						1
285	70201	East	Al Jabal Al Akhdar	Algaygab	المركز الصحي الالي -القيتب	Open		Primary Health Unit	29																					0
286	70202	East	Al Jabal Al Akhdar	Algaygab	المركز الصحي خولان -القيتب	Open		Primary Health Unit	22																					0
287	70203	East	Al Jabal Al Akhdar	Algaygab	مركز صحي القيتب -القيتب	Open		Primary Health Center	68						X									X	X			X	X	5
288	140102	East	Al Jabal Al Akhdar	Assahel	وحدة رعاية صحية ميراد مسعود -الساحل	Closed	Under Maintenance	Primary Health Unit																						
289	140104	East	Al Jabal Al Akhdar	Assahel	وحدة الرعاية الصحية بثنتاي قصر ليبيا -الساحل	Closed	Under Maintenance	Primary Health Unit																						
290	140107	East	Al Jabal Al Akhdar	Assahel	وحدة رعاية صحية سيدي نوح -الساحل	Closed	Under Maintenance	Primary Health Unit																						
291	140110	East	Al Jabal Al Akhdar	Assahel	وحدة رعاية صحية زاوية ايتابوا -الساحل	Closed	Under Maintenance	Primary Health Unit																						
292	140111	East	Al Jabal Al Akhdar	Assahel	وحدة رعاية صحية شعبة صالح -الساحل	Closed	Under Maintenance	Primary Health Unit																						
293	140112	East	Al Jabal Al Akhdar	Assahel	وحدة رعاية صحية سيدي إسماعيل -الساحل	Closed	Under Maintenance	Primary Health Unit																						
294	140114	East	Al Jabal Al Akhdar	Assahel	وحدة رعاية صحية نددخ -الساحل	Closed	Under Maintenance	Primary Health Unit																						
295	140115	East	Al Jabal Al Akhdar	Assahel	وحدة رعاية صحية سيدي دخيل -الساحل	Closed	Under Maintenance	Primary Health Unit																						
296	140117	East	Al Jabal Al Akhdar	Assahel	وحدة الرعاية الصحية زاوية القصرين -الساحل	Closed	Under Maintenance	Primary Health Unit																						
297	140120	East	Al Jabal Al Akhdar	Assahel	وحدة الرعاية الصحية مبررة -الساحل	Closed	Under Maintenance	Primary Health Unit																						
298	140121	East	Al Jabal Al Akhdar	Assahel	وحدة الرعاية الصحية سيدي حميدة -الساحل	Closed	Under Maintenance	Primary Health Unit																						
299	140207	East	Al Jabal Al Akhdar	Assahel	المركز الصحي الترسية -الساحل	Closed	Under Maintenance	Primary Health Center																						
300	140101	East	Al Jabal Al Akhdar	Assahel	وحدة رعاية صحية سيدي مالم -الساحل	Closed	used by other entity	Primary Health Unit																						
301	140105	East	Al Jabal Al Akhdar	Assahel	وحدة الرعاية الصحية الحمامة -الساحل	Closed	used by other entity	Primary Health Unit																						
302	140109	East	Al Jabal Al Akhdar	Assahel	وحدة رعاية صحية الوسيطة -الساحل	Closed	used by other entity	Primary Health Unit																						
303	140119	East	Al Jabal Al Akhdar	Assahel	وحدة الرعاية الصحية اقفطة -الساحل	Closed	used by other entity	Primary Health Unit																						
304	140103	East	Al Jabal Al Akhdar	Assahel	وحدة الرعاية الصحية ميراد رضية -الساحل	Open		Primary Health Unit																						
305	140106	East	Al Jabal Al Akhdar	Assahel	وحدة الرعاية الصحية بمت -الساحل	Open		Primary Health Unit	69					X									X				X	X	4	
306	140108	East	Al Jabal Al Akhdar	Assahel	وحدة رعاية صحية ادوس -الساحل	Open		Primary Health Unit																						
307	140113	East	Al Jabal Al Akhdar	Assahel	وحدة الرعاية الصحية المنارة زاوية العرقوب -الساحل	Open		Primary Health Unit	57																					0
308	140116	East	Al Jabal Al Akhdar	Assahel	وحدة رعاية صحية بوتراية -الساحل	Open		Primary Health Unit	30																					0
309	140118	East	Al Jabal Al Akhdar	Assahel	وحدة الرعاية الصحية بالحديد -الساحل	Open		Primary Health Unit	61					X	X								X				X	X	5	
310	140202	East	Al Jabal Al Akhdar	Assahel	مركز الرعاية الصحية قصر ليبيا -الساحل	Open		Primary Health Center	63																					1
311	140205	East	Al Jabal Al Akhdar	Assahel	المركز الصحي لسطاطة -الساحل	Open		Primary Health Center	38					X									X					X	X	4
312	140208	East	Al Jabal Al Akhdar	Assahel	مركز صحي بطة -الساحل	Open		Primary Health Center	78					X	X												X	X	4	
313	140209	East	Al Jabal Al Akhdar	Assahel	مركز صحي ظلمينة -الساحل	Open		Primary Health Center	29														X							2
314	140210	East	Al Jabal Al Akhdar	Assahel	مركز صحي البياضة -الساحل	Open		Primary Health Center	40					X									X	X		X	X	X	7	
315	140211	East	Al Jabal Al Akhdar	Assahel	مركز صحي الحنية -الساحل	Open		Primary Health Center	1																		X	X	X	4
316	80201	East	Al Jabal Al Akhdar	Labriq	المركز الصحي ترت -الأبرق	Open		Primary Health Center	41														X							1
317	80202	East	Al Jabal Al Akhdar	Labriq	المركز الصحي بونجلة -الأبرق	Open		Primary Health Center	37					X									X							2
318	110101	East	Al Jabal Al Akhdar	Shahhat	وحدة الرعاية الصحية للبحنة شحات -شحات	Open		Primary Health Unit	29																					0
319	110102	East	Al Jabal Al Akhdar	Shahhat	وحدة الرعاية الصحية حيون شحات -شحات	Open		Primary Health Unit	32																					0
320	110104	East	Al Jabal Al Akhdar	Shahhat	وحدة الرعاية الصحية السلام سوسة -شحات	Open		Primary Health Unit	26																					0
321	110105	East	Al Jabal Al Akhdar	Shahhat	وحدة الرعاية الصحية السالية -شحات	Open		Primary Health Unit	28																					0
322	110106	East	Al Jabal Al Akhdar	Shahhat	وحدة الرعاية الصحية بلقش -شحات	Open		Primary Health Unit	33																					0
323	110107	East	Al Jabal Al Akhdar	Shahhat	وحدة الرعاية الصحية النطاط -شحات	Open		Primary Health Unit	29																					0
324	110108	East	Al Jabal Al Akhdar	Shahhat	وحدة الرعاية الصحية الشيشين -شحات	Open		Primary Health Unit	34																					0
325	110109	East	Al Jabal Al Akhdar	Shahhat	وحدة الرعاية الصحية خدافس -شحات	Open		Primary Health Unit	30																					0
326	110110	East	Al Jabal Al Akhdar	Shahhat	وحدة الرعاية الصحية الأكوام -شحات	Open		Primary Health Unit	21																					0
327	110111	East	Al Jabal Al Akhdar	Shahhat	وحدة الرعاية الصحية الحناتة شحات -شحات	Open		Primary Health Unit	32																					0
328	110112	East	Al Jabal Al Akhdar	Shahhat	وحدة الرعاية الصحية صنبر شحات -شحات	Open		Primary Health Unit	22																					0

N	Facility number	Region	District	Municipality	Facility full name	Facility Status	Closure reason	Type of facility	Total staff employed	Number inpatient beds	Number of maternity beds	Family planning services	ANC services	Delivery services	Immunization services	Preventative and curative	HIV counselling and testing	STI services	Leishmaniasis skin	Leishmaniasis internal	Bruceellosis diagnostics	NCD services	Treatment for mental	Surgical services	Blood transfusion services	Diagnostic testing	Diagnostic imaging	Stocks medicines, vaccines	Dental health care	Number of services			
329	110113	East	Al Jabal Al Akhdar	Shahhat	وحدة الرعاية الصحية مفترق الطرق شحات	Open		Primary Health Unit	33																				0				
330	110114	East	Al Jabal Al Akhdar	Shahhat	وحدة الرعاية الصحية البقارة شحات	Open		Primary Health Unit	22																					0			
331	110115	East	Al Jabal Al Akhdar	Shahhat	وحدة الرعاية الصحية عمر المختار شحات	Open		Primary Health Unit	26																					0			
332	110116	East	Al Jabal Al Akhdar	Shahhat	وحدة الرعاية الصحية المنصورة شحات	Open		Primary Health Unit	23																					0			
333	110117	East	Al Jabal Al Akhdar	Shahhat	وحدة الرعاية الصحية راس التراب شحات	Open		Primary Health Unit	32																					0			
334	110118	East	Al Jabal Al Akhdar	Shahhat	وحدة الرعاية الصحية الطغيرية شحات	Open		Primary Health Unit	26																					0			
335	110201	East	Al Jabal Al Akhdar	Shahhat	مركز الرعاية الصحية شحات(1)	Open		Primary Health Center	70													X		X						2			
336	110202	East	Al Jabal Al Akhdar	Shahhat	مركز الرعاية الصحية قرندة شحات	Open		Primary Health Center	74					X	X							X								3			
337	110203	East	Al Jabal Al Akhdar	Shahhat	مركز الرعاية الصحية شحات (2)	Open		Primary Health Center	69					X	X							X								3			
338	110204	East	Al Jabal Al Akhdar	Shahhat	مركز الرعاية الصحية شحات (3)	Open		Primary Health Center	65													X								2			
339	110206	East	Al Jabal Al Akhdar	Shahhat	مركز الرعاية الصحية الصفاص شحات	Open		Primary Health Center	72					X	X							X		X						4			
340	110301	East	Al Jabal Al Akhdar	Shahhat	العيادة المجمع شحات	Open		Polyclinic	167					X	X						X		X		X	X				7			
341	110302	East	Al Jabal Al Akhdar	Shahhat	العيادة مجمعة الفاتية شحات	Open		Polyclinic	142		X			X	X						X				X	X				7			
342	111501	East	Al Jabal Al Akhdar	Shahhat	مركز علاج طبيعي شحات	Open		Primary Health Center	44												X									1			
343	111502	East	Al Jabal Al Akhdar	Shahhat	عيادة علاج سكر و الغدد الصماء شحات	Open		Primary Health Center	45												X		X		X					3			
344	160101	East	Almarj	Alabyar	وحدة رعاية صحية أم شخنب - الأبيار	Closed	Not accessible	Primary Health Unit																									
345	160103	East	Almarj	Alabyar	وحدة رعاية أوبشيفة - الأبيار	Closed	Not accessible	Primary Health Unit																									
346	160105	East	Almarj	Alabyar	وحدة رعاية صحية وادي المغفور - الأبيار	Closed	Not accessible	Primary Health Unit																									
347	160108	East	Almarj	Alabyar	وحدة رعاية صحية سيدي مهيوس - الأبيار	Closed	Not accessible	Primary Health Unit																									
348	160109	East	Almarj	Alabyar	وحدة رعاية صحية بوربوح - الأبيار	Closed	Not accessible	Primary Health Unit																									
349	160107	East	Almarj	Alabyar	وحدة رعاية صحية إبراهيم بوراس - الأبيار	Closed	Under Maintenance	Primary Health Unit																									
350	160208	East	Almarj	Alabyar	مركز صحي شمال الأبيار - الأبيار	Closed	Under Maintenance	Primary Health Center																									
351	160102	East	Almarj	Alabyar	وحدة رعاية صحية قصر الشريف - الأبيار	Open		Primary Health Unit	44																					0			
352	160104	East	Almarj	Alabyar	وحدة رعاية صحية غوط سلطان - الأبيار	Open		Primary Health Unit	61																						0		
353	160106	East	Almarj	Alabyar	وحدة رعاية صحية الأبيار - الأبيار	Open		Primary Health Unit	70																						0		
354	160201	East	Almarj	Alabyar	المركز الصحي مسوس - الأبيار	Open		Primary Health Center	36					X								X									2		
355	160202	East	Almarj	Alabyar	المركز الصحي الرجمة - الأبيار	Open		Primary Health Center	99					X								X									2		
356	160203	East	Almarj	Alabyar	المركز الصحي قنير جيرة - الأبيار	Open		Primary Health Center	143					X								X									2		
357	160204	East	Almarj	Alabyar	المركز الصحي بومريم - الأبيار	Open		Primary Health Center	102					X								X										2	
358	160206	East	Almarj	Alabyar	المركز الصحي الأبيار القديمة - الأبيار	Open		Primary Health Center	77					X	X							X										3	
359	160207	East	Almarj	Alabyar	المركز الصحي الأبيار مسعود الطيب محمد - الأبيار	Open		Primary Health Center	85							X						X										2	
360	160209	East	Almarj	Alabyar	المركز الصحي المجاهد حسن مفتاح - الأبيار	Open		Primary Health Center	129					X								X		X		X						3	
361	160210	East	Almarj	Alabyar	المركز الصحي سيدي مهيوس - الأبيار	Open		Primary Health Center	99													X			X							2	
362	160211	East	Almarj	Alabyar	المركز الصحي الجحيشة - الأبيار	Open		Primary Health Center	79								X					X										2	
363	120208	East	Almarj	Almarj	مركز الصحي فرزوعة - المرح	Closed	Under Maintenance	Primary Health Center																									
364	120201	East	Almarj	Almarj	المركز الصحي المرح الشرقي رقم 1 - المرح	Closed	used by other entity	Primary Health Center																									
365	120202	East	Almarj	Almarj	المركز الصحي المرح رقم 2 - المرح	Closed	used by other entity	Primary Health Center																									
366	120207	East	Almarj	Almarj	المركز الصحي المرح الشمالي رقم 2 - المرح	Closed	used by other entity	Primary Health Center																									
367	120101	East	Almarj	Almarj	وحدة رعاية صحية المرح الشرقي - المرح	Open		Primary Health Unit	50						X																	1	
368	120102	East	Almarj	Almarj	وحدة رعاية صحية سلبيا - المرح	Open		Primary Health Unit	6							X																1	
369	120103	East	Almarj	Almarj	وحدة رعاية صحية سيدي أبو زيد - المرح	Open		Primary Health Unit	12																							0	
370	120203	East	Almarj	Almarj	المركز الصحي المرح الجنوبي رقم 5 - المرح	Open		Primary Health Center	174						X	X						X										3	
371	120204	East	Almarj	Almarj	المركز الصحي المرح الجنوبي رقم 6 - المرح	Open		Primary Health Center	138							X						X		X		X	X					5	
372	120205	East	Almarj	Almarj	المركز الصحي المرح الغربي - المرح	Open		Primary Health Center	107				X			X						X		X									4
373	120206	East	Almarj	Almarj	المركز الصحي المرح الشمالي رقم 1 - المرح	Open		Primary Health Center	231				X		X	X						X					X	X				6	
374	120209	East	Almarj	Almarj	المركز الصحي الموالية - المرح	Open		Primary Health Center	29				X		X	X						X											4
375	130103	East	Almarj	Jardas Alabeed	وحدة رعاية صحية زاوية القصور - جردس العبيد	Closed	used by other entity	Primary Health Unit																									
376	130107	East	Almarj	Jardas Alabeed	وحدة رعاية صحية الغريب - جردس العبيد	Closed	used by other entity	Primary Health Unit																									
377	130203	East	Almarj	Jardas Alabeed	المركز الصحي سانس جردس العبيد	Closed	used by other entity	Primary Health Center																									
378	130106	East	Almarj	Jardas Alabeed	وحدة رعاية مطور الزيتون جردس العبيد	Open		Primary Health Center	78					X								X										2	
379	130201	East	Almarj	Jardas Alabeed	المركز الصحي الصلعاوية - جردس العبيد	Open		Primary Health Center	146					X	X							X										3	
380	130202	East	Almarj	Jardas Alabeed	المركز الصحي البنية - جردس العبيد	Open		Primary Health Center	191					X	X							X										3	
381	130204	East	Almarj	Jardas Alabeed	المركز الصحي جردس جردس العبيد	Open		Primary Health Center	86					X	X							X										3	
382	130205	East	Almarj	Jardas Alabeed	المركز الصحي تاكنس جردس العبيد	Open		Primary Health Center	250					X	X							X					X					4	
383	150101	East	Almarj	Toukra	وحدة رعاية صحية العفورية - توكرة	Closed	used by other entity	Primary Health Unit																									

N	Facility number	Region	District	Municipality	Facility full name	Facility Status	Closure reason	Type of facility	Total staff employed	Number inpatient beds	Number of maternity beds	Family planning services	ANC services	Delivery services	Immunization services	Preventative and curative	HIV counselling and testing	STI services	Leishmaniasis skin	Leishmaniasis internal	Bruceellosis diagnostics	NCD services	Treatment for mental	Surgical services	Blood transfusion services	Diagnostic testing	Diagnostic imaging	Stocks medicines, vaccines	Dental health care	Number of services		
384	150206	East	Almarj	Toukra	المركز الصحي المسيرة الخضراء -توكره	Closed	used by other entity	Primary Health Center																								
385	150201	East	Almarj	Toukra	المركز الصحي الحمدة -توكره	Open		Primary Health Unit	19					X													X		2			
386	150202	East	Almarj	Toukra	المركز الصحي الغفورية -توكره	Open		Primary Health Center	54					X													X		2			
387	150204	East	Almarj	Toukra	المركز الصحي بريس -توكره	Open		Primary Health Center	52					X								X					X		3			
388	150205	East	Almarj	Toukra	مركز صحي العيني -توكره	Open		Primary Health Center														X										
389	150207	East	Almarj	Toukra	المركز الصحي دريانه -توكره	Open		Primary Health Center	59				X	X	X							X		X			X	X	7			
390	60204	East	Darnah	Alqubba	المركز الصحي حي الشروق -القبه	Closed	Not accessible	Primary Health Center																								
391	60205	East	Darnah	Alqubba	المركز الصحي الكرامة -القبه	Closed	Not accessible	Primary Health Center																								
392	60207	East	Darnah	Alqubba	المركز الصحي النبوسية -القبه	Closed	Not accessible	Primary Health Center																								
393	60101	East	Darnah	Alqubba	وحدة رعاية الصحبة بشارة -القبه	Closed	Under Maintenance	Primary Health Unit																								
394	60201	East	Darnah	Alqubba	المركز الصحي سيدي خالد -القبه	Open		Primary Health Center	29													X									1	
395	60202	East	Darnah	Alqubba	المركز الصحي عين مارة -القبه	Open		Primary Health Center	66													X									1	
396	60203	East	Darnah	Alqubba	المركز الصحي راس الهلال -القبه	Open		Primary Health Center	82													X									1	
397	60206	East	Darnah	Alqubba	المركز الصحي بيت تامر -القبه	Open		Primary Health Center	41													X									1	
398	60208	East	Darnah	Alqubba	المركز الصحي لمطودة -القبه	Open		Primary Health Center	106													X									1	
399	60209	East	Darnah	Alqubba	المركز الصحي القبه -القبه	Open		Primary Health Center	88					X								X				X					3	
400	50205	East	Darnah	Derna	المركز الصحي سرسره -حدرنة	Closed	Not accessible	Primary Health Center																								
401	50207	East	Darnah	Derna	المركز الصحي ياسين -حدرنة	Closed	Not accessible	Primary Health Center																								
402	50217	East	Darnah	Derna	مركز صحي العزبات -حدرنة	Closed	Under Maintenance	Primary Health Center																								
403	50215	East	Darnah	Derna	المركز الصحي الفتاح -حدرنة	Closed	used by other entity	Primary Health Center																								
404	50101	East	Darnah	Derna	وحدة رعاية أم المؤمنين -حدرنة	Open		Primary Health Unit	69					X																	1	
405	50102	East	Darnah	Derna	وحدة رعاية كرسه -حدرنة	Open		Primary Health Center	145					X	X							X									3	
406	50201	East	Darnah	Derna	المركز الصحي شهداء جنين -حدرنة	Open		Primary Health Unit	76																							0
407	50202	East	Darnah	Derna	المركز الصحي سالم ملسي -حدرنة	Open		Primary Health Unit	62																							0
408	50203	East	Darnah	Derna	المركز الصحي الساحل رقم 1 -حدرنة	Open		Primary Health Center	97						X							X									2	
409	50206	East	Darnah	Derna	المركز الصحي شهداء الوقف -حدرنة	Open		Primary Health Center	70						X							X									2	
410	50208	East	Darnah	Derna	مركز صحي كرسه -حدرنة	Open		Primary Health Center	75				X	X	X							X	X				X				6	
411	50211	East	Darnah	Derna	المركز الصحي المرحوم محمد جبر -حدرنة	Open		Primary Health Center	128						X							X									2	
412	50212	East	Darnah	Derna	المركز الصحي احزير الكويسة -حدرنة	Open		Primary Health Center	96						X							X									2	
413	50213	East	Darnah	Derna	المركز الصحي حي السلام -حدرنة	Open		Primary Health Unit	156																							0
414	50216	East	Darnah	Derna	المركز الصحي لزبون -حدرنة	Open		Primary Health Center	51																							0
415	50302	East	Darnah	Derna	العيادة المجمع المرحوم محمود لهريش -حدرنة	Open		Polyclinic	146						X						X			X	X	X	X	X			5	
416	50308	East	Darnah	Derna	العيادة المجمع يوسف بو رحيل -حدرنة	Open		Polyclinic	232						X	X					X			X	X	X	X	X	X		6	
417	51510	East	Darnah	Derna	مركز علاج السكر والغدد الصماء -حدرنة	Open		Primary Health Center	115					X	X						X										3	
418	90205	East	Darnah	Umm arrazam	المركز الصحي ام الرزم -أم الرزم	Closed	Not accessible	Primary Health Center																								
419	90101	East	Darnah	Umm arrazam	وحدة رعاية صحبة أبو الفرائس -أم الرزم	Closed	Under Maintenance	Primary Health Unit																								
420	90102	East	Darnah	Umm arrazam	وحدة رعاية حي الأسمت -أم الرزم	Closed	Under Maintenance	Primary Health Unit																								
421	90203	East	Darnah	Umm arrazam	المركز الصحي الحسي -أم الرزم	Closed	Under Maintenance	Primary Health Center																								
422	90211	East	Darnah	Umm arrazam	المركز الصحي الأردام -أم الرزم	Closed	used by other entity	Primary Health Center																								
423	90201	East	Darnah	Umm arrazam	المركز الصحي العزبات -أم الرزم	Open		Primary Health Center	46					X								X				X					3	
424	90202	East	Darnah	Umm arrazam	المركز الصحي التميمي -أم الرزم	Open		Primary Health Center	66					X	X							X									3	
425	90204	East	Darnah	Umm arrazam	المركز الصحي خليج بعية -أم الرزم	Open		Primary Health Center	44					X	X							X									3	
426	90206	East	Darnah	Umm arrazam	المركز الصحي راس القين -أم الرزم	Open		Primary Health Center	13													X									1	
427	90207	East	Darnah	Umm arrazam	المركز الصحي المغرش -أم الرزم	Open		Primary Health Center	102													X									1	
428	90208	East	Darnah	Umm arrazam	المركز الصحي أم الحفين -أم الرزم	Open		Primary Health Center	40													X									1	
429	90209	East	Darnah	Umm arrazam	المركز الصحي مرتوية الجديدة -أم الرزم	Open		Primary Health Center	98				X	X	X							X			X	X					6	
430	90210	East	Darnah	Umm arrazam	المركز الصحي مرتوية القديم -أم الرزم	Open		Primary Health Center	59			X		X	X							X									4	
431	40201	East	Al Betnan	Al Jaghboub	المركز الصحي الجغبوب -الجغبوب	Open		Primary Health Center	15						X																1	
432	30103	East	Al Betnan	Bir Alashhab	وحدة الرعاية الصحية الغربات -جنر الأشهب	Closed	Not accessible	Primary Health Unit																								
433	30107	East	Al Betnan	Bir Alashhab	وحدة الرعاية الصحية وادي فصة -جنر الأشهب	Closed	Not accessible	Primary Health Unit																								
434	30106	East	Al Betnan	Bir Alashhab	وحدة الرعاية الصحية الخيري -جنر الأشهب	Closed	Under Maintenance	Primary Health Unit																								
435	30108	East	Al Betnan	Bir Alashhab	وحدة الرعاية الصحية القرنين -جنر الأشهب	Closed	Under Maintenance	Primary Health Unit																								
436	30102	East	Al Betnan	Bir Alashhab	وحدة الرعاية الصحية الساحلية حفاز -جنر الأشهب	Closed	used by other entity	Primary Health Unit																								
437	30105	East	Al Betnan	Bir Alashhab	وحدة الرعاية الصحية الطرفي -جنر الأشهب	Closed	used by other entity	Primary Health Unit																								
438	30104	East	Al Betnan	Bir Alashhab	وحدة الرعاية الصحية جزور -جنر الأشهب	Open		Primary Health Unit																								



N	Facility number	Region	District	Municipality	Facility full name	Facility Status	Closure reason	Type of facility	Total staff employed	Number inpatient beds	Number of maternity beds	Family planning services	ANC services	Delivery services	Immunization services	Preventative and curative	HIV counselling and testing	STI services	Leishmaniasis skin	Leishmaniasis internal	Brucellosis diagnostics	NCID services	Treatment for mental	Surgical services	Blood transfusion services	Diagnostic testing	Diagnostic imaging	Stocks medicines, vaccines	Dental health care	Number of services	
439	30201	East	Al Betnan	Bir Alashhab	المركز الصحي الأشهب حنر الأشهب	Open		Primary Health Center	51						X							X								2	
440	10104	East	Al Betnan	Emsaed	وحدة الرعاية الصحية لخوير الشرقية -امساعد	Closed	Not accessible	Primary Health Unit																							
441	10103	East	Al Betnan	Emsaed	وحدة الرعاية الصحية الشقة -امساعد	Closed	Under Maintenance	Primary Health Unit																							
442	10105	East	Al Betnan	Emsaed	وحدة الرعاية الصحية شمسان -امساعد	Closed	Under Maintenance	Primary Health Unit																							
443	10101	East	Al Betnan	Emsaed	وحدة الرعاية الصحية أم ركية -امساعد	Open		Primary Health Unit	28																					0	
444	10102	East	Al Betnan	Emsaed	وحدة الرعاية الصحية الخشيتات -امساعد	Open		Primary Health Unit																							
445	10201	East	Al Betnan	Emsaed	مركز صحي أمساعد -امساعد	Open		Primary Health Center	26			X	X		X	X						X		X		X	X	X	X	10	
446	20105	East	Al Betnan	Tobruk	وحدة الرعاية الصحية بوقفساطه طبرق	Closed	Not accessible	Primary Health Unit																							
447	20118	East	Al Betnan	Tobruk	وحدة الرعاية الصحية كمبوت الشمالي طبرق	Closed	Not accessible	Primary Health Unit																							
448	20101	East	Al Betnan	Tobruk	وحدة رعاية صحية تربية الأممك طبرق	Closed	Under Maintenance	Primary Health Unit																							
449	20102	East	Al Betnan	Tobruk	وحدة رعاية صحية عين الغزالة طبرق	Closed	Under Maintenance	Primary Health Unit																							
450	20103	East	Al Betnan	Tobruk	وحدة رعاية صحية القرضبة طبرق	Closed	Under Maintenance	Primary Health Unit																							
451	20106	East	Al Betnan	Tobruk	وحدة الرعاية الصحية عكرمة طبرق	Closed	Under Maintenance	Primary Health Unit																							
452	20109	East	Al Betnan	Tobruk	وحدة رعاية صحية الطرشة طبرق	Closed	Under Maintenance	Primary Health Unit																							
453	20111	East	Al Betnan	Tobruk	وحدة الرعاية الصحية الزغرة طبرق	Closed	Under Maintenance	Primary Health Unit																							
454	20114	East	Al Betnan	Tobruk	وحدة الرعاية الصحية القفاية طبرق	Closed	Under Maintenance	Primary Health Unit																							
455	20116	East	Al Betnan	Tobruk	وحدة رعاية صحية حمزة طبرق	Closed	Under Maintenance	Primary Health Unit																							
456	20120	East	Al Betnan	Tobruk	وحدة الرعاية الصحية الشعبية طبرق	Closed	Under Maintenance	Primary Health Unit																							
457	20122	East	Al Betnan	Tobruk	وحدة الرعاية الصحية المزينة طبرق	Closed	Under Maintenance	Primary Health Unit																							
458	20125	East	Al Betnan	Tobruk	وحدة الرعاية الصحية ربيع طبرق	Closed	Under Maintenance	Primary Health Unit																							
459	20206	East	Al Betnan	Tobruk	المركز الصحي المسائل الجاهرة طبرق	Closed	Under Maintenance	Primary Health Center																							
460	20213	East	Al Betnan	Tobruk	مركز صحي باب دنة للأمومة والطفولة والطوارئ طبرق	Closed	Under Maintenance	Primary Health Center																							
461	20104	East	Al Betnan	Tobruk	وحدة الرعاية الصحية الخوير طبرق	Closed	used by other entity	Primary Health Unit																							
462	20119	East	Al Betnan	Tobruk	وحدة الرعاية الصحية كرم الخيل طبرق	Closed	used by other entity	Primary Health Unit																							
463	20107	East	Al Betnan	Tobruk	وحدة الرعاية الصحية شهداء الناطورة طبرق	Open		Primary Health Unit	382	6					X	X									X					3	
464	20108	East	Al Betnan	Tobruk	وحدة رعاية صحية سوق العجاج طبرق	Open		Primary Health Center	261													X									2
465	20110	East	Al Betnan	Tobruk	وحدة الرعاية الصحية بطرونة طبرق	Open		Primary Health Unit	26																						0
466	20112	East	Al Betnan	Tobruk	وحدة الرعاية الصحية الهائي طبرق	Open		Primary Health Unit	9																						0
467	20113	East	Al Betnan	Tobruk	وحدة الرعاية الصحية الحاج اكريم طبرق	Open		Primary Health Unit	35																						0
468	20115	East	Al Betnan	Tobruk	وحدة رعاية صحية الشهيد البناي طبرق	Open		Primary Health Unit	40																						0
469	20117	East	Al Betnan	Tobruk	وحدة الرعاية الصحية الساحلية قايس طبرق	Open		Primary Health Unit	18																						0
470	20121	East	Al Betnan	Tobruk	وحدة الرعاية الصحية وادي العين طبرق	Open		Primary Health Unit	21	1																					0
471	20124	East	Al Betnan	Tobruk	وحدة الرعاية الصحية الشويمرة طبرق	Open		Primary Health Unit	13	1	1																				0
472	20126	East	Al Betnan	Tobruk	وحدة الرعاية الصحية بو فرجاني طبرق	Open		Primary Health Unit	34	3																					0
473	20127	East	Al Betnan	Tobruk	وحدة الرعاية الصحية بو شويشينة طبرق	Open		Primary Health Unit	8	2																					0
474	20128	East	Al Betnan	Tobruk	وحدة الرعاية الصحية الملاحة طبرق	Open		Primary Health Unit	24																						0
475	20129	East	Al Betnan	Tobruk	وحدة الرعاية الصحية رأس عزاز طبرق	Open		Primary Health Unit	20																						0
476	20201	East	Al Betnan	Tobruk	المركز الصحي الغزالة طبرق	Open		Primary Health Center	132													X									1
477	20202	East	Al Betnan	Tobruk	المركز الصحي القرضبة طبرق	Open		Primary Health Center	111													X									1
478	20203	East	Al Betnan	Tobruk	المركز الصحي بالختار طبرق	Open		Primary Health Center	55	1	1											X									1
479	20204	East	Al Betnan	Tobruk	المركز الصحي المرصص طبرق	Open		Primary Health Center	81													X									1
480	20205	East	Al Betnan	Tobruk	مركز الأمومة و الطفولة و الطوارئ طبرق	Open		Primary Health Center	388			X	X		X	X	X					X		X							7
481	20207	East	Al Betnan	Tobruk	المركز الصحي جمال عبد ناصر طبرق	Open		Primary Health Center	176	3						X						X									2
482	20208	East	Al Betnan	Tobruk	المركز الصحي باب الزويتون طبرق	Open		Primary Health Center	105	5						X						X									2
483	20209	East	Al Betnan	Tobruk	المركز الصحي القعرة طبرق	Open		Primary Health Center	60						X							X									2
484	20210	East	Al Betnan	Tobruk	المركز الصحي كمبوت طبرق	Open		Primary Health Center	76	2												X									1
485	20211	East	Al Betnan	Tobruk	المركز الصحي مرسى دفقة طبرق	Open		Primary Health Center	71						X							X									2
486	20212	East	Al Betnan	Tobruk	المركز الصحي قصر الجدي طبرق	Open		Primary Health Center	73	4												X									1
487	20301	East	Al Betnan	Tobruk	العيادة المجتمعية المنارة طبرق	Open		Polyclinic	234	3						X					X				X	X		X		5	
488	20302	East	Al Betnan	Tobruk	عيادة المختار التخصصية طبرق	Open		Polyclinic	423								X				X				X	X		X		5	
489	510102	South	Wadi Ashati	Al Shate Al Sharge	وحدة الرعاية الصحية رأس الصالحة -الشاطي الشرقي	Closed	Closed due to damage	Primary Health Unit																							
490	510108	South	Wadi Ashati	Al Shate Al Sharge	وحدة الرعاية الصحية كوقيرة -الشاطي الشرقي	Closed	Closed due to damage	Primary Health Unit																							
491	510104	South	Wadi Ashati	Al Shate Al Sharge	وحدة الرعاية الصحية الطريق الدائري -الشاطي الشرقي	Closed	used by other entity	Primary Health Unit																							
492	510107	South	Wadi Ashati	Al Shate Al Sharge	وحدة الرعاية الصحية قرية البراس -الشاطي الشرقي	Closed	used by other entity	Primary Health Unit																							
493	510113	South	Wadi Ashati	Al Shate Al Sharge	وحدة الرعاية الصحية الزاوية -الشاطي الشرقي	Closed	used by other entity	Primary Health Unit																							

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494	510101	South	Wadi Ashati	Al Shate Al Sharge	وحدة الرعاية الصحية حي الاجبار -الشاطبي الشرقي	Open		Primary Health Unit	19																				0		
495	510103	South	Wadi Ashati	Al Shate Al Sharge	وحدة الرعاية الصحية حي هويدي -الشاطبي الشرقي	Open		Primary Health Unit	13																					0	
496	510105	South	Wadi Ashati	Al Shate Al Sharge	وحدة الرعاية الصحية مطار جلود -الشاطبي الشرقي	Open		Primary Health Unit	13																					0	
497	510106	South	Wadi Ashati	Al Shate Al Sharge	وحدة الرعاية الصحية الحزام الاخضر -الشاطبي الشرقي	Open		Primary Health Unit	6					X																1	
498	510109	South	Wadi Ashati	Al Shate Al Sharge	وحدة الرعاية الصحية الزاوية القديمة -الشاطبي الشرقي	Open		Primary Health Unit	15																					0	
499	510110	South	Wadi Ashati	Al Shate Al Sharge	وحدة الرعاية الصحية دينيب اشكدة -الشاطبي الشرقي	Open		Primary Health Unit	34																					0	
500	510111	South	Wadi Ashati	Al Shate Al Sharge	وحدة الرعاية الصحية ابو غرقة اشكدة -الشاطبي الشرقي	Open		Primary Health Unit	25																					0	
501	510112	South	Wadi Ashati	Al Shate Al Sharge	وحدة الرعاية الصحية الحزام الاخضر اشكدة -الشاطبي الشرقي	Open		Primary Health Unit	74																					0	
502	510201	South	Wadi Ashati	Al Shate Al Sharge	المركز الصحي حي الفاتح ( سابقا ) -الشاطبي الشرقي	Open		Primary Health Center	8					X							X									2	
503	510202	South	Wadi Ashati	Al Shate Al Sharge	المركز الصحي براك -الشاطبي الشرقي	Open		Primary Health Center	101												X		X							2	
504	510203	South	Wadi Ashati	Al Shate Al Sharge	المركز الصحي اشكدة -الشاطبي الشرقي	Open		Primary Health Center	55					X							X									2	
505	510204	South	Wadi Ashati	Al Shate Al Sharge	المركز الصحي زلواز -الشاطبي الشرقي	Open		Primary Health Center	91					X							X									2	
506	510205	South	Wadi Ashati	Al Shate Al Sharge	المركز الصحي العافية -الشاطبي الشرقي	Open		Primary Health Center	51												X									1	
507	510206	South	Wadi Ashati	Al Shate Al Sharge	المركز الصحي قبرة -الشاطبي الشرقي	Open		Primary Health Center	64					X	X						X									3	
508	510207	South	Wadi Ashati	Al Shate Al Sharge	المركز الصحي الزاوية -الشاطبي الشرقي	Open		Primary Health Center	75				X	X							X									3	
509	470105	South	Ghat	Ghat	وحدة الرعاية المشروع -غسات	Closed	Under Maintenance	Primary Health Unit																							
510	470202	South	Ghat	Ghat	مركز رعاية صحي البركت -غسات	Closed	Under Maintenance	Primary Health Center																							
511	470204	South	Ghat	Ghat	مركز صحي العوينات -غسات	Closed	Under Maintenance	Primary Health Center																							
512	470203	South	Ghat	Ghat	مركز صحي غات المدينة -غسات	Closed	Used by hospital	Primary Health Center																							
513	470101	South	Ghat	Ghat	وحدة الرعاية ايسين -غسات	Open		Primary Health Unit	3					X										X						2	
514	470102	South	Ghat	Ghat	وحدة الرعاية انتمت -غسات	Open		Primary Health Unit	12																						0
515	470103	South	Ghat	Ghat	وحدة الرعاية جوفاري -غسات	Open		Primary Health Unit	6																X						1
516	470104	South	Ghat	Ghat	وحدة الرعاية تينجراين -غسات	Open		Primary Health Unit	6																						0
517	470106	South	Ghat	Ghat	وحدة الرعاية فيلان -غسات	Open		Primary Health Unit	17					X																	1
518	470201	South	Ghat	Ghat	مركز الصحي البركت -غسات	Open		Primary Health Center	221			X	X	X							X	X		X	X	X	X	X	X		9
519	470205	South	Ghat	Ghat	مركز صحي تهبلا -غسات	Open		Primary Health Center	44												X	X						X	X		4
520	470206	South	Ghat	Ghat	مركز صحي الفوت -غسات	Open		Primary Health Center	23					X							X	X						X	X		4
521	470207	South	Ghat	Ghat	مركز صحي حي العروبة -غسات	Open		Primary Health Center	155					X							X	X		X			X	X	X		6
522	530101	South	Murzuq	Al Shate Al Garbe	وحدة الرعاية الصحية عين المشاشية -الشاطبي الغربي	Open		Primary Health Unit	47					X																	1
523	530102	South	Murzuq	Al Shate Al Garbe	وحدة الرعاية الصحية الرصيفة -الشاطبي الغربي	Open		Primary Health Unit	117																						0
524	530103	South	Murzuq	Al Shate Al Garbe	وحدة الرعاية الصحية الخضراء ونزريك -الشاطبي الغربي	Open		Primary Health Unit	33																						0
525	530104	South	Murzuq	Al Shate Al Garbe	وحدة الرعاية الصحية لوصيف -الشاطبي الغربي	Open		Primary Health Unit	48																						0
526	530105	South	Murzuq	Al Shate Al Garbe	وحدة الرعاية الصحية المعاتيق -الشاطبي الغربي	Open		Primary Health Unit	88																						0
527	530106	South	Murzuq	Al Shate Al Garbe	وحدة الرعاية الصحية قصر العرائسية -الشاطبي الغربي	Open		Primary Health Unit	15																						0
528	530107	South	Murzuq	Al Shate Al Garbe	وحدة الرعاية الصحية الاتحاد ادري -الشاطبي الغربي	Open		Primary Health Unit	86																						0
529	530108	South	Murzuq	Al Shate Al Garbe	وحدة الرعاية الصحية الزاوية -الشاطبي الغربي	Open		Primary Health Unit	119																						0
530	530109	South	Murzuq	Al Shate Al Garbe	وحدة الرعاية الصحية تسمان القديمة -الشاطبي الغربي	Open		Primary Health Unit	139																						0
531	530110	South	Murzuq	Al Shate Al Garbe	وحدة الرعاية الصحية قصر المتمم -الشاطبي الغربي	Open		Primary Health Unit	58																						0
532	530111	South	Murzuq	Al Shate Al Garbe	وحدة الرعاية الصحية اولاد يوسف -الشاطبي الغربي	Open		Primary Health Unit	70																						0
533	530201	South	Murzuq	Al Shate Al Garbe	المركز الصحي المنصورة -الشاطبي الغربي	Open		Primary Health Center	137					X								X									2
534	530202	South	Murzuq	Al Shate Al Garbe	المركز الصحي ونزريك -الشاطبي الغربي	Open		Primary Health Center	17					X								X									2
535	530203	South	Murzuq	Al Shate Al Garbe	المركز الصحي ابو فقود -الشاطبي الغربي	Open		Primary Health Center	43					X								X									2
536	530204	South	Murzuq	Al Shate Al Garbe	المركز الصحي قطة -الشاطبي الغربي	Open		Primary Health Center	118				X									X									3
537	530205	South	Murzuq	Al Shate Al Garbe	المركز الصحي الزهراء -الشاطبي الغربي	Open		Primary Health Center	88					X								X									2
538	530206	South	Murzuq	Al Shate Al Garbe	المركز الصحي قلعة -الشاطبي الغربي	Open		Primary Health Center	86													X									1
539	530207	South	Murzuq	Al Shate Al Garbe	المركز الصحي برفق -الشاطبي الغربي	Open		Primary Health Center	222					X								X									2
540	530208	South	Murzuq	Al Shate Al Garbe	المركز الصحي ادري -الشاطبي الغربي	Open		Primary Health Center	146					X								X	X								3
541	530209	South	Murzuq	Al Shate Al Garbe	المركز الصحي تسمان -الشاطبي الغربي	Open		Primary Health Center	124					X								X									2
542	400101	South	Murzuq	Algatroun	وحدة رعاية منروسة -القطرون	Closed	Closed due to damage	Primary Health Unit																							
543	400103	South	Murzuq	Algatroun	وحدة رعاية نقر كمة -القطرون	Closed	Closed due to damage	Primary Health Unit																							
544	400104	South	Murzuq	Algatroun	وحدة رعاية قصر مسعود -القطرون	Closed	Closed due to damage	Primary Health Unit																							
545	400102	South	Murzuq	Algatroun	وحدة رعاية منفذ تجرهي -القطرون	Closed	Not accessible	Primary Health Unit																							
546	400201	South	Murzuq	Algatroun	مركز الصحي تجرهي -القطرون	Open		Primary Health Center	43					X								X									2
547	400202	South	Murzuq	Algatroun	مركز الصحي القطرون -القطرون	Open		Primary Health Center	249					X								X					X				3
548	400203	South	Murzuq	Algatroun	مركز الصحي البخي -القطرون	Open		Primary Health Center	130					X								X									2



N	Facility number	Region	District	Municipality	Facility full name	Facility Status	Closure reason	Type of facility	Total staff employed	Number inpatient beds	Number of maternity beds	Family planning services	ANC services	Delivery services	Immunization services	Preventative and curative	HIV counselling and testing	STI services	Leishmaniasis skin	Leishmaniasis internal	Brucellosis diagnostics	NCD services	Treatment for mental	Surgical services	Blood transfusion services	Diagnostic testing	Diagnostic imaging	Stocks medicines, vaccines	Dental health care	Number of services	
549	520103	South	Murzuq	Algurudha Ashshati	وحدة الرعاية الصحية بنز الشركاء - القرصنة	Closed	Closed due to damage	Primary Health Unit																							
550	520112	South	Murzuq	Algurudha Ashshati	وحدة الرعاية الصحية الكاف - القرصنة	Closed	used by other entity	Primary Health Unit																							
551	520101	South	Murzuq	Algurudha Ashshati	وحدة الرعاية الصحية أولاد يوسف - القرصنة	Open		Primary Health Unit	112																					0	
552	520102	South	Murzuq	Algurudha Ashshati	وحدة الرعاية الصحية حي المشائليه - القرصنة	Open		Primary Health Unit	43																					0	
553	520104	South	Murzuq	Algurudha Ashshati	وحدة الرعاية الصحية حي العزومة - القرصنة	Open		Primary Health Unit	24																					0	
554	520105	South	Murzuq	Algurudha Ashshati	وحدة الرعاية الصحية تامزاوة القديمة - القرصنة	Open		Primary Health Unit	42																					0	
555	520106	South	Murzuq	Algurudha Ashshati	وحدة الرعاية الصحية قصر الشينبات - القرصنة	Open		Primary Health Unit	69																					0	
556	520107	South	Murzuq	Algurudha Ashshati	وحدة الرعاية الصحية العلوة - القرصنة	Open		Primary Health Unit	39																					0	
557	520108	South	Murzuq	Algurudha Ashshati	وحدة الرعاية الصحية تاروت الجديدة - القرصنة	Open		Primary Health Unit	25																					0	
558	520110	South	Murzuq	Algurudha Ashshati	وحدة الرعاية الصحية العيون - القرصنة	Open		Primary Health Unit	33																					0	
559	520111	South	Murzuq	Algurudha Ashshati	وحدة الرعاية الصحية العيون القديمة - القرصنة	Open		Primary Health Unit	40																					0	
560	520113	South	Murzuq	Algurudha Ashshati	وحدة الرعاية الصحية الدبسة - القرصنة	Open		Primary Health Unit	153																					0	
561	520115	South	Murzuq	Algurudha Ashshati	وحدة الرعاية الصحية الرأس - القرصنة	Open		Primary Health Unit	26																					0	
562	520116	South	Murzuq	Algurudha Ashshati	وحدة الرعاية الصحية شهداء ليبيا - القرصنة	Open		Primary Health Unit	124																					0	
563	520201	South	Murzuq	Algurudha Ashshati	المركز الصحي محروقة - القرصنة	Open		Primary Health Center	60					X							X		X							3	
564	520202	South	Murzuq	Algurudha Ashshati	المركز الصحي أقل - القرصنة	Open		Primary Health Center	80					X							X									2	
565	520203	South	Murzuq	Algurudha Ashshati	المركز الصحي قفم - القرصنة	Open		Primary Health Center	53												X									1	
566	520204	South	Murzuq	Algurudha Ashshati	المركز الصحي تامزاوة - القرصنة	Open		Primary Health Center	28					X							X									2	
567	520205	South	Murzuq	Algurudha Ashshati	المركز الصحي تاروت - القرصنة	Open		Primary Health Center	81					X							X									2	
568	520206	South	Murzuq	Algurudha Ashshati	المركز الصحي العيون - القرصنة	Open		Primary Health Center	255												X									1	
569	520207	South	Murzuq	Algurudha Ashshati	المركز الصحي القرصنة - القرصنة	Open		Primary Health Center	70					X							X									2	
570	420101	South	Murzuq	Alsharguiya	وحدة رعاية أم زويبر - الشارقة	Open		Primary Health Unit	10																					0	
571	420102	South	Murzuq	Alsharguiya	وحدة رعاية أحميصة القديمة - الشارقة	Open		Primary Health Unit	24																					0	
572	420103	South	Murzuq	Alsharguiya	وحدة رعاية تويومي - الشارقة	Open		Primary Health Unit	49					X																1	
573	420104	South	Murzuq	Alsharguiya	وحدة رعاية البيبر - الشارقة	Open		Primary Health Unit	36																					0	
574	420105	South	Murzuq	Alsharguiya	وحدة رعاية تويو - الشارقة	Open		Primary Health Unit	30																					0	
575	420106	South	Murzuq	Alsharguiya	وحدة رعاية مسفوين - الشارقة	Open		Primary Health Unit	28																					0	
576	420201	South	Murzuq	Alsharguiya	مركز الصحي زويلة - الشارقة	Open		Primary Health Center	79					X	X						X				X					4	
577	420202	South	Murzuq	Alsharguiya	مركز الصحي أم الأراب - الشارقة	Open		Primary Health Center	72												X									2	
578	420203	South	Murzuq	Alsharguiya	مركز الصحي مجدول - الشارقة	Open		Primary Health Center	67					X							X									2	
579	420204	South	Murzuq	Alsharguiya	مركز الصحي تمسة - الشارقة	Open		Primary Health Center	61					X							X									2	
580	420205	South	Murzuq	Alsharguiya	مركز الصحي حميرة - الشارقة	Open		Primary Health Center	33					X							X									2	
581	430204	South	Murzuq	Murzuq	مركز صحي تمسة مرزق	Closed	Under Maintenance	Primary Health Center																							
582	430101	South	Murzuq	Murzuq	وحدة رعاية حجارة مرزق	Open		Primary Health Unit	13																					0	
583	430102	South	Murzuq	Murzuq	وحدة رعاية غواط مرزق	Open		Primary Health Unit	14																					0	
584	430103	South	Murzuq	Murzuq	وحدة رعاية البحريات مرزق	Open		Primary Health Unit	36																					0	
585	430104	South	Murzuq	Murzuq	وحدة رعاية أليم مرزق	Open		Primary Health Unit	53																					0	
586	430105	South	Murzuq	Murzuq	وحدة رعاية ببلوح مرزق	Open		Primary Health Unit	31																					0	
587	430107	South	Murzuq	Murzuq	وحدة رعاية حي المطار مرزق	Open		Primary Health Unit	26																					0	
588	430201	South	Murzuq	Murzuq	مركز الصحي جيزاو مرزق	Open		Primary Health Center	77					X							X									2	
589	430202	South	Murzuq	Murzuq	مركز الصحي حج حجيل مرزق	Open		Primary Health Center	69												X									1	
590	430203	South	Murzuq	Murzuq	مركز الصحي الدبسة مرزق	Open		Primary Health Center	39												X									1	
591	430301	South	Murzuq	Murzuq	عيادة مجعهم مرزق مرزق	Open		Polyclinic	137				X		X					X				X	X	X	X	X	X	6	
592	440105	South	Murzuq	Taraghin	وحدة رعاية الطويلة ترأغن	Closed	Closed due to damage	Primary Health Unit																							
593	440204	South	Murzuq	Taraghin	مركز الصحي حي الحرية ترأغن	Closed	Closed due to damage	Primary Health Center																							
594	440101	South	Murzuq	Taraghin	وحدة رعاية الدبسة ترأغن	Open		Primary Health Unit	12																					0	
595	440102	South	Murzuq	Taraghin	وحدة رعاية القلب ترأغن	Open		Primary Health Unit	35																					0	
596	440103	South	Murzuq	Taraghin	وحدة رعاية الجبار ترأغن	Open		Primary Health Unit	24																					0	
597	440104	South	Murzuq	Taraghin	وحدة رعاية مغوة ترأغن	Open		Primary Health Unit	21																					0	
598	440106	South	Murzuq	Taraghin	وحدة رعاية البيضان ترأغن	Open		Primary Health Unit	12																					0	
599	440107	South	Murzuq	Taraghin	وحدة رعاية بند ليف ترأغن	Open		Primary Health Unit	24																					0	
600	440108	South	Murzuq	Taraghin	وحدة رعاية صحية أولية ترأغن	Open		Primary Health Unit	18																					0	
601	440109	South	Murzuq	Taraghin	وحدة رعاية صحية مغفن ترأغن	Open		Primary Health Unit	17																					0	
602	440201	South	Murzuq	Taraghin	مركز الصحي فنفل ترأغن	Open		Primary Health Center	88						X						X									2	
603	440202	South	Murzuq	Taraghin	مركز الصحي ترأغن ترأغن	Open		Primary Health Center	96				X			X						X					X			4	

N	Facility number	Region	District	Municipality	Facility full name	Facility Status	Closure reason	Type of facility	Total staff employed	Number inpatient beds	Number of maternity beds	Family planning services	ANC services	Delivery services	Immunization services	Preventative and curative	HIV counselling and testing	STI services	Leishmaniasis skin	Leishmaniasis internal	Bruceellosis diagnostics	NCD services	Treatment for mental	Surgical services	Blood transfusion services	Diagnostic testing	Diagnostic imaging	Stocks medicines, vaccines	Dental health care	Number of services
604	440203	South	Murzuq	Taraghin	مركز الصحي الزيتونة سترانغ	Open		Primary Health Center	26						X							X							2	
605	410101	South	Murzuq	Wadi Etba	وحدة رعاية الحريات وادي عتبه وادي عتبه	Open		Primary Health Unit	12																				0	
606	410102	South	Murzuq	Wadi Etba	وحدة رعاية السبونية وادي عتبه	Open		Primary Health Unit	15																				0	
607	410103	South	Murzuq	Wadi Etba	وحدة رعاية وادي عتبه وادي عتبه	Open		Primary Health Unit	13																				0	
608	410104	South	Murzuq	Wadi Etba	وحدة رعاية أنجانر وادي عتبه	Open		Primary Health Unit	13																				0	
609	410105	South	Murzuq	Wadi Etba	وحدة رعاية مريحيا وادي عتبه	Open		Primary Health Unit	38																				0	
610	410106	South	Murzuq	Wadi Etba	وحدة رعاية نقرظين وادي عتبه	Open		Primary Health Unit	14																				0	
611	410107	South	Murzuq	Wadi Etba	وحدة رعاية جبارة وادي عتبه	Open		Primary Health Unit	26																				0	
612	410108	South	Murzuq	Wadi Etba	وحدة رعاية مقطع وادي عتبه	Open		Primary Health Unit	13																				0	
613	410109	South	Murzuq	Wadi Etba	وحدة رعاية أم الحمام وادي عتبه	Open		Primary Health Unit	16																				0	
614	410110	South	Murzuq	Wadi Etba	وحدة رعاية دوجال وادي عتبه	Open		Primary Health Unit	20																				0	
615	410201	South	Murzuq	Wadi Etba	مركز الصحي اقرار وادي عتبه	Open		Primary Health Center	152				X		X							X			X		X		5	
616	410202	South	Murzuq	Wadi Etba	مركز الصحي تساره وادي عتبه	Open		Primary Health Center	170						X						X				X		X		4	
617	410203	South	Murzuq	Wadi Etba	مركز الصحي السبونات وادي عتبه	Open		Primary Health Center	143				X		X	X					X				X				5	
618	460104	South	Sabha	Albawanees	وحدة الرعاية الصحية الحي الصناعي -الوالبين	Closed	Under Maintenance	Primary Health Unit																						
619	460202	South	Sabha	Albawanees	مركز صحي تمنهنت -الوالبين	Closed	Under Maintenance	Primary Health Center																						
620	460101	South	Sabha	Albawanees	وحدة رعاية صحية تمنهنت -الوالبين	Open		Primary Health Unit	53	5				X	X						X		X						4	
621	460102	South	Sabha	Albawanees	وحدة رعاية سمنو -الوالبين	Open		Primary Health Unit	58						X									X						2
622	460103	South	Sabha	Albawanees	وحدة الرعاية الصحية المشروع الزراعي سمنو -الوالبين	Open		Primary Health Unit	31	1														X						1
623	460201	South	Sabha	Albawanees	مركز الصحي الزين -الوالبين	Open		Primary Health Center	112	4					X	X					X									3
624	450109	South	Sabha	Sebha	وحدة الرعاية الصحية المشروع الزراعي غدوة حسيبا	Closed	Closed due to damage	Primary Health Unit																						
625	450201	South	Sabha	Sebha	مركز الصحي المنتشية حسيبا	Closed	Closed due to damage	Primary Health Center																						
626	451501	South	Sabha	Sebha	مركز العلاج الطبيعي المنتشية حسيبا	Closed	Closed due to damage	Primary Health Center																						
627	450102	South	Sabha	Sebha	وحدة رعاية الألية حجارة حسيبا	Open		Primary Health Unit	71						X									X						2
628	450103	South	Sabha	Sebha	وحدة رعاية السلام المهدي حسيبا	Open		Primary Health Unit	187				X		X	X									X		X			5
629	450104	South	Sabha	Sebha	وحدة رعاية الناصرية حسيبا	Open		Primary Health Unit	28	2					X									X						2
630	450105	South	Sabha	Sebha	وحدة رعاية القاهرة حسيبا	Open		Primary Health Unit	51					X	X															2
631	450106	South	Sabha	Sebha	وحدة رعاية المشروع الزراعي سبها حسيبا	Open		Primary Health Unit	42															X						1
632	450107	South	Sabha	Sebha	وحدة رعاية حسيبا	Open		Primary Health Unit	64	2					X	X						X		X						4
633	450108	South	Sabha	Sebha	وحدة رعاية صحية حي الكرامة حسيبا	Open		Primary Health Center	30	7			X	X								X		X						4
634	450202	South	Sabha	Sebha	مركز الصحي الثانوية حسيبا	Open		Primary Health Center	387	3			X		X	X					X		X		X		X	X		8
635	450203	South	Sabha	Sebha	مركز الصحي القرضة حسيبا	Open		Primary Health Center	131	6	6		X	X	X	X				X	X	X		X		X	X	X		10
636	450204	South	Sabha	Sebha	مركز الصحي المهدي حسيبا	Open		Primary Health Center	228	4					X	X					X		X							4
637	450205	South	Sabha	Sebha	مركز الصحي الجديد حسيبا	Open		Primary Health Center	414	2	9		X	X	X	X					X		X		X					7
638	450206	South	Sabha	Sebha	مركز الصحي غدوة حسيبا	Open		Primary Health Center	184				X		X						X									3
639	450207	South	Sabha	Sebha	مركز الصحي سكرة حسيبا	Open		Primary Health Center	118				X			X					X		X							4
640	450208	South	Sabha	Sebha	مركز صحي حجارة الجديدة حسيبا	Open		Primary Health Center	93	1			X		X						X		X		X					5
641	450209	South	Sabha	Sebha	مركز الرعاية الصحية التحرير حسيبا	Open		Primary Health Center	304						X						X		X							3
642	450301	South	Sabha	Sebha	العيادة المجمع حسيبا	Open		Polyclinic	399							X					X		X		X	X		X		6
643	451502	South	Sabha	Sebha	مركز العلاج الطبيعي غدوة حسيبا	Open		Primary Health Center	48												X									1
644	451503	South	Sabha	Sebha	مركز علاج السكر والغدد الصماء حسيبا	Open		Primary Health Center	17							X						X								2
645	490101	South	Wadi Al Haya	Alghrayfa	وحدة رعاية الصحية الغربية -الغريفة	Open		Primary Health Unit	38						X															1
646	490103	South	Wadi Al Haya	Alghrayfa	وحدة رعاية الصحية توش -الغريفة	Open		Primary Health Unit	135						X															1
647	490104	South	Wadi Al Haya	Alghrayfa	وحدة رعاية الصحية الفخفاخة -الغريفة	Open		Primary Health Unit	45						X															1
648	490105	South	Wadi Al Haya	Alghrayfa	وحدة رعاية الصحية توبية -الغريفة	Open		Primary Health Unit	115						X															1
649	490106	South	Wadi Al Haya	Alghrayfa	وحدة رعاية الصحية توبية النبع -الغريفة	Open		Primary Health Unit	30																					0
650	490107	South	Wadi Al Haya	Alghrayfa	وحدة رعاية الصحية الخرائق -الغريفة	Open		Primary Health Unit	61						X															1
651	490201	South	Wadi Al Haya	Alghrayfa	مركز صحي القعيرات -الغريفة	Open		Primary Health Center	188						X						X									2
652	490202	South	Wadi Al Haya	Alghrayfa	مركز صحي جرمة -الغريفة	Open		Primary Health Center	190						X	X					X				X					4
653	490203	South	Wadi Al Haya	Alghrayfa	مركز صحي ايريك -الغريفة	Open		Primary Health Center	81						X						X				X					3
654	490204	South	Wadi Al Haya	Alghrayfa	مركز صحي قرارة -الغريفة	Open		Primary Health Center	170				X	X	X						X				X	X				6
655	490301	South	Wadi Al Haya	Alghrayfa	العيادة المجمع الغربية -الغريفة	Open		Polyclinic	185	3	3		X	X						X		X		X	X		X			7
656	500102	South	Wadi Al Haya	Bint Bayya	وحدة رعاية الصحية لآركو بنت بيه	Closed	Under Maintenance	Primary Health Unit																						
657	500205	South	Wadi Al Haya	Bint Bayya	مركز صحي الأبيض بنت بيه	Closed	Under Maintenance	Primary Health Center																						
658	500202	South	Wadi Al Haya	Bint Bayya	مركز صحي الترابية بنت بيه	Closed	used by other entity	Primary Health Center																						

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659	500101	South	Wadi Al Haya	Bint Bayya	وحدة رعاية الصحة تكريبية -بنت بيه	Open		Primary Health Unit	58						X										X	X				3		
660	500103	South	Wadi Al Haya	Bint Bayya	وحدة رعاية الصحة قبر عون ومنذر بنت بيه	Open		Primary Health Unit	60						X															1		
661	500105	South	Wadi Al Haya	Bint Bayya	وحدة رعاية الصحة التناجمة -بنت بيه	Open		Primary Health Unit	40																X					1		
662	500106	South	Wadi Al Haya	Bint Bayya	وحدة رعاية الصحة القلعة -بنت بيه	Open		Primary Health Unit	75																					0		
663	500107	South	Wadi Al Haya	Bint Bayya	وحدة رعاية الصحة الحمراء -بنت بيه	Open		Primary Health Unit	49																					0		
664	500108	South	Wadi Al Haya	Bint Bayya	وحدة رعاية الصحة بن حارت بنت بيه	Open		Primary Health Unit	28						X															1		
665	500201	South	Wadi Al Haya	Bint Bayya	مركز صحي الفحيح -بنت بيه	Open		Primary Health Center	85						X							X			X					3		
666	500203	South	Wadi Al Haya	Bint Bayya	مركز صحي الرقيبة -بنت بيه	Open		Primary Health Center	199			X			X							X			X					4		
667	500204	South	Wadi Al Haya	Bint Bayya	مركز صحي بنت بيه -بنت بيه	Open		Primary Health Center	63						X	X						X			X					4		
668	500206	South	Wadi Al Haya	Bint Bayya	مركز صحي أخليف -بنت بيه	Open		Primary Health Center	145													X			X					3		
669	480107	South	Wadi Al Haya	Ubari	وحدة الرعاية الصحية طريق المطار -أوباري	Closed	Closed due to damage	Primary Health Unit																								
670	480108	South	Wadi Al Haya	Ubari	وحدة الرعاية الصحية المشروع الغربي -أوباري	Closed	Closed due to damage	Primary Health Unit																								
671	480104	South	Wadi Al Haya	Ubari	وحدة رعاية الصحة الحطية الغربية -أوباري	Open		Primary Health Unit	78						X															1		
672	480105	South	Wadi Al Haya	Ubari	وحدة رعاية الصحة الحطية الشرقية -أوباري	Open		Primary Health Unit	35																					0		
673	480106	South	Wadi Al Haya	Ubari	وحدة الرعاية الصحية الديسة -أوباري	Open		Primary Health Unit	75						X										X					2		
674	480201	South	Wadi Al Haya	Ubari	مركز صحي أوباري -أوباري	Open		Primary Health Center	311	6					X							X								2		
675	390103	Tripoli	Al Jifarah	Al Aziziya	وحدة رعاية صحية الحرية -العزيرية	Closed	Not accessible	Primary Health Unit																								
676	390102	Tripoli	Al Jifarah	Al Aziziya	وحدة رعاية صحية اولاد جابر -العزيرية	Closed	Under Maintenance	Primary Health Unit																								
677	390107	Tripoli	Al Jifarah	Al Aziziya	وحدة رعاية صحية بنر سجون -العزيرية	Closed	Under Maintenance	Primary Health Unit																								
678	39026	Tripoli	Al Jifarah	Al Aziziya	مركز صحي العزيرية -العزيرية	Open		Primary Health Center	1											X	X	X									3	
679	390101	Tripoli	Al Jifarah	Al Aziziya	وحدة رعاية صحية الساعدية الشرقية -العزيرية	Open		Primary Health Unit	77						X	X															2	
680	390104	Tripoli	Al Jifarah	Al Aziziya	وحدة رعاية صحية ام القرون -العزيرية	Open		Primary Health Unit	44																						0	
681	390105	Tripoli	Al Jifarah	Al Aziziya	وحدة رعاية صحية البرموك -العزيرية	Open		Primary Health Unit	79						X																1	
682	390106	Tripoli	Al Jifarah	Al Aziziya	وحدة رعاية صحية بنر الجديد -العزيرية	Open		Primary Health Unit	36						X																1	
683	390108	Tripoli	Al Jifarah	Al Aziziya	وحدة رعاية صحية تهلتل -العزيرية	Open		Primary Health Unit	45																						0	
684	390110	Tripoli	Al Jifarah	Al Aziziya	وحدة رعاية صحية العزيرية الجنوبية -العزيرية	Open		Primary Health Unit	59																						0	
685	390111	Tripoli	Al Jifarah	Al Aziziya	وحدة رعاية صحية الرافقيه -العزيرية	Open		Primary Health Unit	73																						0	
686	390112	Tripoli	Al Jifarah	Al Aziziya	وحدة رعاية صحية الصمود -العزيرية	Open		Primary Health Center	84													X									1	
687	390202	Tripoli	Al Jifarah	Al Aziziya	مركز الصحي اولاد تليس -العزيرية	Open		Primary Health Center	250					X								X					X				3	
688	390203	Tripoli	Al Jifarah	Al Aziziya	مركز الصحي الساعدية -العزيرية	Open		Primary Health Center	34													X									1	
689	390204	Tripoli	Al Jifarah	Al Aziziya	مركز الصحي الجلاء -العزيرية	Open		Primary Health Center	73													X									1	
690	390205	Tripoli	Al Jifarah	Al Aziziya	مركز الصحي العامرية -العزيرية	Open		Primary Health Center	52						X							X									2	
691	391502	Tripoli	Al Jifarah	Al Aziziya	مركز علاج سكر -العزيرية -العزيرية	Open		Primary Health Center	96													X			X		X				3	
692	310104	Tripoli	Al Jifarah	Al Maya	وحدة رعاية صحية الطوبية -المالية	Closed	Not accessible	Primary Health Unit																								
693	310108	Tripoli	Al Jifarah	Al Maya	وحدة رعاية صحية المالية الجنوبية -المالية	Closed	Not accessible	Primary Health Unit																								
694	310109	Tripoli	Al Jifarah	Al Maya	وحدة رعاية صحية المالية الغربية -المالية	Closed	Not accessible	Primary Health Unit																								
695	310203	Tripoli	Al Jifarah	Al Maya	مركز صحي أبو صرة -المالية	Closed	Not accessible	Primary Health Center																								
696	310101	Tripoli	Al Jifarah	Al Maya	وحدة رعاية صحية قرقوزة المركز -المالية	Open		Primary Health Unit	97																						0	
697	310102	Tripoli	Al Jifarah	Al Maya	وحدة رعاية صحية قرقوزة الغربية -المالية	Open		Primary Health Unit	139																						0	
698	310103	Tripoli	Al Jifarah	Al Maya	وحدة رعاية صحية المعمورة الشمالية -المالية	Open		Primary Health Unit	214																						0	
699	310105	Tripoli	Al Jifarah	Al Maya	وحدة رعاية صحية المالية الشمالية -المالية	Open		Primary Health Unit	66																						0	
700	310107	Tripoli	Al Jifarah	Al Maya	وحدة رعاية صحية الطيبة -المالية	Open		Primary Health Unit	58																						0	
701	311001	Tripoli	Al Jifarah	Al Maya	المركز الصحي المعمورة المركز -المالية	Open		Primary Health Center	139						X							X									2	
702	370110	Tripoli	Al Jifarah	Al Swani	وحدة رعاية صحية زيتون العائدة -السواني	Closed	Not accessible	Primary Health Unit																								
703	370108	Tripoli	Al Jifarah	Al Swani	وحدة رعاية صحية اولاد تليس -السواني	Closed	Under Maintenance	Primary Health Unit																								
704	370109	Tripoli	Al Jifarah	Al Swani	وحدة رعاية صحية الميامين -السواني	Closed	Under Maintenance	Primary Health Unit																								
705	370101	Tripoli	Al Jifarah	Al Swani	وحدة رعاية صحية ابن خلدون -السواني	Open		Primary Health Unit	54																						0	
706	370102	Tripoli	Al Jifarah	Al Swani	وحدة رعاية صحية السهلة -السواني	Open		Primary Health Unit	48																						0	
707	370103	Tripoli	Al Jifarah	Al Swani	وحدة رعاية صحية الانتصار -السواني	Open		Primary Health Unit	111																						0	
708	370104	Tripoli	Al Jifarah	Al Swani	وحدة رعاية صحية الخلة السواني -السواني	Open		Primary Health Unit	56																						0	
709	370105	Tripoli	Al Jifarah	Al Swani	وحدة رعاية صحية البيليصة -السواني	Open		Primary Health Unit	72	1	1																				0	
710	370106	Tripoli	Al Jifarah	Al Swani	وحدة رعاية صحية البركة -السواني	Open		Primary Health Unit	31																						0	
711	370202	Tripoli	Al Jifarah	Al Swani	مركز الصحي التوغار -السواني	Open		Primary Health Center	205							X						X			X		X				4	
712	370203	Tripoli	Al Jifarah	Al Swani	مركز الصحي الكريمة -السواني	Open		Primary Health Center	107	1					X							X									2	
713	370204	Tripoli	Al Jifarah	Al Swani	مركز صحي السواني -السواني	Open		Primary Health Center	46						X					X	X	X				X	X	X	X		8	

N	Facility number	Region	District	Municipality	Facility full name	Facility Status	Closure reason	Type of facility	Total staff employed	Number inpatient beds	Number of maternity beds	Family planning services	ANC services	Delivery services	Immunization services	Preventative and curative	HIV counselling and testing	STI services	Leishmaniasis skin	Leishmaniasis internal	Bruceellosis diagnostics	NCD services	Treatment for mental	Surgical services	Blood transfusion services	Diagnostic testing	Diagnostic imaging	Stocks medicines, vaccines	Dental health care	Number of services	
714	370205	Tripoli	Al Jifarah	Al Swani	مركز الصحي غوط أبي ساق -المواني	Open		Primary Health Unit	50																					0	
715	370206	Tripoli	Al Jifarah	Al Swani	مركز صحي اولاد عيسى -المواني	Open		Primary Health Center	19						X													X	X	3	
716	320106	Tripoli	Al Jifarah	Azzahra	وحدة رعاية صحية اولاد عمر -الزهره	Closed	Under Maintenance	Primary Health Unit																							
717	320101	Tripoli	Al Jifarah	Azzahra	وحدة رعاية صحية بنز الحاج -الزهره	Open		Primary Health Unit	94	1																				0	
718	320102	Tripoli	Al Jifarah	Azzahra	وحدة رعاية صحية الحاتة الجنوبية -الزهره	Open		Primary Health Unit	87	1																				0	
719	320103	Tripoli	Al Jifarah	Azzahra	وحدة رعاية صحية الحاتة الشمالية -الزهره	Open		Primary Health Unit	80	1																				0	
720	320105	Tripoli	Al Jifarah	Azzahra	وحدة الرعاية الصحية الزهره الشمالية -الزهره	Open		Primary Health Unit	119																					0	
721	320107	Tripoli	Al Jifarah	Azzahra	وحدة رعاية صحية اولاد محمد -الزهره	Open		Primary Health Unit	107	1																				0	
722	320108	Tripoli	Al Jifarah	Azzahra	وحدة رعاية صحية الناصرية الشرقية -الزهره	Open		Primary Health Unit	47	1																				0	
723	320109	Tripoli	Al Jifarah	Azzahra	وحدة رعاية صحية بنز بن سالم -الزهره	Open		Primary Health Unit	55	2																				0	
724	320110	Tripoli	Al Jifarah	Azzahra	وحدة رعاية صحية الزهره الغربية -الزهره	Open		Primary Health Unit	70																					0	
725	320111	Tripoli	Al Jifarah	Azzahra	وحدة رعاية صحية ابن سينا -الزهره	Open		Primary Health Unit	56																					0	
726	320201	Tripoli	Al Jifarah	Azzahra	المركز الصحي الناصرية -الزهره	Open		Primary Health Center	69													X								1	
727	320202	Tripoli	Al Jifarah	Azzahra	مركز الصحي الزهره المدينة -الزهره	Open		Primary Health Center	208	2	2	X	X		X	X						X				X	X	X		8	
728	320203	Tripoli	Al Jifarah	Azzahra	مركز صحي شهداء بنز ترينة -الزهره	Open		Primary Health Center	96						X	X											X			4	
729	320204	Tripoli	Al Jifarah	Azzahra	مركز صحي الخزام -الزهره	Open		Primary Health Center	107	1	1											X								1	
730	320205	Tripoli	Al Jifarah	Azzahra	مركز صحي الجبلية -الزهره	Open		Primary Health Center	131	1	1				X							X								2	
731	320206	Tripoli	Al Jifarah	Azzahra	مركز صحي لفلجات -الزهره	Open		Primary Health Center	42							X						X					X			3	
732	320207	Tripoli	Al Jifarah	Azzahra	مركز صحي بنز النجم -الزهره	Open		Primary Health Center	134	1												X								1	
733	340105	Tripoli	Al Jifarah	Espeaa	وحدة رعاية صحية اولاد عائشة -السيبعه	Closed	Under Maintenance	Primary Health Unit																							
734	340101	Tripoli	Al Jifarah	Espeaa	وحدة رعاية صحية بنز فريوان -السيبعه	Open		Primary Health Unit	147																					0	
735	340102	Tripoli	Al Jifarah	Espeaa	وحدة رعاية صحية بنز درور -السيبعه	Open		Primary Health Unit	135																					0	
736	340103	Tripoli	Al Jifarah	Espeaa	وحدة رعاية صحية بنز علاق -السيبعه	Open		Primary Health Unit	117																					0	
737	340202	Tripoli	Al Jifarah	Espeaa	مركز الصحي الهيرة -السيبعه	Open		Primary Health Center	123													X			X					3	
738	380203	Tripoli	Al Jifarah	Gasr Bin Ghasheer	مركز الصحي سوق الميت قصر بن غشير	Closed	Under Maintenance	Primary Health Center																							
739	380101	Tripoli	Al Jifarah	Gasr Bin Ghasheer	وحدة رعاية صحية الأولية الثرفة قصر بن غشير	Open		Primary Health Unit	89																					0	
740	380102	Tripoli	Al Jifarah	Gasr Bin Ghasheer	وحدة رعاية صحية الأولية الحمرونية قصر بن غشير	Open		Primary Health Unit	184																					0	
741	380201	Tripoli	Al Jifarah	Gasr Bin Ghasheer	مركز الصحي قصر بن غشير قصر بن غشير	Open		Primary Health Center	132	1	1				X	X						X								3	
742	380202	Tripoli	Al Jifarah	Gasr Bin Ghasheer	مركز الصحي المرازق قصر بن غشير	Open		Primary Health Center	393						X	X						X								3	
743	360202	Tripoli	Al Jifarah	Sidi Assayeh	مركز الصحي وادي الربيع سيدي السائح	Open		Primary Health Center	166													X								1	
744	360203	Tripoli	Al Jifarah	Sidi Assayeh	مركز الصحي الصويحي الخيتوني سيدي السائح	Open		Primary Health Center	93													X								1	
745	350105	Tripoli	Al Jifarah	Sug Alkhamees	وحدة رعاية صحية الظهرة سوق الخميس	Closed	Under Maintenance	Primary Health Unit																							
746	350101	Tripoli	Al Jifarah	Sug Alkhamees	مركز الصحي سوق الخميس امسجل سوق الخميس	Open		Primary Health Center	64						X							X								2	
747	350102	Tripoli	Al Jifarah	Sug Alkhamees	وحدة رعاية صحية العوامة سوق الخميس	Open		Primary Health Unit	62						X															1	
748	350103	Tripoli	Al Jifarah	Sug Alkhamees	وحدة رعاية صحية الحي الصناعي سوق الخميس	Open		Primary Health Unit	91						X										X					2	
749	350104	Tripoli	Al Jifarah	Sug Alkhamees	وحدة رعاية صحية وادي المجنبيين سوق الخميس	Open		Primary Health Unit	30																					0	
750	350201	Tripoli	Al Jifarah	Sug Alkhamees	مركز الصحي العوامة سوق الخميس	Open		Primary Health Center	55													X								1	
751	620101	Tripoli	Almargeb	Aldawoon	وحدة الرعاية بنز النواقة -الداوون	Closed	Under Maintenance	Primary Health Unit																							
752	620102	Tripoli	Almargeb	Aldawoon	وحدة الرعاية الزويتينة -الداوون	Closed	Under Maintenance	Primary Health Unit																							
753	620103	Tripoli	Almargeb	Aldawoon	وحدة الرعاية الشروق -الداوون	Closed	Under Maintenance	Primary Health Unit																							
754	620201	Tripoli	Almargeb	Aldawoon	مركز صحي الداوون -الداوون	Open		Primary Health Center	86						X							X		X	X	X	X			5	
755	600101	Tripoli	Almargeb	Alkhums	وحدة رعاية الحوامد -الخميس	Closed	Closed due to damage	Primary Health Unit																							
756	600112	Tripoli	Almargeb	Alkhums	وحدة رعاية السبعة -الخميس	Closed	Closed due to damage	Primary Health Unit																							
757	600104	Tripoli	Almargeb	Alkhums	وحدة رعاية اولاد سنان -الخميس	Closed	Under Maintenance	Primary Health Unit																							
758	600115	Tripoli	Almargeb	Alkhums	وحدة رعاية شقران القديم -الخميس	Closed	Under Maintenance	Primary Health Unit																							
759	600102	Tripoli	Almargeb	Alkhums	وحدة رعاية الرفاعية -الخميس	Open		Primary Health Unit	19																					0	
760	600103	Tripoli	Almargeb	Alkhums	وحدة رعاية الفاترة -الخميس	Open		Primary Health Center	54						X	X						X	X		X	X	X	X		6	
761	600105	Tripoli	Almargeb	Alkhums	وحدة رعاية القاهرة لينة -الخميس	Open		Primary Health Unit	51	1					X															1	
762	600106	Tripoli	Almargeb	Alkhums	وحدة رعاية الشواقي -الخميس	Open		Primary Health Center	54			X	X									X									3
763	600107	Tripoli	Almargeb	Alkhums	وحدة رعاية المرقب -الخميس	Open		Primary Health Center	49			X		X								X						X			4
764	600108	Tripoli	Almargeb	Alkhums	وحدة رعاية الشاخرطرة -الخميس	Open		Primary Health Center	20													X	X		X	X		X			3
765	600109	Tripoli	Almargeb	Alkhums	وحدة رعاية التحرير -الخميس	Open		Primary Health Center	39							X						X						X			3
766	600110	Tripoli	Almargeb	Alkhums	وحدة رعاية الشهيد امحمد المقرئ -الخميس	Open		Primary Health Unit	43													X				X					2
767	600111	Tripoli	Almargeb	Alkhums	وحدة رعاية النوكالي -الخميس	Open		Primary Health Unit	38				X											X		X					3
768	600113	Tripoli	Almargeb	Alkhums	وحدة رعاية بن سليمان -الخميس	Open		Primary Health Unit	39																						0

N	Facility number	Region	District	Municipality	Facility full name	Facility Status	Closure reason	Type of facility	Total staff employed	Number inpatient beds	Number of maternity beds	Family planning services	ANC services	Delivery services	Immunization services	Preventative and curative	HIV counselling and testing	STI services	Leishmaniasis skin	Leishmaniasis internal	Bruceellosis diagnostics	NCD services	Treatment for mental	Surgical services	Blood transfusion services	Diagnostic testing	Diagnostic imaging	Stocks medicines, vaccines	Dental health care	Number of services
769	600114	Tripoli	Almargeb	Alkhums	وحدة رعاية فوقس الخمس	Open		Primary Health Unit	29														X						1	
770	600116	Tripoli	Almargeb	Alkhums	وحدة رعاية الطوبية الخمس	Open		Primary Health Unit	7																				0	
771	600201	Tripoli	Almargeb	Alkhums	مركز صحي الخمس المدينة - الخمس	Open		Primary Health Center	60					X	X							X	X				X	X	6	
772	600202	Tripoli	Almargeb	Alkhums	مركز صحي الحمروني - الخمس	Open		Primary Health Center	85				X		X	X						X			X	X	X	X	7	
773	600203	Tripoli	Almargeb	Alkhums	مركز صحي شقران - الخمس	Open		Primary Health Center	35						X							X	X				X	X	5	
774	600204	Tripoli	Almargeb	Alkhums	مركز صحي سيلين - الخمس	Open		Primary Health Center	88					X	X							X			X		X		5	
775	600209	Tripoli	Almargeb	Alkhums	مركز صحي وافي - الخمس	Open		Primary Health Center	147						X	X					X				X	X	X	X	6	
776	600210	Tripoli	Almargeb	Alkhums	مركز صحي حمود - الخمس	Open		Primary Health Center	79					X	X							X					X	X	5	
777	600211	Tripoli	Almargeb	Alkhums	مركز صحي تربية - الخمس	Open		Primary Health Center	71												X								1	
778	600212	Tripoli	Almargeb	Alkhums	مركز صحي الطورة - الخمس	Open		Primary Health Center	41							X					X	X					X		4	
779	600213	Tripoli	Almargeb	Alkhums	مركز صحي الوادي المعقولة - الخمس	Open		Primary Health Center	32						X						X					X	X		4	
780	600214	Tripoli	Almargeb	Alkhums	مركز صحي المعقولة - الخمس	Open		Primary Health Center	79					X	X						X	X		X	X	X	X	X	7	
781	600215	Tripoli	Almargeb	Alkhums	مركز صحي امحمد بن ابراهيم - الخمس	Open		Primary Health Center	113			X		X	X						X			X	X	X	X		6	
782	600216	Tripoli	Almargeb	Alkhums	مركز صحي راس الحمام - الخمس	Open		Primary Health Center	92					X	X						X	X		X	X	X	X	X	7	
783	600217	Tripoli	Almargeb	Alkhums	مركز صحي اولاد نما - الخمس	Open		Primary Health Center	71					X	X						X			X	X	X	X		5	
784	600218	Tripoli	Almargeb	Alkhums	مركز صحي الخمس الجديدة - الخمس	Open		Primary Health Center	83			X			X						X			X	X	X	X		5	
785	600219	Tripoli	Almargeb	Alkhums	مركز صحي أم الرثم - الخمس	Open		Primary Health Center	39					X							X	X		X	X	X	X		6	
786	600220	Tripoli	Almargeb	Alkhums	مركز صحي غنيمه - الخمس	Open		Primary Health Center	71					X	X						X			X	X	X	X		5	
787	600301	Tripoli	Almargeb	Alkhums	عيادة المجمع الحياوات - الخمس	Open		Polyclinic	78			X		X	X						X			X	X	X	X	X	8	
788	600302	Tripoli	Almargeb	Alkhums	عيادة المجمع امحمد المقرئف - الخمس	Open		Polyclinic	80			X		X	X					X	X	X		X	X	X	X		10	
789	600303	Tripoli	Almargeb	Alkhums	عيادة مجمعة الخمس - الخمس	Open		Polyclinic	133			X			X						X	X		X	X	X	X	X	8	
790	601502	Tripoli	Almargeb	Alkhums	مركز علاج الملحم الطبيعى - الخمس	Open		Primary Health Center	39												X								1	
791	590108	Tripoli	Almargeb	Garaboli	وحدة رعاية الشويرع - القره بوللي	Closed	Under Maintenance	Primary Health Unit																						
792	590101	Tripoli	Almargeb	Garaboli	وحدة رعاية الجبيل - القره بوللي	Open		Primary Health Unit	72												X			X		X			3	
793	590102	Tripoli	Almargeb	Garaboli	وحدة رعاية راس الغزال - القره بوللي	Open		Primary Health Center	63			X	X			X					X					X			5	
794	590103	Tripoli	Almargeb	Garaboli	وحدة رعاية العطايا العربي - القره بوللي	Open		Primary Health Unit	87															X		X			1	
795	590104	Tripoli	Almargeb	Garaboli	وحدة رعاية الوفاء - القره بوللي	Open		Primary Health Unit	113			X	X								X					X			4	
796	590105	Tripoli	Almargeb	Garaboli	وحدة رعاية القوية - القره بوللي	Open		Primary Health Unit	49																				0	
797	590106	Tripoli	Almargeb	Garaboli	وحدة رعاية منطقة 2 - القره بوللي	Open		Primary Health Unit	44																				0	
798	590109	Tripoli	Almargeb	Garaboli	وحدة رعاية منطقة 3 - القره بوللي	Open		Primary Health Unit	25																				0	
799	590111	Tripoli	Almargeb	Garaboli	وحدة رعاية الرواجح الجنوبية - القره بوللي	Open		Primary Health Unit	52																				0	
800	590112	Tripoli	Almargeb	Garaboli	وحدة رعاية الحواتم - القره بوللي	Open		Primary Health Center	125							X					X	X							3	
801	590130	Tripoli	Almargeb	Garaboli	وحدة رعاية صحية طمبي الأسرة - القره بوللي	Open		Primary Health Unit	104																				0	
802	590201	Tripoli	Almargeb	Garaboli	مركز صحي الشرقية - القره بوللي	Open		Primary Health Center	56						X						X			X	X	X	X		4	
803	590202	Tripoli	Almargeb	Garaboli	مركز صحي العطايا - القره بوللي	Open		Primary Health Center	161						X						X			X	X	X	X		5	
804	590203	Tripoli	Almargeb	Garaboli	مركز صحي الزبانية - القره بوللي	Open		Primary Health Center	68						X						X					X			3	
805	590204	Tripoli	Almargeb	Garaboli	مركز صحي القبولي - القره بوللي	Open		Primary Health Center	145			X		X	X						X	X		X	X	X	X	X	8	
806	590205	Tripoli	Almargeb	Garaboli	مركز صحي الشبيد الصاوي - القره بوللي	Open		Primary Health Center	83			X		X							X				X		X		4	
807	590206	Tripoli	Almargeb	Garaboli	مركز صحي الرواجح الشمالية - القره بوللي	Open		Primary Health Center	31						X						X					X			3	
808	590208	Tripoli	Almargeb	Garaboli	مركز صحي الرواجح الغربية - القره بوللي	Open		Primary Health Center	71							X					X			X					3	
809	591501	Tripoli	Almargeb	Garaboli	مركز علاج طبيعى - القره بوللي - القره بوللي	Open		Primary Health Center	25												X								1	
810	580206	Tripoli	Almargeb	Gasr Akhyar	مركز صحي التمانين قصر الأخيار	Closed	Under Maintenance	Primary Health Center																						
811	580108	Tripoli	Almargeb	Gasr Akhyar	وحدة رعاية صحية الملوص قصر الأخيار	Closed	used by other entity	Primary Health Unit																						
812	580101	Tripoli	Almargeb	Gasr Akhyar	وحدة رعاية صحية العماريين قصر الأخيار	Open		Primary Health Unit	117							X										X	X		3	
813	580102	Tripoli	Almargeb	Gasr Akhyar	وحدة رعاية صحية مرادة قصر الأخيار	Open		Primary Health Unit	86						X											X	X		3	
814	580103	Tripoli	Almargeb	Gasr Akhyar	وحدة رعاية صحية الكراوة قصر الأخيار	Open		Primary Health Unit	85							X					X					X	X		4	
815	580104	Tripoli	Almargeb	Gasr Akhyar	وحدة رعاية صحية البيوت قصر الأخيار	Open		Primary Health Unit	30																		X		1	
816	580105	Tripoli	Almargeb	Gasr Akhyar	وحدة رعاية صحية سيدي عيبر قصر الأخيار	Open		Primary Health Unit	84						X									X	X	X	X		3	
817	580106	Tripoli	Almargeb	Gasr Akhyar	وحدة رعاية صحية اولاد ابو زيد قصر الأخيار	Open		Primary Health Unit	81																	X			1	
818	580107	Tripoli	Almargeb	Gasr Akhyar	وحدة رعاية صحية الجوايز قصر الأخيار	Open		Primary Health Unit	56																				0	
819	580109	Tripoli	Almargeb	Gasr Akhyar	وحدة رعاية صحية العواشير قصر الأخيار	Open		Primary Health Unit	44																				0	
820	580201	Tripoli	Almargeb	Gasr Akhyar	مركز صحي قصر الأخيار قصر الأخيار	Open		Primary Health Center	3			X		X	X						X			X	X	X	X		7	
821	580202	Tripoli	Almargeb	Gasr Akhyar	مركز صحي الملوص قصر الأخيار	Open		Primary Health Center	91			X	X		X	X					X			X	X	X	X		8	
822	580203	Tripoli	Almargeb	Gasr Akhyar	مركز صحي اولاد حسين قصر الأخيار	Open		Primary Health Center	125													X			X		X	X		4
823	570102	Tripoli	Almargeb	Msallata	وحدة رعاية صحية المسيد مسلاتة	Closed	Under Maintenance	Primary Health Unit																						

N	Facility number	Region	District	Municipality	Facility full name	Facility Status	Closure reason	Type of facility	Total staff employed	Number inpatient beds	Number of maternity beds	Family planning services	ANC services	Delivery services	Immunization services	Preventative and curative	HIV counselling and testing	STI services	Leishmaniasis skin	Leishmaniasis internal	Bruceellosis diagnostics	NCD services	Treatment for mental	Surgical services	Blood transfusion services	Diagnostic testing	Diagnostic imaging	Stocks medicines, vaccines	Dental health care	Number of services
824	570101	Tripoli	Almargeb	Msallata	وحدة رعاية صحية البركات -مسلاتة	Open		Primary Health Unit	58																					1
825	570103	Tripoli	Almargeb	Msallata	وحدة رعاية صحية الخزان -مسلاتة	Open		Primary Health Unit	27																X					1
826	570104	Tripoli	Almargeb	Msallata	وحدة رعاية صحية بريير -مسلاتة	Open		Primary Health Unit	19																					0
827	570105	Tripoli	Almargeb	Msallata	وحدة رعاية صحية الفليل -مسلاتة	Open		Primary Health Unit	30																X					1
828	570106	Tripoli	Almargeb	Msallata	وحدة رعاية صحية طبيب الامرة -مسلاتة	Open		Primary Health Unit	31				X																	1
829	570107	Tripoli	Almargeb	Msallata	وحدة رعاية صحية المشروح الزراعي -مسلاتة	Open		Primary Health Unit	39																					0
830	570108	Tripoli	Almargeb	Msallata	وحدة رعاية صحية الفطارة -مسلاتة	Open		Primary Health Unit	33																					0
831	570109	Tripoli	Almargeb	Msallata	وحدة رعاية صحية بن ناصر -مسلاتة	Open		Primary Health Unit	35																X					1
832	570201	Tripoli	Almargeb	Msallata	مركز صحي العمارة -مسلاتة	Open		Primary Health Center	94					X								X				X	X			4
833	570202	Tripoli	Almargeb	Msallata	مركز صحي القصبات مسلاتة	Open		Primary Health Center	113						X	X						X				X	X	X	X	6
834	570203	Tripoli	Almargeb	Msallata	مركز صحي الخمري -مسلاتة	Open		Primary Health Center	45				X									X			X					3
835	570204	Tripoli	Almargeb	Msallata	مركز صحي سم الديس -مسلاتة	Open		Primary Health Center	65													X			X					2
836	570205	Tripoli	Almargeb	Msallata	مركز صحي الخشش -مسلاتة	Open		Primary Health Unit	19																					0
837	610125	Tripoli	Almargeb	Tarhuna	وحدة رعاية وشتاتة -تر هونة	Closed	Closed due to damage	Primary Health Unit																						
838	610105	Tripoli	Almargeb	Tarhuna	وحدة رعاية نلة الجليل -تر هونة	Closed	Under Maintenance	Primary Health Unit																						
839	610107	Tripoli	Almargeb	Tarhuna	وحدة رعاية شعبة عائد -تر هونة	Closed	Under Maintenance	Primary Health Unit																						
840	610108	Tripoli	Almargeb	Tarhuna	وحدة رعاية الكرامة -تر هونة	Closed	Under Maintenance	Primary Health Unit																						
841	610112	Tripoli	Almargeb	Tarhuna	وحدة رعاية الطليحة -تر هونة	Closed	Under Maintenance	Primary Health Unit																						
842	610114	Tripoli	Almargeb	Tarhuna	وحدة رعاية الاز غاندة -تر هونة	Closed	Under Maintenance	Primary Health Unit																						
843	610116	Tripoli	Almargeb	Tarhuna	وحدة رعاية الرقيص -تر هونة	Closed	Under Maintenance	Primary Health Unit																						
844	610122	Tripoli	Almargeb	Tarhuna	وحدة الرعاية الغارات -تر هونة	Closed	Under Maintenance	Primary Health Unit																						
845	610127	Tripoli	Almargeb	Tarhuna	وحدة رعاية القسيس -تر هونة	Closed	Under Maintenance	Primary Health Unit																						
846	610130	Tripoli	Almargeb	Tarhuna	وحدة رعاية الحرية -تر هونة	Closed	Under Maintenance	Primary Health Unit																						
847	610133	Tripoli	Almargeb	Tarhuna	وحدة الرعاية الشفاء -تر هونة	Closed	Under Maintenance	Primary Health Unit																						
848	610134	Tripoli	Almargeb	Tarhuna	وحدة الرعاية الوفاء -تر هونة	Closed	Under Maintenance	Primary Health Unit																						
849	610216	Tripoli	Almargeb	Tarhuna	مركز صحي سيدى معمر -تر هونة	Closed	Under Maintenance	Primary Health Center																						
850	610101	Tripoli	Almargeb	Tarhuna	وحدة رعاية كوم اجلاص -تر هونة	Open		Primary Health Unit	161																					0
851	610102	Tripoli	Almargeb	Tarhuna	وحدة رعاية النعاجية -تر هونة	Open		Primary Health Unit	209															X						1
852	610104	Tripoli	Almargeb	Tarhuna	وحدة رعاية لود دمنة -تر هونة	Open		Primary Health Unit	86																					0
853	610106	Tripoli	Almargeb	Tarhuna	وحدة رعاية بن سعدان -تر هونة	Open		Primary Health Unit	75					X										X						2
854	610109	Tripoli	Almargeb	Tarhuna	وحدة رعاية القصيعة -تر هونة	Open		Primary Health Unit	111																					0
855	610110	Tripoli	Almargeb	Tarhuna	وحدة رعاية التلة -تر هونة	Open		Primary Health Unit	61															X						1
856	610111	Tripoli	Almargeb	Tarhuna	وحدة رعاية عقبة بن نافع -تر هونة	Open		Primary Health Unit	32						X															1
857	610113	Tripoli	Almargeb	Tarhuna	وحدة رعاية المقارة -تر هونة	Open		Primary Health Unit	34																					0
858	610115	Tripoli	Almargeb	Tarhuna	وحدة رعاية لكم اولاد يوسف -تر هونة	Open		Primary Health Unit	25																					0
859	610117	Tripoli	Almargeb	Tarhuna	وحدة رعاية سماقية الدخان -تر هونة	Open		Primary Health Center	192				X		X								X		X					4
860	610118	Tripoli	Almargeb	Tarhuna	وحدة رعاية دم بلعة -تر هونة	Open		Primary Health Center	181														X		X	X	X	X		4
861	610119	Tripoli	Almargeb	Tarhuna	وحدة الرعاية الحوام ابو سلمى -تر هونة	Open		Primary Health Center	56					X								X		X	X					4
862	610121	Tripoli	Almargeb	Tarhuna	وحدة الرعاية الطرشان -تر هونة	Open		Primary Health Unit	67															X						1
863	610123	Tripoli	Almargeb	Tarhuna	وحدة رعاية مار غة حلة الناقة -تر هونة	Open		Primary Health Unit	67																					0
864	610124	Tripoli	Almargeb	Tarhuna	وحدة الرعاية العباسية -تر هونة	Open		Primary Health Center	106						X	X						X			X	X	X			5
865	610126	Tripoli	Almargeb	Tarhuna	وحدة رعاية السونينية -تر هونة	Open		Primary Health Unit	39																					0
866	610128	Tripoli	Almargeb	Tarhuna	وحدة رعاية اليريكات -تر هونة	Open		Primary Health Unit	31																					0
867	610129	Tripoli	Almargeb	Tarhuna	وحدة رعاية ويف -تر هونة	Open		Primary Health Unit	23																					0
868	610131	Tripoli	Almargeb	Tarhuna	وحدة الرعاية اليرموك -تر هونة	Open		Primary Health Unit	40																					0
869	610132	Tripoli	Almargeb	Tarhuna	وحدة رعاية حيونة -تر هونة	Open		Primary Health Unit	69																					0
870	610201	Tripoli	Almargeb	Tarhuna	مركز صحي عبون دوعنة -تر هونة	Open		Primary Health Center	129														X	X						2
871	610202	Tripoli	Almargeb	Tarhuna	مركز صحي سوق الأحد -تر هونة	Open		Primary Health Center	67					X									X	X	X	X	X	X	X	5
872	610203	Tripoli	Almargeb	Tarhuna	مركز صحي الخضراء -تر هونة	Open		Primary Health Center	112					X								X	X	X	X	X	X	X	X	6
873	610204	Tripoli	Almargeb	Tarhuna	مركز صحي الداجون -تر هونة	Open		Primary Health Center	99													X	X							2
874	610205	Tripoli	Almargeb	Tarhuna	مركز صحي سوق الجمعة -تر هونة	Open		Primary Health Center	66					X								X	X	X	X					4
875	610206	Tripoli	Almargeb	Tarhuna	مركز صحي سيدى الصييد -تر هونة	Open		Primary Health Center	77					X								X					X	X		4
876	610207	Tripoli	Almargeb	Tarhuna	مركز صحي غرب المدينة -تر هونة	Open		Primary Health Center	219						X	X						X								3
877	610209	Tripoli	Almargeb	Tarhuna	مركز صحي عبات عبورة -تر هونة	Open		Primary Health Center	100						X							X								2
878	610210	Tripoli	Almargeb	Tarhuna	مركز صحي الشويرف -تر هونة	Open		Primary Health Center	23						X								X							2



N	Facility number	Region	District	Municipality	Facility full name	Facility Status	Closure reason	Type of facility	Total staff employed	Number inpatient beds	Number of maternity beds	Family planning services	ANC services	Delivery services	Immunization services	Preventative and curative	HIV counselling and testing	STI services	Leishmaniasis skin	Leishmaniasis internal	Brucellosis diagnostics	NCD services	Treatment for mental	Surgical services	Blood transfusion services	Diagnostic testing	Diagnostic imaging	Stocks medicines, vaccines	Dental health care	Number of services	
879	610211	Tripoli	Almargeb	Tarhuna	مركز صحي أسامة بن زيد - خز هونة	Open		Primary Health Center	124						X														4		
880	610213	Tripoli	Almargeb	Tarhuna	مركز صحي ابيار محي - خز هونة	Open		Primary Health Center	54						X								X							2	
881	610214	Tripoli	Almargeb	Tarhuna	مركز صحي سيدي الشارف - خز هونة	Open		Primary Health Center	36														X							1	
882	610215	Tripoli	Almargeb	Tarhuna	مركز صحي لكو اولاد علي - خز هونة	Open		Primary Health Center	43						X															1	
883	611501	Tripoli	Almargeb	Tarhuna	عيادة مجمعة خز هونة - خز هونة	Open		Polyclinic	184				X	X	X				X	X	X				X	X	X	X		10	
884	660206	Tripoli	Tripoli	Abusliem	المركز الصحي حي المجاهدين - ابوسليم	Closed	Under Maintenance	Primary Health Center																							
885	660101	Tripoli	Tripoli	Abusliem	وحدة الرعاية الصحية الهضبية الحرة - ابوسليم	Open		Primary Health Center	252				X		X	X							X							4	
886	660102	Tripoli	Tripoli	Abusliem	وحدة الرعاية الصحية مشروع الهضبية الزراعي - ابوسليم	Open		Primary Health Center	210							X							X	X			X	X		5	
887	660201	Tripoli	Tripoli	Abusliem	المركز الصحي خالد بن الوليد - ابوسليم	Open		Primary Health Center	422			X		X	X								X							4	
888	660202	Tripoli	Tripoli	Abusliem	المركز الصحي حي الاكواخ - ابوسليم	Open		Primary Health Center	45														X							1	
889	660203	Tripoli	Tripoli	Abusliem	المركز الصحي ابي ذر الغفاري - ابوسليم	Open		Primary Health Center	150						X	X							X	X			X	X		6	
890	660204	Tripoli	Tripoli	Abusliem	المركز الصحي الدويس - ابوسليم	Open		Primary Health Center	85														X							1	
891	660205	Tripoli	Tripoli	Abusliem	المركز الصحي باب بن عشتير - ابوسليم	Open		Primary Health Center	160						X	X							X					X	X	5	
892	660207	Tripoli	Tripoli	Abusliem	المركز الصحي الانتصار - ابوسليم	Open		Primary Health Center	268						X	X							X							3	
893	660208	Tripoli	Tripoli	Abusliem	المركز الصحي حي دمشق - ابوسليم	Open		Primary Health Center	153				X	X	X								X							4	
894	660209	Tripoli	Tripoli	Abusliem	المركز الصحي الامتقاق - ابوسليم - ابوسليم	Open		Primary Health Center	278			X	X	X									X							4	
895	660210	Tripoli	Tripoli	Abusliem	المركز الصحي سيدي سليم - ابوسليم	Open		Primary Health Center	140			X	X	X									X							4	
896	660212	Tripoli	Tripoli	Abusliem	المركز الصحي الشفاء - ابوسليم	Open		Primary Health Center	358			X	X	X									X							3	
897	660213	Tripoli	Tripoli	Abusliem	المركز الصحي غرغور - ابوسليم	Open		Primary Health Center	84			X			X								X							3	
898	660301	Tripoli	Tripoli	Abusliem	العيادة المجمعة ابو سليم - ابوسليم	Open		Polyclinic	291						X	X							X			X	X	X	X	6	
899	660302	Tripoli	Tripoli	Abusliem	العيادة المجمعة طريق المطار - ابوسليم	Open		Polyclinic	437	4	4	X		X	X	X							X			X	X	X	X	8	
900	670209	Tripoli	Tripoli	Ain Zara	المركز الصحي الزوالي - عين زارة	Closed	Under Maintenance	Primary Health Center																							
901	670101	Tripoli	Tripoli	Ain Zara	وحدة الرعاية الصحية الحموذات - عين زارة	Open		Primary Health Unit	93				X		X										X					3	
902	670102	Tripoli	Tripoli	Ain Zara	وحدة لارعاية الصحية قاطمة الزهراء - عين زارة	Open		Primary Health Unit	60						X								X				X			3	
903	670201	Tripoli	Tripoli	Ain Zara	المركز الصحي حي الجامعي - عين زارة	Open		Primary Health Center	198			X		X	X								X		X	X	X	X		7	
904	670202	Tripoli	Tripoli	Ain Zara	المركز الصحي القبائلية - عين زارة	Open		Primary Health Unit	151														X		X	X	X	X		3	
905	670203	Tripoli	Tripoli	Ain Zara	المركز الصحي السلام - عين زارة	Open		Primary Health Center	137			X		X	X								X	X	X	X	X	X		8	
906	670204	Tripoli	Tripoli	Ain Zara	المركز الصحي النسب التذكاري - عين زارة	Open		Primary Health Center	174			X	X	X									X		X	X	X	X		7	
907	670205	Tripoli	Tripoli	Ain Zara	المركز الصحي خلعة الفرجان - عين زارة	Open		Primary Health Center	433			X	X	X									X		X	X	X	X		7	
908	670206	Tripoli	Tripoli	Ain Zara	المركز الصحي التامصر صلاح الدين - عين زارة	Open		Primary Health Center	184			X		X	X								X		X	X	X	X		7	
909	670207	Tripoli	Tripoli	Ain Zara	المركز الصحي الشارف الفرجاني - عين زارة	Open		Primary Health Center	55						X								X		X	X	X			4	
910	670208	Tripoli	Tripoli	Ain Zara	المركز الصحي محمد المقرئف - عين زارة	Open		Primary Health Center	78			X		X									X		X	X	X	X		5	
911	670210	Tripoli	Tripoli	Ain Zara	المركز الصحي 20 أغسطس - عين زارة	Open		Primary Health Center	291			X		X	X								X	X	X	X	X	X		8	
912	670303	Tripoli	Tripoli	Ain Zara	العيادة المجمعة البديري - عين زارة	Open		Polyclinic	430			X	X		X	X							X		X	X	X	X		9	
913	680302	Tripoli	Tripoli	Hai Alandalus	العيادة المجمعة 2 مارس حي الأندلس	Closed	Under Maintenance	Polyclinic																							
914	680303	Tripoli	Tripoli	Hai Alandalus	العيادة المجمعة غوط الشمال حي الأندلس	Closed	Under Maintenance	Polyclinic																							
915	680101	Tripoli	Tripoli	Hai Alandalus	وحدة الرعاية الصحية الطشاني حي الأندلس	Open		Primary Health Unit	138						X	X							X		X	X	X	X		6	
916	680102	Tripoli	Tripoli	Hai Alandalus	وحدة الرعاية الصحية الكرامة حي الأندلس	Open		Primary Health Unit	80			X		X											X	X	X	X		4	
917	680104	Tripoli	Tripoli	Hai Alandalus	وحدة الرعاية الصحية الغيران حي الأندلس	Open		Primary Health Center	309			X		X	X								X		X	X	X	X		7	
918	680105	Tripoli	Tripoli	Hai Alandalus	وحدة الرعاية الصحية حطين حي الأندلس	Open		Primary Health Unit	128						X	X									X	X	X	X		2	
919	680201	Tripoli	Tripoli	Hai Alandalus	المركز الصحي الشارع الغربي حي الأندلس	Open		Primary Health Center	217						X								X		X	X	X	X		5	
920	680202	Tripoli	Tripoli	Hai Alandalus	المركز الصحي حي الأندلس حي الأندلس	Open		Primary Health Center	247			X		X	X								X		X	X	X	X		5	
921	680203	Tripoli	Tripoli	Hai Alandalus	المركز الصحي المدينة السباحية حي الأندلس	Open		Primary Health Center	203			X	X	X									X		X	20	X	X	X	7	
922	680204	Tripoli	Tripoli	Hai Alandalus	المركز الصحي الغدير حي الأندلس	Open		Primary Health Unit	67														X		X	X	X	X		4	
923	680205	Tripoli	Tripoli	Hai Alandalus	المركز الصحي غوط الدير حي الأندلس	Open		Primary Health Center	125			X		X	X								X		X	X	X	X		7	
924	680206	Tripoli	Tripoli	Hai Alandalus	المركز الصحي الحي الصناعي حي الأندلس	Open		Primary Health Center	309			X		X	X								X		X	30	X	X	X	7	
925	680207	Tripoli	Tripoli	Hai Alandalus	المركز الصحي كشلاف حي الأندلس	Open		Primary Health Center	304			X			X								X		X	X	X	X		6	
926	680208	Tripoli	Tripoli	Hai Alandalus	المركز الصحي قرقارش حي الأندلس	Open		Primary Health Center	244			X		X	X								X		X	X	X	X		7	
927	680209	Tripoli	Tripoli	Hai Alandalus	المركز الصحي ابن سينا حي الأندلس	Open		Primary Health Center	65						X								X		X	X	X	X		5	
928	680210	Tripoli	Tripoli	Hai Alandalus	المركز الصحي تافرفت حي الأندلس	Open		Primary Health Unit	64						X								X		X	X	X	X		5	
929	680211	Tripoli	Tripoli	Hai Alandalus	المركز الصحي الشهيد حي الأندلس	Open		Primary Health Center	373			X		X	X								X		X	37	X	X	X	7	
930	680213	Tripoli	Tripoli	Hai Alandalus	المركز الصحي نور الهدى حي الأندلس	Open		Primary Health Center	218			X		X									X		X	X	X	X		6	
931	680301	Tripoli	Tripoli	Hai Alandalus	العيادة المجمعة فندق التوغار حي الأندلس	Open		Polyclinic	290			X		X									X		X	X	X	X		7	
932	330103	Tripoli	Tripoli	Janzour	وحدة رعاية صحية زواية عبودة - حنزور	Open		Primary Health Unit	7																					0	
933	330104	Tripoli	Tripoli	Janzour	وحدة رعاية صحية الرشاح حنزور	Open		Primary Health Unit	51				X															X		2	

N	Facility number	Region	District	Municipality	Facility full name	Facility Status	Closure reason	Type of facility	Total staff employed	Number inpatient beds	Number of maternity beds	Family planning services	ANC services	Delivery services	Immunization services	Preventative and curative	HIV counselling and testing	STI services	Leishmaniasis skin	Leishmaniasis internal	Bruceellosis diagnostics	NCD services	Treatment for mental	Surgical services	Blood transfusion services	Diagnostic testing	Diagnostic imaging	Stocks medicines, vaccines	Dental health care	Number of services
934	330105	Tripoli	Tripoli	Janzour	وحدة رعاية صحية جنزور المركز جنزور	Open		Primary Health Center	74						X							X					X	X	4	
935	330106	Tripoli	Tripoli	Janzour	وحدة رعاية صحية حاتم الطائي جنزور	Open		Primary Health Unit	50																				X	0
936	330107	Tripoli	Tripoli	Janzour	وحدة رعاية صحية ابن سينا الحشان جنزور	Open		Primary Health Unit	35						X															1
937	330108	Tripoli	Tripoli	Janzour	وحدة رعاية صحية الغار جنزور	Open		Primary Health Unit	69															X						1
938	330109	Tripoli	Tripoli	Janzour	وحدة رعاية صحية سيدي ابراهيم جنزور	Open		Primary Health Unit	72			X				X									X					3
939	330110	Tripoli	Tripoli	Janzour	وحدة رعاية صحية خلة الغاندي جنزور	Open		Primary Health Unit	43													X		X						2
940	330111	Tripoli	Tripoli	Janzour	وحدة رعاية صحية طبيب الأسرة جنزور	Open		Primary Health Unit	177																					0
941	330201	Tripoli	Tripoli	Janzour	مركز الصحي الحشان جنزور	Open		Primary Health Center	63													X								1
942	330202	Tripoli	Tripoli	Janzour	مركز الصحي شهداء عبد الجليل جنزور	Open		Primary Health Center	251			X		X	X							X		X		X	X			7
943	330203	Tripoli	Tripoli	Janzour	مركز الصحي جمال عبد الناصر جنزور	Open		Primary Health Center	29															X						0
944	330204	Tripoli	Tripoli	Janzour	مركز الصحي سليمان خاطر جنزور	Open		Primary Health Center	151			X			X							X								3
945	330205	Tripoli	Tripoli	Janzour	المركز الصحي الغيران جنزور	Open		Primary Health Center	163			X		X	X				X		X						X			6
946	330206	Tripoli	Tripoli	Janzour	مركز الصحي أنجيله جنزور	Open		Primary Health Center	100						X							X			X					3
947	330207	Tripoli	Tripoli	Janzour	مركز الصحي صياد المركز جنزور	Open		Primary Health Center	115						X							X		X						3
948	330208	Tripoli	Tripoli	Janzour	مركز الصحي سيدي مسعود جنزور	Open		Primary Health Center	112			X		X	X							X								4
949	330212	Tripoli	Tripoli	Janzour	مركز الصحي شهداء جنزور جنزور	Open		Primary Health Center	192			X		X	X							X			X	X	X	X		7
950	330213	Tripoli	Tripoli	Janzour	مركز رعاية صحية أولاد أحمد جنزور	Open		Primary Health Center	145			X	X		X	X						X			X					6
951	630302	Tripoli	Tripoli	Sug Aljumaa	العيادة المجمع شهداء الشط والنوطين سوق الجمعة	Closed	Under Maintenance	Polyclinic																						
952	630108	Tripoli	Tripoli	Sug Aljumaa	وحدة الرعاية الصحية المد الشمالي سوق الجمعة	Closed	used by other entity	Primary Health Unit																						
953	630101	Tripoli	Tripoli	Sug Aljumaa	وحدة الرعاية الصحية باب تاجورا سوق الجمعة	Open		Primary Health Unit	75																X		X	X		2
954	630102	Tripoli	Tripoli	Sug Aljumaa	وحدة الرعاية الصحية أخاد المجاهدين سوق الجمعة	Open		Primary Health Unit	43																		X			1
955	630103	Tripoli	Tripoli	Sug Aljumaa	وحدة الرعاية الصحية شرفة الملاحة سوق الجمعة	Open		Primary Health Unit	49																X	X	X	X		3
956	630104	Tripoli	Tripoli	Sug Aljumaa	وحدة الرعاية الصحية قرية الشعب سوق الجمعة	Open		Primary Health Unit	133																X	X	X			2
957	630105	Tripoli	Tripoli	Sug Aljumaa	وحدة الرعاية الصحية الأمومة رأس حسن سوق الجمعة	Open		Primary Health Unit	35						X															1
958	630106	Tripoli	Tripoli	Sug Aljumaa	وحدة الرعاية الصحية الحشان سوق الجمعة	Open		Primary Health Center	317			X				X						X								3
959	630107	Tripoli	Tripoli	Sug Aljumaa	وحدة الرعاية الصحية العبيدات سوق الجمعة	Open		Primary Health Unit	39																		X			1
960	630201	Tripoli	Tripoli	Sug Aljumaa	المركز الصحي بنز الشبو سوق الجمعة	Open		Primary Health Center	201							X						X			X	X	X	X		5
961	630202	Tripoli	Tripoli	Sug Aljumaa	المركز الصحي الإنتاق سوق الجمعة سوق الجمعة	Open		Primary Health Center	51						X	X						X			X		X	X		5
962	630203	Tripoli	Tripoli	Sug Aljumaa	المركز الصحي الساحل سوق الجمعة	Open		Primary Health Center	91						X												X	X	X	4
963	630204	Tripoli	Tripoli	Sug Aljumaa	المركز الصحي الولادة الطبيعية سوق الجمعة	Open		Primary Health Unit	40			X			X												X			3
964	630205	Tripoli	Tripoli	Sug Aljumaa	المركز الصحي الجهاد سوق الجمعة	Open		Primary Health Center	208						X							X								2
965	630206	Tripoli	Tripoli	Sug Aljumaa	المركز الصحي الحارات سوق الجمعة	Open		Primary Health Center	125													X					X	X	X	3
966	630207	Tripoli	Tripoli	Sug Aljumaa	المركز الصحي فوز زناتة سوق الجمعة	Open		Primary Health Center	230						X								X		X	X	X	X		5
967	630208	Tripoli	Tripoli	Sug Aljumaa	المركز الصحي الجنبية سوق الجمعة	Open		Primary Health Unit	77																X	X	X	X		3
968	630209	Tripoli	Tripoli	Sug Aljumaa	المركز الصحي الغارات سوق الجمعة	Open		Primary Health Unit	83			X				X														2
969	630210	Tripoli	Tripoli	Sug Aljumaa	المركز الصحي الحشان الجنوبي سوق الجمعة	Open		Primary Health Center	94			X				X						X		X						4
970	630301	Tripoli	Tripoli	Sug Aljumaa	العيادة المجمع عرادة سوق الجمعة	Open		Polyclinic	606			X		X	X							X	X	X	X	X	X	X	X	9
971	630303	Tripoli	Tripoli	Sug Aljumaa	العيادة المجمع الحرية سوق الجمعة	Open		Polyclinic	1003			X		X	X							X	X	X	X	X	X	X	X	9
972	630304	Tripoli	Tripoli	Sug Aljumaa	العيادة المجمع القرقني سوق الجمعة	Open		Polyclinic	289			X		X	X							X	X	X	X	X	X	X	X	9
973	630305	Tripoli	Tripoli	Sug Aljumaa	العيادة المجمع الهاني سوق الجمعة	Open		Polyclinic	365			X		X	X							X			X	X	X	X	X	8
974	650101	Tripoli	Tripoli	Tajoura	وحدة الرعاية الصحية أبي الأشهر تاجوراء	Open		Primary Health Unit	70																					0
975	650102	Tripoli	Tripoli	Tajoura	وحدة الرعاية الصحية بنز حماد تاجوراء	Open		Primary Health Unit	26																					0
976	650103	Tripoli	Tripoli	Tajoura	وحدة الرعاية الصحية الزطارنة تاجوراء	Open		Primary Health Unit	18																					0
977	650104	Tripoli	Tripoli	Tajoura	وحدة الرعاية الصحية الشبع تاجوراء	Open		Primary Health Unit	145			X																		1
978	650105	Tripoli	Tripoli	Tajoura	وحدة الرعاية الصحية الطوالب تاجوراء	Open		Primary Health Unit	44																					0
979	650106	Tripoli	Tripoli	Tajoura	وحدة الرعاية الصحية الصمود والتصدي تاجوراء	Open		Primary Health Unit	73																					0
980	650107	Tripoli	Tripoli	Tajoura	وحدة الرعاية الصحية ابن سينا تاجوراء	Open		Primary Health Unit	49																					0
981	650108	Tripoli	Tripoli	Tajoura	وحدة الرعاية الصحية المرانة تاجوراء	Open		Primary Health Unit	38																					0
982	650109	Tripoli	Tripoli	Tajoura	وحدة الرعاية الصحية سيدي الفتحي تاجوراء	Open		Primary Health Unit	21																					0
983	650201	Tripoli	Tripoli	Tajoura	المركز الصحي النعم تاجوراء	Open		Primary Health Center	72						X															1
984	650202	Tripoli	Tripoli	Tajoura	المركز الصحي يحي بن يحي السويدي تاجوراء	Open		Primary Health Center	72							X						X								2
985	650203	Tripoli	Tripoli	Tajoura	المركز الصحي سيدي خليفة تاجوراء	Open		Primary Health Center	175			X		X	X							X								4
986	650204	Tripoli	Tripoli	Tajoura	المركز الصحي المدينة تاجوراء	Open		Primary Health Center	57																					0
987	650207	Tripoli	Tripoli	Tajoura	المركز الصحي 17 فبراير تاجوراء	Open		Primary Health Center	76						X	X						X								3
988	650301	Tripoli	Tripoli	Tajoura	العيادة المجمع غوط الرمان تاجوراء	Open		Polyclinic	135						X	X						X			X	X	X	X		6



N	Facility number	Region	District	Municipality	Facility full name	Facility Status	Closure reason	Type of facility	Total staff employed	Number inpatient beds	Number of maternity beds	Family planning services	ANC services	Delivery services	Immunization services	Preventative and curative	HIV counselling and testing	STI services	Leishmaniasis skin	Leishmaniasis internal	Brucellosis diagnostics	NCD services	Treatment for mental	Surgical services	Blood transfusion services	Diagnostic testing	Diagnostic imaging	Stocks medicines, vaccines	Dental health care	Number of services
989	650302	Tripoli	Tripoli	Tajoura	العيادة المجمعمة بنز الأسمى ميلاد -تاجوراء	Open		Polyclinic	137						X	X									X	X	X	X	5	
990	650303	Tripoli	Tripoli	Tajoura	العيادة المجمعمة أبو شوشة -تاجوراء	Open		Polyclinic	228						X	X						X			X	X	X	X	6	
991	650304	Tripoli	Tripoli	Tajoura	العيادة المجمعمة وريمة -تاجوراء	Open		Polyclinic	145							X						X			X	X	X	X	5	
992	640101	Tripoli	Tripoli	Tripoli	وحدة الرعاية الصحية التحدي -حطرابلس المركز	Open		Primary Health Center	52												X				X	X	X	X	4	
993	640102	Tripoli	Tripoli	Tripoli	وحدة الرعاية الصحية الظهرة -حطرابلس المركز	Open		Primary Health Center	139							X						X			X	X	X	X	5	
994	640201	Tripoli	Tripoli	Tripoli	المركز الصحي شهداء أبو مليانة -حطرابلس المركز	Open		Primary Health Center	254						X	X					X				X	X	X	X	7	
995	640202	Tripoli	Tripoli	Tripoli	المركز الصحي شارع الزاوية -حطرابلس المركز	Open		Primary Health Center	166							X	X					X			X	X	X	X	6	
996	640203	Tripoli	Tripoli	Tripoli	المركز الصحي شهداء المنقشة -حطرابلس المركز	Open		Primary Health Center	326							X	X					X			X	X	X	X	6	
997	640204	Tripoli	Tripoli	Tripoli	المركز الصحي قشلوم -حطرابلس المركز	Open		Primary Health Center	299			X			X	X					X				X	X	X	X	7	
998	640205	Tripoli	Tripoli	Tripoli	المركز الصحي هانتي -حطرابلس المركز	Open		Primary Health Center	100							X	X					X			X	X	X	X	6	
999	640206	Tripoli	Tripoli	Tripoli	مركز الصحي الاكواش -حطرابلس المركز	Open		Primary Health Center	52							X	X					X			X	X	X	X	5	
1000	640207	Tripoli	Tripoli	Tripoli	المركز الصحي شارع الجمهورية -حطرابلس المركز	Open		Primary Health Unit	35													X			X	X	X	X	5	
1001	640208	Tripoli	Tripoli	Tripoli	المركز الصحي عمر المختار -حطرابلس المركز	Open		Primary Health Center	141			X			X	X						X			X	X	X	X	8	
1002	640209	Tripoli	Tripoli	Tripoli	المركز الصحي شهداء النوفلين -حطرابلس المركز	Open		Primary Health Center	298			X				X						X	X			X	X	X	6	
1003	640211	Tripoli	Tripoli	Tripoli	المركز الصحي سيدي خليفة -حطرابلس المركز	Open		Primary Health Center	85							X						X			X	X	X	X	4	
1004	640301	Tripoli	Tripoli	Tripoli	العيادة المجمعمة ميزران -حطرابلس المركز	Open		Polyclinic	180							X	X					X			X	X	X	X	7	
1005	910101	West	Al Jabal Al Gharbi	Al Galaa	وحدة رعاية القلعة الجديدة -القلعة	Open		Primary Health Unit	39																				0	
1006	910102	West	Al Jabal Al Gharbi	Al Galaa	وحدة رعاية الوادي -القلعة	Open		Primary Health Unit	39																				0	
1007	910103	West	Al Jabal Al Gharbi	Al Galaa	وحدة رعاية قصبة عكة -القلعة	Open		Primary Health Unit	35																				0	
1008	910201	West	Al Jabal Al Gharbi	Al Galaa	مركز صحي القلعة -القلعة	Open		Primary Health Center	92							X						X							2	
1009	800112	West	Al Jabal Al Gharbi	Alasabaa	وحدة رعاية القوايين الشرقية -الاصابع	Closed	Closed due to damage	Primary Health Unit																						
1010	800113	West	Al Jabal Al Gharbi	Alasabaa	وحدة رعاية القوايين الغربي -الاصابع	Closed	Closed due to damage	Primary Health Unit																						
1011	800114	West	Al Jabal Al Gharbi	Alasabaa	وحدة رعاية للهو -الاصابع	Closed	Not accessible	Primary Health Unit																						
1012	800101	West	Al Jabal Al Gharbi	Alasabaa	وحدة رعاية جندوبية -الاصابع	Closed	Under Maintenance	Primary Health Unit																						
1013	800102	West	Al Jabal Al Gharbi	Alasabaa	وحدة رعاية السناتين -الاصابع	Closed	Under Maintenance	Primary Health Unit																						
1014	800103	West	Al Jabal Al Gharbi	Alasabaa	وحدة رعاية الشرف -الاصابع	Closed	Under Maintenance	Primary Health Unit																						
1015	800107	West	Al Jabal Al Gharbi	Alasabaa	وحدة رعاية الهنشير -الاصابع	Closed	Under Maintenance	Primary Health Unit																						
1016	800109	West	Al Jabal Al Gharbi	Alasabaa	وحدة رعاية اولاد موسى -الاصابع	Closed	Under Maintenance	Primary Health Unit																						
1017	80203	West	Al Jabal Al Gharbi	Alasabaa	مركز صحي المعطلي -الاصابع	Open		Primary Health Center	9															X		X	X	X	X	5
1018	800104	West	Al Jabal Al Gharbi	Alasabaa	وحدة رعاية الضوة -الاصابع	Open		Primary Health Unit	59																					0
1019	800105	West	Al Jabal Al Gharbi	Alasabaa	وحدة رعاية الفاروق -الاصابع	Open		Primary Health Unit	37																					0
1020	800106	West	Al Jabal Al Gharbi	Alasabaa	وحدة رعاية النور -الاصابع	Open		Primary Health Unit	63																					0
1021	800108	West	Al Jabal Al Gharbi	Alasabaa	وحدة رعاية المهشيرات -الاصابع	Open		Primary Health Unit	65																					0
1022	800110	West	Al Jabal Al Gharbi	Alasabaa	وحدة رعاية الاصابع الشمالية -الاصابع	Open		Primary Health Unit	31																					0
1023	800111	West	Al Jabal Al Gharbi	Alasabaa	وحدة رعاية مسكة -الاصابع	Open		Primary Health Unit	42																					0
1024	800115	West	Al Jabal Al Gharbi	Alasabaa	وحدة رعاية الشفارة -الاصابع	Open		Primary Health Unit	59																					0
1025	800116	West	Al Jabal Al Gharbi	Alasabaa	وحدة رعاية الصحية الجنوبية -الاصابع	Open		Primary Health Unit	43																					0
1026	800201	West	Al Jabal Al Gharbi	Alasabaa	مركز صحي الاصابع -الاصابع	Open		Primary Health Center	437						X	X						X								3
1027	800202	West	Al Jabal Al Gharbi	Alasabaa	مركز صحي اولاد ادرين -الاصابع	Open		Primary Health Center	53													X								1
1028	800203	West	Al Jabal Al Gharbi	Alasabaa	مركز صحي جندوبية -الاصابع	Open		Primary Health Center	159							X						X								2
1029	800204	West	Al Jabal Al Gharbi	Alasabaa	مركز صحي بنز غني -الاصابع	Open		Primary Health Center	33							X						X								2
1030	870102	West	Al Jabal Al Gharbi	Arrajban	وحدة رعاية اولاد جابر -الرجبان	Closed	Closed due to damage	Primary Health Unit																						
1031	870105	West	Al Jabal Al Gharbi	Arrajban	وحدة رعاية اولاد عبدالجليل -الرجبان	Closed	Closed due to damage	Primary Health Unit																						
1032	870101	West	Al Jabal Al Gharbi	Arrajban	وحدة رعاية القرية الجنوبية -الرجبان	Closed	Under Maintenance	Primary Health Unit																						
1033	870104	West	Al Jabal Al Gharbi	Arrajban	وحدة رعاية شقي -الرجبان	Closed	Under Maintenance	Primary Health Unit																						
1034	870106	West	Al Jabal Al Gharbi	Arrajban	وحدة رعاية اولاد مسمود -الرجبان	Closed	Under Maintenance	Primary Health Unit																						
1035	870202	West	Al Jabal Al Gharbi	Arrajban	مركز صحي الرجبان -الرجبان	Closed	Under Maintenance	Primary Health Center																						
1036	870107	West	Al Jabal Al Gharbi	Arrajban	وحدة رعاية قصر دلة -الرجبان	Closed	Used by hospital	Primary Health Unit																						
1037	870103	West	Al Jabal Al Gharbi	Arrajban	وحدة رعاية اولاد عطية -الرجبان	Open		Primary Health Center	142						X							X			X					3
1038	870108	West	Al Jabal Al Gharbi	Arrajban	وحدة رعاية قصر الحاج -الرجبان	Open		Primary Health Center	38							X						X								2
1039	870201	West	Al Jabal Al Gharbi	Arrajban	مركز صحي اولاد عبيد -الرجبان	Open		Primary Health Center	78													X			X					2
1040	900103	West	Al Jabal Al Gharbi	Arrayayna	وحدة رعاية الغربية -الريانية	Closed	Under Maintenance	Primary Health Unit																						
1041	90212	West	Al Jabal Al Gharbi	Arrayayna	مركز صحي مرتوية -الريانية	Open		Primary Health Center	36																		X	X	2	
1042	900101	West	Al Jabal Al Gharbi	Arrayayna	وحدة رعاية ابو اللجام -الريانية	Open		Primary Health Unit	41																					
1043	900102	West	Al Jabal Al Gharbi	Arrayayna	وحدة رعاية الشرقية -الريانية	Open		Primary Health Unit	8																					

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1044	900201	West	Al Jabal Al Gharbi	Arrayayna	مركز صحي الريانية -الريانية	Open		Primary Health Unit	10						X														1				
1045	860104	West	Al Jabal Al Gharbi	Arrhaibat	وحدة رعاية القنانيق -الرحيبات	Closed	Under Maintenance	Primary Health Unit																						0			
1046	860101	West	Al Jabal Al Gharbi	Arrhaibat	وحدة رعاية السلامة -الرحيبات	Open		Primary Health Unit	22																					0			
1047	860102	West	Al Jabal Al Gharbi	Arrhaibat	وحدة رعاية الشباب -الرحيبات	Open		Primary Health Unit	31																					0			
1048	860103	West	Al Jabal Al Gharbi	Arrhaibat	وحدة رعاية الفاصلة -الرحيبات	Open		Primary Health Unit	12					X																1			
1049	860105	West	Al Jabal Al Gharbi	Arrhaibat	وحدة رعاية الكرومة -الرحيبات	Open		Primary Health Unit	7																					0			
1050	860201	West	Al Jabal Al Gharbi	Arrhaibat	مركز صحي الرحيبات -الرحيبات	Open		Primary Health Center	96												X									1			
1051	840101	West	Al Jabal Al Gharbi	Ashshgega	وحدة الرعاية فيصل -الشقيقة	Open		Primary Health Unit	21																					0			
1052	840102	West	Al Jabal Al Gharbi	Ashshgega	وحدة الرعاية الصحية وامس -الشقيقة	Open		Primary Health Unit	59																					0			
1053	840201	West	Al Jabal Al Gharbi	Ashshgega	مركز صحي الشقيقة -الشقيقة	Open		Primary Health Center	60					X							X									2			
1054	850102	West	Al Jabal Al Gharbi	Azzintan	وحدة رعاية طبقة -الزنتان	Closed	Under Maintenance	Primary Health Unit																						0			
1055	850101	West	Al Jabal Al Gharbi	Azzintan	وحدة رعاية عين الإبراهيمة -الزنتان	Open		Primary Health Unit	23	1				X										X				X		3			
1056	850103	West	Al Jabal Al Gharbi	Azzintan	وحدة رعاية القرية الشرقية -الزنتان	Open		Primary Health Center	18					X	X						X	X						X		5			
1057	850105	West	Al Jabal Al Gharbi	Azzintan	وحدة رعاية الحمى الزراعي -الزنتان	Open		Primary Health Unit	39												X							X		2			
1058	850106	West	Al Jabal Al Gharbi	Azzintan	وحدة رعاية المرحان -الزنتان	Open		Primary Health Unit	21																					0			
1059	850202	West	Al Jabal Al Gharbi	Azzintan	مركز صحي الزنتان الشرقي -الزنتان	Open		Primary Health Center	74	2	X			X							X				X		X	X		5			
1060	850203	West	Al Jabal Al Gharbi	Azzintan	مركز صحي طاهر -الزنتان	Open		Primary Health Center	84	4				X							X				X	X	X			5			
1061	850204	West	Al Jabal Al Gharbi	Azzintan	مركز صحي الشمالي -الزنتان	Open		Primary Health Center	51	3				X							X						X	X		4			
1062	850205	West	Al Jabal Al Gharbi	Azzintan	مركز صحي الغربي -الزنتان	Open		Primary Health Center	83	6				X	X						X		X		X		X			5			
1063	850206	West	Al Jabal Al Gharbi	Azzintan	مركز صحي القرية الغربية -الزنتان	Open		Primary Health Center	25	4				X	X					X	X	X					X	X		6			
1064	850207	West	Al Jabal Al Gharbi	Azzintan	مركز صحي الزنتان للحوادث والجراحة -الزنتان	Open		Primary Health Center	95	4														X	X	X	X	X	X		5		
1065	850208	West	Al Jabal Al Gharbi	Azzintan	مركز صحي طبقة -الزنتان	Open		Primary Health Center	3											X	X	X						X	X		5		
1066	790121	West	Al Jabal Al Gharbi	Ghiryan	وحدة رعاية السقايف -غريان	Closed	Not accessible	Primary Health Unit																									
1067	790120	West	Al Jabal Al Gharbi	Ghiryan	وحدة رعاية الزوية -غريان	Closed	Under Maintenance	Primary Health Unit																									
1068	790101	West	Al Jabal Al Gharbi	Ghiryan	وحدة رعاية القفس -غريان	Open		Primary Health Unit	35																						0		
1069	790102	West	Al Jabal Al Gharbi	Ghiryan	وحدة رعاية التحوير -غريان	Open		Primary Health Unit	9																						0		
1070	790103	West	Al Jabal Al Gharbi	Ghiryan	وحدة رعاية الشراة -غريان	Open		Primary Health Unit	10																						0		
1071	790104	West	Al Jabal Al Gharbi	Ghiryan	وحدة رعاية رابطة الشرقية -غريان	Open		Primary Health Unit	35																						0		
1072	790105	West	Al Jabal Al Gharbi	Ghiryan	وحدة رعاية قطيس -غريان	Open		Primary Health Center	91												X										1		
1073	790106	West	Al Jabal Al Gharbi	Ghiryan	وحدة رعاية وادي الحمى -غريان	Open		Primary Health Center	198					X							X										2		
1074	790107	West	Al Jabal Al Gharbi	Ghiryan	وحدة رعاية أبو سلامة -غريان	Open		Primary Health Unit	232																						0		
1075	790108	West	Al Jabal Al Gharbi	Ghiryan	وحدة رعاية أبو عيلان -غريان	Open		Primary Health Center	456												X										1		
1076	790109	West	Al Jabal Al Gharbi	Ghiryan	وحدة رعاية البحرية -غريان	Open		Primary Health Unit	174																						0		
1077	790110	West	Al Jabal Al Gharbi	Ghiryan	وحدة رعاية الذرافقة -غريان	Open		Primary Health Unit	209																							0	
1078	790111	West	Al Jabal Al Gharbi	Ghiryan	وحدة رعاية الرحبة -غريان	Open		Primary Health Unit	157																							0	
1079	790112	West	Al Jabal Al Gharbi	Ghiryan	وحدة رعاية السواعدية -غريان	Open		Primary Health Unit	295																							0	
1080	790113	West	Al Jabal Al Gharbi	Ghiryan	وحدة رعاية الميامين -غريان	Open		Primary Health Unit	179																							0	
1081	790114	West	Al Jabal Al Gharbi	Ghiryan	وحدة رعاية قران -غريان	Open		Primary Health Unit	190																							0	
1082	790115	West	Al Jabal Al Gharbi	Ghiryan	وحدة رعاية أولاد حزام -غريان	Open		Primary Health Unit	76																							0	
1083	790116	West	Al Jabal Al Gharbi	Ghiryan	وحدة رعاية العرايفية -غريان	Open		Primary Health Unit	31																							0	
1084	790117	West	Al Jabal Al Gharbi	Ghiryan	وحدة رعاية سيدي موسى -غريان	Open		Primary Health Center	56													X										1	
1085	790118	West	Al Jabal Al Gharbi	Ghiryan	وحدة رعاية أبو عياد -غريان	Open		Primary Health Unit	56																							0	
1086	790119	West	Al Jabal Al Gharbi	Ghiryan	وحدة رعاية التعلون -غريان	Open		Primary Health Unit	74																							0	
1087	790122	West	Al Jabal Al Gharbi	Ghiryan	وحدة رعاية اليعاقب -غريان	Open		Primary Health Unit	64																							0	
1088	790123	West	Al Jabal Al Gharbi	Ghiryan	وحدة رعاية دنون -غريان	Open		Primary Health Center	153						X							X										2	
1089	790124	West	Al Jabal Al Gharbi	Ghiryan	وحدة رعاية غوط الريح -غريان	Open		Primary Health Unit	96																							0	
1090	790125	West	Al Jabal Al Gharbi	Ghiryan	وحدة رعاية كمون -غريان	Open		Primary Health Unit	78																							0	
1091	790126	West	Al Jabal Al Gharbi	Ghiryan	وحدة رعاية ابوجعفر -غريان	Open		Primary Health Unit	87						X																	1	
1092	790127	West	Al Jabal Al Gharbi	Ghiryan	وحدة رعاية البيضاء -غريان	Open		Primary Health Unit	123																							0	
1093	790128	West	Al Jabal Al Gharbi	Ghiryan	وحدة رعاية الخضراء -غريان	Open		Primary Health Unit	40																							0	
1094	790129	West	Al Jabal Al Gharbi	Ghiryan	وحدة رعاية الشمالية -غريان	Open		Primary Health Unit	37																							0	
1095	790130	West	Al Jabal Al Gharbi	Ghiryan	وحدة رعاية الفاتح -غريان	Open		Primary Health Unit	21																							0	
1096	790131	West	Al Jabal Al Gharbi	Ghiryan	وحدة رعاية تليلت -غريان	Open		Primary Health Unit	65																							0	
1097	790132	West	Al Jabal Al Gharbi	Ghiryan	وحدة رعاية تطيب الغرسة -غريان	Open		Primary Health Center	106													X										1	
1098	790133	West	Al Jabal Al Gharbi	Ghiryan	وحدة رعاية شهادة الحجره -غريان	Open		Primary Health Unit	39																								0

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1099	790134	West	Al Jabal Al Gharbi	Ghiryan	وحدة رعاية ميلاد عطية - غريان	Open		Primary Health Unit	89																				0				
1100	790135	West	Al Jabal Al Gharbi	Ghiryan	وحدة رعاية امسوفين - غريان	Open		Primary Health Unit	28																					0			
1101	790136	West	Al Jabal Al Gharbi	Ghiryan	المركز الصحائلكليية - غريان	Open		Primary Health Center	58													X								1			
1102	790137	West	Al Jabal Al Gharbi	Ghiryan	وحدة رعاية اوسانن - غريان	Open		Primary Health Center	66					X									X							2			
1103	790138	West	Al Jabal Al Gharbi	Ghiryan	وحدة رعاية اوسانن المنطى - غريان	Open		Primary Health Unit	19																					0			
1104	790139	West	Al Jabal Al Gharbi	Ghiryan	وحدة رعاية الوسط - غريان	Open		Primary Health Center	483					X									X							2			
1105	790140	West	Al Jabal Al Gharbi	Ghiryan	وحدة رعاية تبادوت - غريان	Open		Primary Health Unit	30																					0			
1106	790141	West	Al Jabal Al Gharbi	Ghiryan	وحدة رعاية شعنان - غريان	Open		Primary Health Unit	14																					0			
1107	790142	West	Al Jabal Al Gharbi	Ghiryan	وحدة رعاية قباغ - غريان	Open		Primary Health Unit	29																					0			
1108	790143	West	Al Jabal Al Gharbi	Ghiryan	وحدة رعاية صحية كعام - غريان	Open		Primary Health Unit	22																					0			
1109	790201	West	Al Jabal Al Gharbi	Ghiryan	مركز صحي الرابطة - غريان	Open		Primary Health Center	156					X									X							2			
1110	790202	West	Al Jabal Al Gharbi	Ghiryan	مركز صحي الشويخ - غريان	Open		Primary Health Center	670					X									X							2			
1111	790203	West	Al Jabal Al Gharbi	Ghiryan	مركز صحي الكمشيات - غريان	Open		Primary Health Center	313														X							1			
1112	790204	West	Al Jabal Al Gharbi	Ghiryan	مركز صحي الوسط - غريان	Open		Primary Health Center	126					X									X							2			
1113	790205	West	Al Jabal Al Gharbi	Ghiryan	مركز صحي سيدي يعقوب - غريان	Open		Primary Health Center	97					X									X							2			
1114	790206	West	Al Jabal Al Gharbi	Ghiryan	مركز صحي الفاحصات - غريان	Open		Primary Health Center	193					X									X							2			
1115	790207	West	Al Jabal Al Gharbi	Ghiryan	مركز صحي ابوزيان - غريان	Open		Primary Health Center	107				X	X	X								X								4		
1116	790208	West	Al Jabal Al Gharbi	Ghiryan	مركز صحي تغرنة - غريان	Open		Primary Health Center	190					X	X								X								3		
1117	790209	West	Al Jabal Al Gharbi	Ghiryan	مركز صحي العريان - غريان	Open		Primary Health Center	131					X	X								X								3		
1118	790301	West	Al Jabal Al Gharbi	Ghiryan	عياد المعجمة غريان - غريان	Open		Polyclinic	260				X		X	X							X			X	X	X			7		
1119	810102	West	Al Jabal Al Gharbi	Kikkla	وحدة رعاية الخوزن - ككلا	Closed	Closed due to damage	Primary Health Unit																									
1120	810104	West	Al Jabal Al Gharbi	Kikkla	وحدة رعاية العبيدات - ككلا	Closed	Not accessible	Primary Health Unit																									
1121	810110	West	Al Jabal Al Gharbi	Kikkla	وحدة رعاية قطيس ككلا - ككلا	Closed	Not accessible	Primary Health Unit																									
1122	810101	West	Al Jabal Al Gharbi	Kikkla	وحدة رعاية ابوماضي - ككلا	Closed	Under Maintenance	Primary Health Unit																									
1123	810105	West	Al Jabal Al Gharbi	Kikkla	وحدة رعاية المزايدة - ككلا	Closed	Under Maintenance	Primary Health Unit																									
1124	810109	West	Al Jabal Al Gharbi	Kikkla	وحدة رعاية احيينس ككلا - ككلا	Closed	Under Maintenance	Primary Health Unit																									
1125	810103	West	Al Jabal Al Gharbi	Kikkla	وحدة رعاية السودانية - ككلا	Open		Primary Health Unit	30					X																	1		
1126	810106	West	Al Jabal Al Gharbi	Kikkla	وحدة رعاية المعافية - ككلا	Open		Primary Health Unit	13																							0	
1127	810107	West	Al Jabal Al Gharbi	Kikkla	وحدة رعاية الوادي - ككلا	Open		Primary Health Unit	15																							0	
1128	810108	West	Al Jabal Al Gharbi	Kikkla	وحدة رعاية انزو - ككلا	Open		Primary Health Unit	17																							0	
1129	810201	West	Al Jabal Al Gharbi	Kikkla	مركز صحي ككلا - ككلا	Open		Primary Health Center	163					X									X									2	
1130	830102	West	Al Jabal Al Gharbi	Mizda	وحدة رعاية السدرة - مزدة	Closed	Under Maintenance	Primary Health Unit																									
1131	830103	West	Al Jabal Al Gharbi	Mizda	وحدة رعاية حي ابوسبيطة - مزدة	Closed	Under Maintenance	Primary Health Unit																									
1132	830105	West	Al Jabal Al Gharbi	Mizda	وحدة الرعاية فسانوا الجنوبي - مزدة	Closed	Under Maintenance	Primary Health Unit																									
1133	830101	West	Al Jabal Al Gharbi	Mizda	وحدة رعاية صحية العوقوب الشرقي - مزدة	Open		Primary Health Unit	66					X									X									2	
1134	830104	West	Al Jabal Al Gharbi	Mizda	وحدة رعاية فسانوا - مزدة	Open		Primary Health Center	28					X									X									2	
1135	830201	West	Al Jabal Al Gharbi	Mizda	مركز صحي مزدة المدينة - مزدة	Open		Primary Health Center	86					X	X								X									3	
1136	920104	West	Al Jabal Al Gharbi	Nesma	وحدة رعاية مرسبط - نسمة	Closed	Under Maintenance	Primary Health Unit																									
1137	920101	West	Al Jabal Al Gharbi	Nesma	وحدة رعاية ابو الغرب - نسمة	Open		Primary Health Unit	26					X																			1
1138	920102	West	Al Jabal Al Gharbi	Nesma	وحدة رعاية راس الطبل - نسمة	Open		Primary Health Unit	29																								0
1139	920103	West	Al Jabal Al Gharbi	Nesma	وحدة رعاية المكورة - نسمة	Open		Primary Health Unit	9																								0
1140	920105	West	Al Jabal Al Gharbi	Nesma	وحدة رعاية نسمة - نسمة	Open		Primary Health Unit	11					X																			1
1141	920201	West	Al Jabal Al Gharbi	Nesma	مركز صحي نسمة - نسمة	Open		Primary Health Center	10					X	X				X	X	X	X						X	X			8	
1142	890102	West	Al Jabal Al Gharbi	Thaher Aljabal	وحدة رعاية الخلافة - ظاهر الجبل	Open		Primary Health Unit	102					X																			1
1143	890103	West	Al Jabal Al Gharbi	Thaher Aljabal	وحدة رعاية المعمورة - ظاهر الجبل	Open		Primary Health Unit	25																								0
1144	890104	West	Al Jabal Al Gharbi	Thaher Aljabal	وحدة رعاية الغنامة - ظاهر الجبل	Open		Primary Health Unit	5																								0
1145	890201	West	Al Jabal Al Gharbi	Thaher Aljabal	مركز صحي الغنامة - ظاهر الجبل	Open		Primary Health Center	98					X									X										2
1146	890202	West	Al Jabal Al Gharbi	Thaher Aljabal	مركز صحي ام الجرسان - ظاهر الجبل	Open		Primary Health Center	129					X	X								X										3
1147	880201	West	Al Jabal Al Gharbi	Yefren	مركز صحي العوينية - يفرن	Closed	Closed due to damage	Primary Health Center																									
1148	880101	West	Al Jabal Al Gharbi	Yefren	وحدة رعاية الاحير - يفرن	Closed	Not accessible	Primary Health Unit																									
1149	880102	West	Al Jabal Al Gharbi	Yefren	وحدة رعاية الزاوية - يفرن	Closed	Not accessible	Primary Health Unit																									
1150	880103	West	Al Jabal Al Gharbi	Yefren	وحدة رعاية عمر - يفرن	Closed	Not accessible	Primary Health Unit																									
1151	880104	West	Al Jabal Al Gharbi	Yefren	وحدة رعاية البراهمة - يفرن	Closed	Under Maintenance	Primary Health Unit																									
1152	880106	West	Al Jabal Al Gharbi	Yefren	وحدة رعاية الزرقان - يفرن	Closed	Under Maintenance	Primary Health Unit																									
1153	880105	West	Al Jabal Al Gharbi	Yefren	وحدة رعاية الجديدة - يفرن	Open		Primary Health Unit	54																								0

N	Facility number	Region	District	Municipality	Facility full name	Facility Status	Closure reason	Type of facility	Total staff employed	Number inpatient beds	Number of maternity beds	Family planning services	ANC services	Delivery services	Immunization services	Preventative and curative	HIV counselling and testing	STI services	Leishmaniasis skin	Leishmaniasis internal	Bruceellosis diagnostics	NCD services	Treatment for mental	Surgical services	Blood transfusion services	Diagnostic testing	Diagnostic imaging	Stocks medicines, vaccines	Dental health care	Number of services	
1154	880107	West	Al Jabal Al Gharbi	Yefren	وحدة رعاية اولاد عطية جفرن	Open		Primary Health Unit	5																					0	
1155	880108	West	Al Jabal Al Gharbi	Yefren	وحدة رعاية اولاد يحيى جفرن	Open		Primary Health Unit	35																					0	
1156	880109	West	Al Jabal Al Gharbi	Yefren	وحدة رعاية تاغمة جفرن	Open		Primary Health Unit	53																					0	
1157	880202	West	Al Jabal Al Gharbi	Yefren	مركز صحي تاز مرابت جفرن	Open		Primary Health Center	114						X	X						X								3	
1158	700103	West	Azzawya	Azzawya	وحدة رعاية الصحية اسامة بن زيد -الزاوية	Closed	Under Maintenance	Primary Health Unit																							
1159	700120	West	Azzawya	Azzawya	وحدة رعاية الشهيد رمضان زعيط -الزاوية	Closed	Under Maintenance	Primary Health Unit																							
1160	700101	West	Azzawya	Azzawya	وحدة رعاية الصحية 17 فبراير -الزاوية	Open		Primary Health Unit	60				X	X	X						X	X		X	X	X	X	X	X	8	
1161	700102	West	Azzawya	Azzawya	وحدة رعاية الصحية عمر بن عبد العزيز -الزاوية	Open		Primary Health Unit	54			X			X						X	X	X	X	X	X	X	X	X	9	
1162	700104	West	Azzawya	Azzawya	وحدة رعاية الصحية العين -الزاوية	Open		Primary Health Unit	31						X						X	X	X	X	X	X	X	X	X	4	
1163	700105	West	Azzawya	Azzawya	وحدة رعاية صحية صلاح الدين -الزاوية	Open		Primary Health Unit	42			X			X					X	X	X		X	X	X	X	X	X	7	
1164	700106	West	Azzawya	Azzawya	وحدة رعاية صحية جودام -الزاوية	Open		Primary Health Unit	39						X								X	X	X	X	X	X	X	5	
1165	700107	West	Azzawya	Azzawya	وحدة رعاية صحية السلام -الزاوية	Open		Primary Health Unit	24			X	X	X	X					X	X	X	X	X	X	X	X	X	X	9	
1166	700108	West	Azzawya	Azzawya	وحدة رعاية صحية بنو ترفاس -الزاوية	Open		Primary Health Unit	60		X	X			X	X					X	X	X	X	X	X	X	X	X	8	
1167	700109	West	Azzawya	Azzawya	وحدة رعاية صحية الحسن بن علي -الزاوية	Open		Primary Health Unit	39						X								X	X	X	X	X	X	X	4	
1168	700110	West	Azzawya	Azzawya	وحدة رعاية صحية بنو خنيفة -الزاوية	Open		Primary Health Unit	22												X	X	X	X	X	X	X	X	X	4	
1169	700112	West	Azzawya	Azzawya	وحدة رعاية بنو هوسمة -الزاوية	Open		Primary Health Unit	45																					1	
1170	700113	West	Azzawya	Azzawya	وحدة رعاية بنو بن الحسن -الزاوية	Open		Primary Health Unit	69						X	X				X	X		X	X	X	X	X	X	X	7	
1171	700114	West	Azzawya	Azzawya	وحدة رعاية بنو الحنيتش -الزاوية	Open		Primary Health Unit	53												X	X	X	X	X	X	X	X	X	4	
1172	700115	West	Azzawya	Azzawya	وحدة رعاية الصحية بنو معمر -الزاوية	Open		Primary Health Unit	87			X			X	X					X	X	X	X	X	X	X	X	X	9	
1173	700116	West	Azzawya	Azzawya	وحدة رعاية الباشا -الزاوية	Open		Primary Health Unit	25						X						X	X		X	X	X	X	X	X	2	
1174	700117	West	Azzawya	Azzawya	وحدة الرعاية الصحية الجلاء -الزاوية	Open		Primary Health Unit	66	4		X			X					X	X	X	X	X	X	X	X	X	X	9	
1175	700118	West	Azzawya	Azzawya	وحدة رعاية سعدون -الزاوية	Open		Primary Health Unit	30						X							X								2	
1176	700119	West	Azzawya	Azzawya	وحدة رعاية المهدي بن بركة -الزاوية	Open		Primary Health Unit	36						X						X	X	X	X	X	X	X	X	X	6	
1177	700121	West	Azzawya	Azzawya	وحدة رعاية صحية شلغودة -الزاوية	Open		Primary Health Unit	53			X		X						X	X	X	X	X	X	X	X	X	X	7	
1178	700122	West	Azzawya	Azzawya	وحدة رعاية بنو العسل -الزاوية	Open		Primary Health Unit																							
1179	700123	West	Azzawya	Azzawya	وحدة رعاية صحية شهداء امدانك -الزاوية	Open		Primary Health Unit	35											X					X	X	X	X	3		
1180	700124	West	Azzawya	Azzawya	وحدة رعاية صحية بنو الغم -الزاوية	Open		Primary Health Unit	32																X	X	X	X	2		
1181	700125	West	Azzawya	Azzawya	وحدة رعاية صحية بنو عر الدين -الزاوية	Open		Primary Health Unit	27						X								X							2	
1182	700126	West	Azzawya	Azzawya	وحدة رعاية الواسع -الزاوية	Open		Primary Health Unit	28											X										1	
1183	700127	West	Azzawya	Azzawya	وحدة رعاية صحية البشائر -الزاوية	Open		Primary Health Unit	30												X									1	
1184	700128	West	Azzawya	Azzawya	وحدة رعاية الصحية بحر السماح -الزاوية	Open		Primary Health Unit	48			X			X	X				X	X	X	X	X	X	X	X	X	X	9	
1185	700129	West	Azzawya	Azzawya	وحدة صحية ابو سباع -الزاوية	Open		Primary Health Unit	60			X			X					X	X	X	X	X	X	X	X	X	X	7	
1186	700130	West	Azzawya	Azzawya	وحدة رعاية صحية الزاوية الجنوبية -الزاوية	Open		Primary Health Unit	33			X			X							X		X	X	X	X	X	X	6	
1187	700131	West	Azzawya	Azzawya	وحدة رعاية صحية السيدة عائشة -الزاوية	Open		Primary Health Unit	44						X						X	X	X	X	X	X	X	X	X	4	
1188	700132	West	Azzawya	Azzawya	وحدة رعاية صحية المدرسية -الزاوية	Open		Primary Health Center	31						X						X									3	
1189	700201	West	Azzawya	Azzawya	مركز صحي ضئ الهلال -الزاوية	Open		Primary Health Center	175			X	X	X						X	X	X	X	X	X	X	X	X	X	11	
1190	700202	West	Azzawya	Azzawya	مركز الرعاية الصحية الناصر -الزاوية	Open		Primary Health Center	58			X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	8	
1191	700203	West	Azzawya	Azzawya	المركز الصحي ناصر -الزاوية	Open		Primary Health Center	118			X		X	X	X	X			X	X	X	X	X	X	X	X	X	X	9	
1192	700204	West	Azzawya	Azzawya	المركز الصحي بنو الغم -الزاوية	Open		Primary Health Center	92					X	X					X	X	X	X	X	X	X	X	X	X	8	
1193	700205	West	Azzawya	Azzawya	مركز صحي شلغودة -الزاوية	Open		Primary Health Center	33						X					X	X	X	X	X	X	X	X	X	X	8	
1194	700301	West	Azzawya	Azzawya	العيادة المجمع الزاوية -الزاوية	Open		Polyclinic	280			X		X	X					X	X	X	X	X	X	X	X	X	X	11	
1195	710108	West	Azzawya	Gharb Azzawya	وحدة الرعاية الصحية بنو رابحة -الزاوية الغرب	Closed	Not accessible	Primary Health Unit																							
1196	710110	West	Azzawya	Gharb Azzawya	وحدة الرعاية الصحية الجليل الصاعد -الزاوية الغرب	Closed	Not accessible	Primary Health Unit																							
1197	710111	West	Azzawya	Gharb Azzawya	وحدة الرعاية الصحية بنو الرتم -الزاوية الغرب	Closed	Under Maintenance	Primary Health Unit																							
1198	710101	West	Azzawya	Gharb Azzawya	وحدة رعاية صحية ابو شمطة -الزاوية الغرب	Open		Primary Health Unit	15																		X			1	
1199	710102	West	Azzawya	Gharb Azzawya	وحدة رعاية صحية الرابطة -الزاوية الغرب	Open		Primary Health Unit	41						X											X	X	X	2		
1200	710103	West	Azzawya	Gharb Azzawya	وحدة رعاية صحية الكاساسية -الزاوية الغرب	Open		Primary Health Unit	47			X			X											X	X	X	4		
1201	710104	West	Azzawya	Gharb Azzawya	وحدة رعاية القصر -الزاوية الغرب	Open		Primary Health Unit	48			X			X											X	X	X	4		
1202	710105	West	Azzawya	Gharb Azzawya	وحدة رعاية صحية ابو شعاعه -الزاوية الغرب	Open		Primary Health Unit	55	1	1				X	X					X			X	X	X	X	X	6		
1203	710106	West	Azzawya	Gharb Azzawya	وحدة رعاية الصحية الشروق -الزاوية الغرب	Open		Primary Health Unit	47						X	X										X	X	X	3		
1204	710107	West	Azzawya	Gharb Azzawya	وحدة الرعاية الصحية حسي الحمرة -الزاوية الغرب	Open		Primary Health Unit	70						X	X										X	X	X	4		
1205	710109	West	Azzawya	Gharb Azzawya	وحدة الرعاية الصحية الحمي القديم -الزاوية الغرب	Open		Primary Health Unit	32			X									X					X	X	X	3		
1206	710201	West	Azzawya	Gharb Azzawya	المركز الصحي الحرثة -الزاوية الغرب	Open		Primary Health Center	176						X	X					X					X	X	X	6		
1207	710202	West	Azzawya	Gharb Azzawya	المركز الصحي المطرد -الزاوية الغرب	Open		Primary Health Center	118			X	X	X	X					X	X	X	X	X	X	X	X	X	X	7	
1208	710301	West	Azzawya	Gharb Azzawya	العيادة المجمع ابو عيسى -الزاوية الغرب	Open		Polyclinic	127	6		X		X	X					X	X	X	X	X	X	X	X	X	10		

N	Facility number	Region	District	Municipality	Facility full name	Facility Status	Closure reason	Type of facility	Total staff employed	Number inpatient beds	Number of maternity beds	Family planning services	ANC services	Delivery services	Immunization services	Preventative and curative	HIV counselling and testing	STI services	Leishmaniasis skin	Leishmaniasis internal	Brucellosis diagnostics	NCD services	Treatment for mental	Surgical services	Blood transfusion services	Diagnostic testing	Diagnostic imaging	Stocks medicines, vaccines	Dental health care	Number of services	
1209	780201	West	Azzawya	Sabratha	المركز الصحي حصراته المدينة حصراته	Closed	Under Maintenance	Primary Health Center																							
1210	780101	West	Azzawya	Sabratha	وحدة رعاية صحية تليل حصراته	Open		Primary Health Unit	49																					0	
1211	780102	West	Azzawya	Sabratha	وحدة الرعاية الصحية الخطاطبية الشمالية حصراته	Open		Primary Health Unit	66			X	X	X																3	
1212	780103	West	Azzawya	Sabratha	وحدة الرعاية الصحية النبهضة حصراته	Open		Primary Health Unit	196			X																		1	
1213	780104	West	Azzawya	Sabratha	وحدة رعاية صحية نصر دحمان حصراته	Open		Primary Health Unit	61																					0	
1214	780105	West	Azzawya	Sabratha	وحدة الرعاية الصحية الدباسية حصراته	Open		Primary Health Unit	81			X																X		2	
1215	780106	West	Azzawya	Sabratha	وحدة رعاية صحية المنبيبات حصراته	Open		Primary Health Unit	65																					0	
1216	780107	West	Azzawya	Sabratha	وحدة رعاية صحية المدهون حصراته	Open		Primary Health Unit	59																			X		1	
1217	780108	West	Azzawya	Sabratha	وحدة رعاية صحية الوادي حصراته	Open		Primary Health Unit	154			X		X	X												X	X		5	
1218	780109	West	Azzawya	Sabratha	وحدة رعاية صحية الفتح حصراته	Open		Primary Health Unit	45																					0	
1219	780110	West	Azzawya	Sabratha	وحدة رعاية صحية عقار المعاولية حصراته	Open		Primary Health Unit	97																					0	
1220	780111	West	Azzawya	Sabratha	وحدة الرعاية الصحية الطويلة الجنوبية حصراته	Open		Primary Health Unit	36																					0	
1221	780112	West	Azzawya	Sabratha	وحدة الرعاية الصحية دحمان حصراته	Open		Primary Health Unit	58																					0	
1222	780113	West	Azzawya	Sabratha	وحدة الرعاية الصحية الشبيعان حصراته	Open		Primary Health Center	37					X								X								2	
1223	780114	West	Azzawya	Sabratha	وحدة الرعاية الصحية الخطاطبية الجنوبية حصراته	Open		Primary Health Unit	71																					0	
1224	780202	West	Azzawya	Sabratha	المركز الصحي الملاحة سيدي معروف حصراته	Open		Primary Health Center	229			X			X							X					X			4	
1225	780203	West	Azzawya	Sabratha	المركز الصحي جبل حصراته	Open		Primary Health Center	160													X						X	X	3	
1226	780204	West	Azzawya	Sabratha	المركز الصحي زواغة حصراته	Open		Primary Health Unit	183						X													X	X	3	
1227	780205	West	Azzawya	Sabratha	المركز الصحي قائل حصراته	Open		Primary Health Center	222			X										X	X					X	X	5	
1228	780206	West	Azzawya	Sabratha	المركز الصحي الطويلة حصراته	Open		Primary Health Center	129			X			X							X						X		4	
1229	780207	West	Azzawya	Sabratha	المركز الصحي 17 فبراير حصراته	Open		Primary Health Center	121						X							X						X	X	4	
1230	720101	West	Azzawya	Surman	وحدة رعاية صحية عطاف حصرمان	Open		Primary Health Unit	101			X		X	X						X	X		X	X	X	X	X	X	9	
1231	720102	West	Azzawya	Surman	وحدة رعاية صحية الشاطئ حصرمان	Open		Primary Health Unit	75					X	X							X	X	X	X	X	X	X	X	5	
1232	720103	West	Azzawya	Surman	وحدة رعاية صحية الساحل حصرمان	Open		Primary Health Unit	67			X		X	X							X	X				X	X	X	5	
1233	720104	West	Azzawya	Surman	وحدة رعاية صحية السهل الأخضر حصرمان	Open		Primary Health Unit	82			X		X	X							X	X		X	X	X	X	X	7	
1234	720105	West	Azzawya	Surman	وحدة رعاية صحية ام الحشان حصرمان	Open		Primary Health Unit	61			X		X						X	X	X	X	X	X	X	X	X	X	8	
1235	720106	West	Azzawya	Surman	وحدة رعاية العين حصرمان	Open		Primary Health Unit	47					X	X						X	X			X	X	X	X	X	6	
1236	720107	West	Azzawya	Surman	وحدة رعاية صحية ابي الويش حصرمان	Open		Primary Health Unit	99			X		X	X								X	X			X	X	X	5	
1237	720108	West	Azzawya	Surman	وحدة رعاية صحية الحرية حصرمان	Open		Primary Health Unit	57			X		X												X	X	X	X	5	
1238	720109	West	Azzawya	Surman	وحدة رعاية صحية الجليلة حصرمان	Open		Primary Health Unit	51						X								X		X	X	X	X	X	5	
1239	720142	West	Azzawya	Surman	وحدة الرعاية الصحية راس الرمزام حصرمان	Open		Primary Health Unit	24						X							X	X			X	X	X	X	5	
1240	720201	West	Azzawya	Surman	مركز الرعاية الصحية سيدي مخلوف حصرمان	Open		Primary Health Center	95			X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	12
1241	720240	West	Azzawya	Surman	مركز الرعاية الصحية لاكري حصرمان	Open		Primary Health Center	69																						0
1242	720301	West	Azzawya	Surman	العيادة المجمعة حصرمان حصرمان	Open		Polyclinic	135			X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
1243	729630	West	Azzawya	Surman	مركز العلاج الطبيعي حصرمان	Open		Primary Health Center	16																						0
1244	950102	West	Nalut	Alharaba	وحدة رعاية الفتح الحاربا	Closed	Under Maintenance	Primary Health Unit																							
1245	950101	West	Nalut	Alharaba	وحدة رعاية ام صفار الحاربا	Open		Primary Health Unit																							
1246	950103	West	Nalut	Alharaba	وحدة رعاية بقبلة الحاربا	Open		Primary Health Unit																							
1247	950104	West	Nalut	Alharaba	وحدة رعاية الديرانة الشرقية الحاربا	Open		Primary Health Unit	46						X																1
1248	950105	West	Nalut	Alharaba	وحدة رعاية الديرانة الحاربا	Open		Primary Health Unit	17																						0
1249	950201	West	Nalut	Alharaba	مركز صحي طمزين الحاربا	Open		Primary Health Center	30					X								X									2
1250	980201	West	Nalut	Alhawamid	مركز صحي الغزايا الحوامد	Open		Primary Health Center	59					X								X									2
1251	980203	West	Nalut	Alhawamid	مركز صحي اولاد محمود الحوامد	Open		Primary Health Center	101					X								X									2
1252	980204	West	Nalut	Alhawamid	مركز صحي الحوامد الحوامد	Open		Primary Health Center	96					X								X									2
1253	1010102	West	Nalut	Daraj	وحدة رعاية عين علي حرج	Open		Primary Health Unit	20																						0
1254	1010103	West	Nalut	Daraj	وحدة رعاية تغلظت حرج	Open		Primary Health Unit	14																						0
1255	1010104	West	Nalut	Daraj	وحدة رعاية النبهضة درج حرج	Open		Primary Health Unit	32						X																1
1256	1010201	West	Nalut	Daraj	مركز صحي الشعواء حرج	Open		Primary Health Center	51													X									2
1257	1010202	West	Nalut	Daraj	مركز صحي سيلاون حرج	Open		Primary Health Center	39					X	X							X			X						4
1258	1010203	West	Nalut	Daraj	مركز صحي درج حرج	Open		Primary Health Center	74			X										X			X						3
1259	1010204	West	Nalut	Daraj	مركز صحي ماتريس حرج	Open		Primary Health Center	34													X									1
1260	1010205	West	Nalut	Daraj	مركز صحي تقطة حرج	Open		Primary Health Center	57													X									1
1261	990101	West	Nalut	Ghadamis	وحدة رعاية صحية تونين - غدامس	Closed	Under Maintenance	Primary Health Unit																							
1262	990201	West	Nalut	Ghadamis	مركز الصحي غدامس - غدامس	Open		Primary Health Center	39					X								X				X					3
1263	820105	West	Nalut	Jadu	وحدة رعاية نمزة جادو	Closed	Closed due to damage	Primary Health Unit																							

N	Facility number	Region	District	Municipality	Facility full name	Facility Status	Closure reason	Type of facility	Total staff employed	Number inpatient beds	Number of maternity beds	Family planning services	ANC services	Delivery services	Immunization services	Preventative and curative	HIV counselling and testing	STI services	Leishmaniasis skin	Leishmaniasis internal	Bruceellosis diagnostics	NCD services	Treatment for mental	Surgical services	Blood transfusion services	Diagnostic testing	Diagnostic imaging	Stocks medicines, vaccines	Dental health care	Number of services	
1264	820101	West	Nalut	Jadu	وحدة رعاية ونزيف جادو	Closed	Under Maintenance	Primary Health Unit																							
1265	820102	West	Nalut	Jadu	وحدة رعاية جيطل -الرحيبات	Closed	Under Maintenance	Primary Health Unit																							
1266	820103	West	Nalut	Jadu	وحدة رعاية الجماري جادو	Open		Primary Health Unit	43																					0	
1267	820104	West	Nalut	Jadu	وحدة رعاية الجنلون جادو	Open		Primary Health Unit	15																					0	
1268	820106	West	Nalut	Jadu	وحدة رعاية مز غورة جادو	Open		Primary Health Unit	18																					0	
1269	820107	West	Nalut	Jadu	وحدة رعاية ندياس جادو	Open		Primary Health Unit	19																					0	
1270	820108	West	Nalut	Jadu	وحدة رعاية صحية شكشوك جادو	Open		Primary Health Unit	79					X																1	
1271	820130	West	Nalut	Jadu	وحدة رعاية صحية وفيات جادو	Open		Primary Health Unit	25																					0	
1272	820230	West	Nalut	Jadu	مركز صحي جادو	Open		Primary Health Center	62					X																1	
1273	960101	West	Nalut	Kabaw	وحدة رعاية قوسماء كابلو	Open		Primary Health Unit	20					X																1	
1274	960102	West	Nalut	Kabaw	وحدة رعاية كابلو كابلو	Open		Primary Health Unit	23					X																1	
1275	960103	West	Nalut	Kabaw	وحدة رعاية وادي السندر كابلو	Open		Primary Health Unit	35					X																1	
1276	960201	West	Nalut	Kabaw	مركز صحي المجاورة كابلو	Open		Primary Health Center	95					X								X								2	
1277	960202	West	Nalut	Kabaw	مركز صحي تندميرة كابلو	Open		Primary Health Center	91					X								X								2	
1278	940102	West	Nalut	Nalut	وحدة رعاية الخنساء خنالوت	Closed	Not accessible	Primary Health Unit																							
1279	940101	West	Nalut	Nalut	وحدة رعاية زقزف خنالوت	Open		Primary Health Unit	77					X																1	
1280	940201	West	Nalut	Nalut	مركز صحي سيدي خليفة خنالوت	Open		Primary Health Center	91					X	X				X					X			X	X	X	8	
1281	940202	West	Nalut	Nalut	مركز صحي تاكوت خنالوت	Open		Primary Health Center	59					X								X									2
1282	1000201	West	Nalut	Wazin	مركز صحي وازن	Open		Primary Health Center	88					X								X									2
1283	770105	West	Zwara	Al Ajaylat	وحدة الرعاية الصحية المعطر -العجيلات	Closed	Under Maintenance	Primary Health Unit																							
1284	770108	West	Zwara	Al Ajaylat	وحدة الرعاية الصحية راس يوسف -العجيلات	Closed	Under Maintenance	Primary Health Unit																							
1285	770201	West	Zwara	Al Ajaylat	المركز الصحي مؤتمر النهشير -العجيلات	Closed	Used by hospital	Primary Health Center																							
1286	770101	West	Zwara	Al Ajaylat	وحدة الرعاية الصحية العالمية -العجيلات	Open		Primary Health Unit	66																						0
1287	770102	West	Zwara	Al Ajaylat	وحدة الرعاية الصحية الزرامة -العجيلات	Open		Primary Health Center	24											X			X								2
1288	770103	West	Zwara	Al Ajaylat	وحدة الرعاية الصحية ابو سعد -العجيلات	Open		Primary Health Unit	20																						0
1289	770104	West	Zwara	Al Ajaylat	وحدة الرعاية الصحية بناموية -العجيلات	Open		Primary Health Unit	7																						0
1290	770106	West	Zwara	Al Ajaylat	وحدة الرعاية الصحية سنوية صلاح -العجيلات	Open		Primary Health Unit	145																						0
1291	770107	West	Zwara	Al Ajaylat	وحدة الرعاية الصحية جنان عطية -العجيلات	Open		Primary Health Unit	22																						0
1292	770109	West	Zwara	Al Ajaylat	وحدة الرعاية الصحية الشبيكة -العجيلات	Open		Primary Health Unit	22																						0
1293	770202	West	Zwara	Al Ajaylat	المركز الصحي غوط بيروص -العجيلات	Open		Primary Health Unit	18																						0
1294	770203	West	Zwara	Al Ajaylat	المركز الصحي الحمام السباحي -العجيلات	Open		Primary Health Center	71																						0
1295	770204	West	Zwara	Al Ajaylat	المركز الصحي طهرة عرفة -العجيلات	Open		Primary Health Center	36														X								1
1296	770205	West	Zwara	Al Ajaylat	المركز الصحي الافران -العجيلات	Open		Primary Health Center	87														X								1
1297	770206	West	Zwara	Al Ajaylat	المركز الصحي الذرائية -العجيلات	Open		Primary Health Unit	84																						0
1298	770207	West	Zwara	Al Ajaylat	المركز الصحي المجاهد ابوقيلة -العجيلات	Open		Primary Health Unit	14																						0
1299	770208	West	Zwara	Al Ajaylat	المركز الصحي الجديدة -العجيلات	Open		Primary Health Center	141						X	X							X								3
1300	770209	West	Zwara	Al Ajaylat	المركز الصحي الفريخ -العجيلات	Open		Primary Health Unit	23																						0
1301	770210	West	Zwara	Al Ajaylat	المركز الصحي جلد الجعاده -العجيلات	Open		Primary Health Unit	16																						0
1302	770211	West	Zwara	Al Ajaylat	المركز الصحي السونية -العجيلات	Open		Primary Health Unit	8																						0
1303	770212	West	Zwara	Al Ajaylat	المركز الصحي السندرة -العجيلات	Open		Primary Health Unit	41																						0
1304	770213	West	Zwara	Al Ajaylat	المركز الصحي النصر -العجيلات	Open		Primary Health Center	292			X	X		X	X							X								5
1305	770214	West	Zwara	Al Ajaylat	المركز الصحي ساتية خملج -العجيلات	Open		Primary Health Unit	58																						0
1306	770215	West	Zwara	Al Ajaylat	المركز الصحي العجيلات المدينة -العجيلات	Open		Primary Health Center	268			X				X							X								3
1307	730201	West	Zwara	Aljmail	المركز الصحي الجميل -الجميل	Closed	Under Maintenance	Primary Health Center																							
1308	730101	West	Zwara	Aljmail	وحدة الرعاية الصحية الصمود والتصدى -الجميل	Open		Primary Health Unit	128	2																		X			1
1309	730102	West	Zwara	Aljmail	وحدة الرعاية الصحية الدواودة -الجميل	Open		Primary Health Unit	111	5																X					1
1310	730103	West	Zwara	Aljmail	وحدة رعاية صبة ابوقرعة -الجميل	Open		Primary Health Unit	110	2																		X			1
1311	730104	West	Zwara	Aljmail	وحدة رعاية صحية جنان بن نصيب -الجميل	Open		Primary Health Unit	67	3			X												X	X	X				3
1312	730105	West	Zwara	Aljmail	وحدة الرعاية الصحية ام عزيز -الجميل	Open		Primary Health Unit	33	3																	X				1
1313	730106	West	Zwara	Aljmail	وحدة الرعاية الصحية العقرية -الجميل	Open		Primary Health Unit	135	5																X	X	X	X		3
1314	730107	West	Zwara	Aljmail	وحدة الرعاية الصحية ابو نوار -الجميل	Open		Primary Health Unit	50	2					X	X											X	X	X		4
1315	730108	West	Zwara	Aljmail	وحدة الرعاية الصحية حمدة -الجميل	Open		Primary Health Unit	221	3																	X	X			2
1316	730109	West	Zwara	Aljmail	وحدة الرعاية الصحية المنتشية الغربية -الجميل	Open		Primary Health Unit	125	1																	X				1
1317	730110	West	Zwara	Aljmail	وحدة الرعاية الصحية ابوطينة -الجميل	Open		Primary Health Unit	127	1																	X				1
1318	730202	West	Zwara	Aljmail	المركز الصحي ابو عرادة -الجميل	Open		Primary Health Center	145	8					X	X							X			X	X	X	X		7



N	Facility number	Region	District	Municipality	Facility full name	Facility Status	Closure reason	Type of facility	Total staff employed	Number inpatient beds	Number of maternity beds	Family planning services	ANC services	Delivery services	Immunization services	Preventative and curative	HIV counselling and testing	STI services	Leishmaniasis skin	Leishmaniasis internal	Bruceellosis diagnostics	NCD services	Treatment for mental	Surgical services	Blood transfusion services	Diagnostic testing	Diagnostic imaging	Stocks medicines, vaccines	Dental health care	Number of services		
1319	730203	West	Zwara	Aljmail	المركز الصحي الوطنية -الجميل	Open		Primary Health Center	75	4																				2		
1320	730204	West	Zwara	Aljmail	المركز الصحي جناب بن نصيب الشرقي -الجميل	Open		Primary Health Center	136	8		X													X		X	X		5		
1321	730205	West	Zwara	Aljmail	المركز الصحي بئر الحلو -الجميل	Open		Primary Health Center	252	1	2			X	X											X	X	X		5		
1322	730206	West	Zwara	Aljmail	المركز الصحي ام حبيش -الجميل	Open		Primary Health Center	184	6				X													X	X		3		
1323	730207	West	Zwara	Aljmail	المركز الصحي المكنن -الجميل	Open		Primary Health Center	95	1					X												X			3		
1324	730311	West	Zwara	Aljmail	العيادة المجمعة -الجميل	Open		Polyclinic	92	8																				0		
1325	970103	West	Zwara	Baten Aljabal	وحدة رعاية العجمية حياطن الجبل	Closed	Closed due to damage	Primary Health Unit																								
1326	970104	West	Zwara	Baten Aljabal	وحدة رعاية زيفزرا حياطن الجبل	Closed	Closed due to damage	Primary Health Unit																								
1327	970105	West	Zwara	Baten Aljabal	وحدة رعاية أم الفار/ تيجي حياطن الجبل	Closed	Closed due to damage	Primary Health Unit																								
1328	970106	West	Zwara	Baten Aljabal	وحدة رعاية صحية الهيبيلية حياطن الجبل	Closed	Closed due to damage	Primary Health Unit																								
1329	970101	West	Zwara	Baten Aljabal	وحدة رعاية تندميرة حياطن الجبل	Open		Primary Health Unit	24																						0	
1330	970102	West	Zwara	Baten Aljabal	وحدة رعاية تيجي حياطن الجبل	Open		Primary Health Unit	35					X																	1	
1331	970201	West	Zwara	Baten Aljabal	مركز صحي اولاد طالب حياطن الجبل	Open		Primary Health Center	138					X	X						X	X		X							5	
1332	970202	West	Zwara	Baten Aljabal	مركز صحي تيجي حياطن الجبل	Open		Primary Health Center	169												X										1	
1333	970203	West	Zwara	Baten Aljabal	مركز صحي بئر حياطن الجبل	Open		Primary Health Center	201			X		X	X						X					X					5	
1334	970204	West	Zwara	Baten Aljabal	مركز صحي الجروش حياطن الجبل	Open		Primary Health Center																								
1335	740203	West	Zwara	Rigdaleen	المركز الصحي العسة بردالين	Closed	Not accessible	Primary Health Center																								
1336	740201	West	Zwara	Rigdaleen	المركز الصحي بردالين بردالين	Closed	Under Maintenance	Primary Health Center																								
1337	740101	West	Zwara	Rigdaleen	وحدة الرعاية الصحية التزقاز بردالين	Open		Primary Health Unit	107	6																	X				1	
1338	740102	West	Zwara	Rigdaleen	الوحدة الصحية التقدم بردالين	Open		Primary Health Unit	94	3																	X	X			2	
1339	740103	West	Zwara	Rigdaleen	وحدة الرعاية الصحية مخلب بردالين	Open		Primary Health Unit																								
1340	740104	West	Zwara	Rigdaleen	وحدة الرعاية الصحية رأس عطية بردالين	Open		Primary Health Unit	36	1																		X			1	
1341	740202	West	Zwara	Rigdaleen	المركز الصحي السبخة بردالين	Open		Primary Health Center	468	4											X				X		X	X	X		4	
1342	750202	West	Zwara	Ziltun	مركز صحي الأوتاد زلطن	Closed	Under Maintenance	Primary Health Center																								
1343	750101	West	Zwara	Ziltun	وحدة الرعاية الصحية الطويلة زلطن زلطن	Open		Primary Health Unit	264	2				X											X							2
1344	750102	West	Zwara	Ziltun	وحدة الرعاية الصحية طويلة الغزالة زلطن	Open		Primary Health Unit	50																			X			1	
1345	750103	West	Zwara	Ziltun	وحدة الرعاية الصحية الأوتاد زلطن	Open		Primary Health Unit	19	3																	X				1	
1346	750201	West	Zwara	Ziltun	المركز الصحي زلطن زلطن	Open		Primary Health Center	168	1					X							X			X		X	X			5	
1347	7501050	West	Zwara	Ziltun	وحدة الرعاية الصحية الرفيقة زلطن	Open		Primary Health Unit	17																							0
1348	7596050	West	Zwara	Ziltun	وحدة رعاية الامومتر الطفولة زلطن	Open		Primary Health Unit	16	3	3			X																		1
1349	760103	West	Zwara	Zwara	وحدة الرعاية الصحية رأس حديد زوارة	Closed	Under Maintenance	Primary Health Unit																								
1350	760101	West	Zwara	Zwara	الوحدة الصحية البركة زوارة	Open		Primary Health Unit	289																							0
1351	760102	West	Zwara	Zwara	الوحدة الصحية جدي ابراهيم زوارة	Open		Primary Health Unit	104			X										X										2
1352	760104	West	Zwara	Zwara	وحدة الرعاية الصحية زوارة زوارة	Open		Primary Health Center	31					X								X										2
1353	760202	West	Zwara	Zwara	المركز الصحي زوارة الجنوبي زوارة	Open		Primary Health Center	130													X										1
1354	760204	West	Zwara	Zwara	المركز الصحي أبو كمش زوارة	Open		Primary Health Center	75						X	X						X	X									4
1355	760301	West	Zwara	Zwara	العيادة المجمعة زوارة زوارة	Open		Polyclinic	159								X					X			X	X		X			5	

## OTHER FACILITIES

N	Facility number	Region	District	Municipality	Facility full name	Facility Status	Closure reason	Type of facility	Urban	Rural	N staff employed	N inpatient beds	N maternity beds	Ambulance	ANC	PMTCT	Delivery	Immunization	Child health	HIV C&T	ARV	HIV care and support	STI	Tuberculosis	Malaria	Leishmaniasis	Bruceellosis diagnostics	NCD	Surgical	Blood transfusion	Diagnostic testing	Diagnostic imaging	Stock medicines	Dental health	N services offered	
1	270801	Benghazi	Alkufra	Alkufra	المركز الوطني لمكافحة الامراض الكفرة -الكفرة	Closed	Not accessible	NCDC Branches																												
2	271101	Benghazi	Alkufra	Alkufra	جهاز الإسعاف و الطوارئ -الكفرة	Open		Ambulance Service Center	Urban		6		X																							1
3	270901	Benghazi	Alkufra	Alkufra	مركز غسيل كلى - الكفرة -الكفرة	Open		Dialysis Center	Urban		9																	X								1
4	271001	Benghazi	Alkufra	Alkufra	الإمداد الطبي -الكفرة	Open		Medical Supply Warehouse	Urban		24																						X			1
5	261101	Benghazi	Alkufra	Tazirbu	جهاز الإسعاف و الطوارئ -تازربو	Open		Ambulance Service Center	Urban		9		X																							1
6	261001	Benghazi	Alkufra	Tazirbu	الإمداد الطبي -تازربو	Open		Medical Supply Warehouse	Urban		6																					X				1
7	211101	Benghazi	Al Wahat	Aujala	جهاز الإسعاف و الطوارئ -اوجل	Open		Ambulance Service Center	Urban		28		X																							1









Facility number	Region	District	Municipality	Facility full name	Facility Status	Closure reason	Type of facility	Urban	Rural	N staff employed	N inpatient beds	N maternity beds	Ambulance	ANC	PMCT	Delivery	Immunization	Child health	HIV C&T	ARV	HIV care and support	STI	Tuberculosis	Malaria	Leishmaniasis	Brucellosis diagnostics	NCD	Surgical	Blood transfusion	Diagnostic testing	Diagnostic imaging	Stock medicines	Dental health	N services offered		
176	West	Azzawya	Surman	جهاز الإسعاف والطوارئ حصرمان	Open		Ambulance Service Center	Urban		40																								2		
177	West	Azzawya	Surman	عيادة الأسنان المركزية حصرمان - حصرمان	Open		Dental Clinic	Urban		68			X																					0		
178	West	Azzawya	Surman	مركز غسيل كلوي - حصرمان - حصرمان	Open		Dialysis Center	Urban		43									X							X					X			4		
179	West	Azzawya	Surman	الإمداد الطبي حصرمان	Open		Medical Supply Warehouse	Urban		23																								1		
180	West	Azzawya	Surman	مختبر مركزي - حصرمان - حصرمان	Open		Referral Medical Laboratory	Urban		12																								0		
181	West	Nalut	Daraj	جهاز الإسعاف والطوارئ حرج	Open		Ambulance Service Center	Urban		15			X																					1		
182	West	Nalut	Daraj	الإمداد الطبي حرج	Open		Medical Supply Warehouse	Urban		33																				X				1		
183	West	Nalut	Daraj	المركز الوطني لمكافحة الأمراض درج حرج	Open		NCDC Branches	Urban		12												X	X						X	X				4		
184	West	Nalut	Ghadamis	جهاز الإسعاف والطوارئ - غدامس	Open		Ambulance Service Center	Urban		3			X																					1		
185	West	Nalut	Ghadamis	المركز الوطني لمكافحة الأمراض غدامس - غدامس	Open		NCDC Branches	Urban		18													X						X	X				3		
186	West	Nalut	Jadu	جهاز الإسعاف والطوارئ حادو	Open		Ambulance Service Center	Urban		22			X																					1		
187	West	Nalut	Jadu	مركز غسيل كلوي - حادو - حادو	Open		Dialysis Center	Urban		10															X									1		
188	West	Nalut	Jadu	الإمداد الطبي حادو	Open		Medical Supply Warehouse	Urban		8																X								0		
189	West	Nalut	Kabaw	جهاز الإسعاف والطوارئ كاباتو	Open		Ambulance Service Center	Urban		14			X																					1		
190	West	Nalut	Kabaw	الإمداد الطبي كاباتو	Open		Medical Supply Warehouse	Urban		8																									0	
191	West	Nalut	Nalut	جهاز الإسعاف والطوارئ خنالسوت	Open		Ambulance Service Center	Urban		8			X																						1	
192	West	Nalut	Nalut	الإمداد الطبي خنالسوت	Open		Medical Supply Warehouse	Urban		24																									0	
193	West	Nalut	Nalut	المركز الوطني لمكافحة الأمراض نالوت - خنالسوت	Open		NCDC Branches	Urban		8													X						X	X					3	
194	West	Zwara	Al Ajaylat	الإمداد الطبي المعجلات	Open		Medical Supply Warehouse	Rural		53																									0	
195	West	Zwara	Aljmail	جهاز الإسعاف والطوارئ - الجميل	Open		Ambulance Service Center			46			X																						1	
196	West	Zwara	Aljmail	الإمداد الطبي الجميل	Open		Medical Supply Warehouse			0																										0
197	West	Zwara	Baten Aljabal	مركز غسيل كلوي - تبجي - بطن الجبل	Open		Dialysis Center	Urban		14															X			X	X						3	
198	West	Zwara	Baten Aljabal	الإمداد الطبي - بطن الجبل	Open		Medical Supply Warehouse	Urban		112																				X					1	
199	West	Zwara	Ziltun	جهاز الإسعاف والطوارئ - زلطن	Open		Ambulance Service Center			46			X																						1	
200	West	Zwara	Ziltun	الإمداد الطبي - زلطن	Open		Medical Supply Warehouse			5																					X				1	
201	West	Zwara	Zwara	عيادة الأسنان المركزية - زوارة	Open		Dental Clinic	Urban		170																									1	
202	West	Zwara	Zwara	مركز غسيل كلوي - زوارة - زوارة	Open		Dialysis Center	Urban		23									X							X		X	X						4	
203	West	Zwara	Zwara	الإمداد الطبي - زوارة	Open		Medical Supply Warehouse	Urban		6																					X				1	
204	West	Zwara	Zwara	المركز الوطني لمكافحة الأمراض زوارة - زوارة	Open		NCDC Branches	Urban		16													X						X	X					3	

Annex II: 2017 Population estimates per district, Libya

<b>District</b>	<b>Male</b>	<b>Female</b>	<b>Total</b>
<i>Al Wahat/Ajdabia</i>	101,938	100,715	202,653
<i>Alkufra</i>	26,824	26,961	53,785
<i>Benghazi</i>	376,251	361,542	737,793
<i>Al Betnan</i>	96,232	95,182	191,414
<i>Al Jabal Al Akhdar</i>	122,154	120,819	242,973
<i>Darnah</i>	98,380	97,699	196,079
<i>Almarj</i>	110,279	109,929	220,208
<i>Sirt</i>	81,218	80,701	161,919
<i>Aljufra</i>	28,876	28,324	57,200
<i>Misratah</i>	317,987	310,298	628,285
<i>Almargeb</i>	257,215	252,937	510,152
<i>Al Jifarah</i>	267,017	257,188	524,205
<i>Tripoli</i>	601,709	573,960	1,175,669
<i>Azzawya</i>	175,939	170,934	346,873
<i>Zwara</i>	172,392	169,663	342,055
<i>Al Jabal Al Gharbi</i>	177,762	173,211	350,973
<i>Nalut</i>	53,170	51,739	104,909
<i>Wadi Ashati</i>	45,264	45,687	90,951
<i>Sebha</i>	80,269	77,293	157,562
<i>Wadi Al Haya</i>	44,739	43,154	87,893
<i>Murzuq</i>	44,650	45,341	89,991
<i>Ghat</i>	13,440	13,466	26,906
<b>Total</b>	<b>3,293,705</b>	<b>3,206,743</b>	<b>6,500,448</b>

Source: Bureau of Statistics, Libya

### Annex III: Standard humanitarian place codes (P-codes) and alternative district names

<b><i>District names used in this report</i></b>	<b>P-code</b>	<b>District name used by OCHA</b>	<b>Alternative district names used elsewhere</b>
<i>Al Wahat/Ajdabia</i>	LY0105	Ejdabia	
<i>Alkufra</i>	LY0107	Alkufra	Al Kufrah
<i>Benghazi</i>	LY0103	Benghazi	
<i>Al Betnan</i>	LY0104	Tobruk	Tubrag, Tobrag
<i>Al Jabal Al Akhdar</i>	LY0106	Al Jabal Al Akhdar	
<i>Darnah</i>	LY0101	Derna	Darnah
<i>Almarj</i>	LY0102	Almarj	Al Marj
<i>Sirt</i>	LY0208	Sirt	Surt
<i>Aljufra</i>	LY0317	Aljufra	Al Jufrah
<i>Misratah</i>	LY0214	Misrata	
<i>Almargeb</i>	LY0210	Almargeb	Al Margab
<i>Al Jifarah</i>	LY0212	Aljfara	Al Jifarahh
<i>Tripoli</i>	LY0211	Tripoli	
<i>Azzawya</i>	LY0213	Azzawya	Az Zawiyah, Azzawya, Zawiyah
<i>Zwara</i>	LY0215	Zwara	Western Area, An Niquat Al Khums
<i>Al Jabal Al Gharbi</i>	LY0216	Al Jabal Al Gharbi	
<i>Nalut</i>	LY0209	Nalut	
<i>Wadi Ashati</i>	LY0318	Wadi Ashati	Ash Shati, Al Shati
<i>Sebha</i>	LY0319	Sebha	Sabha
<i>Wadi Al Haya</i>	LY0320	Ubari	
<i>Murzuq</i>	LY0322	Murzuq	
<i>Ghat</i>	LY0321	Ghat	

## Annex IV: Surveyors for Hospitals and Primary Health Care Facilities

	Names		Names
1	Dr Ibrahim Ali Mohamed Jebail	16	Dr Ali Zaied Najei
2	Dr Hatem Mohamed Mansoor Elhaf	17	Dr Guma Ali Abdulghader
3	Dr Marwan T A Alsari	18	Dr Mohamed Younis Alshlmani
4	Dr Monder Saed Moujrani	19	Dr Nasreen Maylud Alaokly
5	Dr Ali Masoud Ahmed Jirnaz	20	Dr Samer Guma Alfalah
6	Dr Wiled Masaud A M	21	Dr Salahaldeen Ali Guala
7	Dr Muftah Mahmud Mansour Altaw	22	Dr Salem Mohamed Rafee
8	Dr Salem Mohamed S Asakali	23	Dr Nada Mohamed Eltarhuni
9	Dr Salem A A Fkrana	24	Dr Mudsa Basher Abdulghader
10	Dr Waseem Mohammed Adim	25	Dr Ahmed Almabrok Ali
11	Dr Tamer M Abdelsaid Ahmed	26	Dr Mahmud Abdullah Altayb
12	Dr Saah M E Elgebaly	27	Dr Mohamed Faraj Swan
13	Dr MUHANAD A ALSANUSI	28	Dr ABDLRAHEM A ABDLRHEM SOLAMAN
14	Fatma Mohamed Salem Elzawi	29	Dr SALIM MAWLOUD ALI JUBAYL
15	Dr Fathi Mohamed Elzwawi		

	Names		Names
1	Abdlrahem AAbdlrhem Solaman	39	Mohamed Jamaledeen Almajdoob
2	Albasheer Ayad Mohammed Iqas	40	Abubaker Alhadi Suasi
3	Ali Almahjoub Bin Halash	41	Ahmed Ismael Suasi
4	Ali Mohamed Ali Ehmidia	42	Isaldeen Mohamed Addullah
5	Alsalueen Alnaehom	43	Hasan Mohamed Almabrok
6	Amhimmid Mahjoub Aboulqassim	44	Ali Mohamed Salem Marset
7	Atia Faraj Yousif	45	Salma Sulyman Altajuri
8	Atiat Allah Ali Musa	46	Hazem Sulyman Nabus
9	Gaith Abdrabah Abubaker	47	Amina Idrees Alhuni
10	Hafith Arhaym Mohammed Jeedullah	48	Abdulbaset Amhamed Auhada
11	Ibrahim Ammar S Bin Omar	49	Zaina Abuzaid Moamar
12	Ibrahim Omar Algntrari	50	Saed Agela Mohamed
13	Jumma Khalleefah Qidarrah	51	Ali Salem Addullah
14	Khalafallah Aboyouf Khalafallah	52	Abdaldhem Salama Basher
15	Khalleefah Ali Kaljatlawi	53	Jalal Ahmed Addullah
16	Khamis Aissa Khelifa Alrani	54	Sulyman Altwati Mohamed
17	Majda Faraj Alzaidi	55	Nasreen Maylud Alaokly
18	Moftah Omran Abdulkarm Ashour	56	Elfaturi Mohamed Trooq
19	Mohamed Ali Elhadi Badawi	57	Abdulmajeed Mohamed Ali Ahsna
20	Mohammed Hasan Alshkham	58	Moftah Mohamed Alhamali
21	Muftah Abdalaziz Omar	59	Alsonossi Ali Hussein
22	Muftah Saad Alwarad	60	Abdulsalam Masoud Mokhtar
23	Nourdhalam Mohamad Koroghei	61	Abdullrazag Mohamed Basher
24	Osama Ahmad Abdalazizi	62	Mohamed A Omar Nasr
25	Rajab Saeid Miftah Mashathi	63	Mahmud Alsghear Alhadi
26	Ramadan Jouma Mohamed	64	Abulgasem Mohamed Alamani
27	Adel Abdulselm Alkelani	65	Faisal Basher Blead
28	Salem Abdalnaser Mohamed	66	Saad Bushnaef Adem
29	Salm Abdulqadr Jadaalah Sulayman	67	Ali Abdulgader Mohamed
30	Samer Farag Ibrahhem Ben Rezk	68	Altuhami Saleh Abdulgader
31	Sulayman Emran Almanfi	69	Hussam Alghatos
32	Sumeia Ibrahim Mohamed Elmahdawi	70	Tufeeq Mostafa Guma
33	Waleed Ali Ayad Due	71	Altaher Khalefa Taroom
34	Saad Salem	72	Sharaf Aldeen Abdulsalam Irabi
35	Yousuf Wannas Amhimid Tababh	73	Ayman Beghasm Rashed
36	Khaled Elhemali	74	Yosef Altamami
37	Ahmed Almabrok Ali	75	Kholud Amar Salama
38	Mabroka Alnajeh Abosaa		