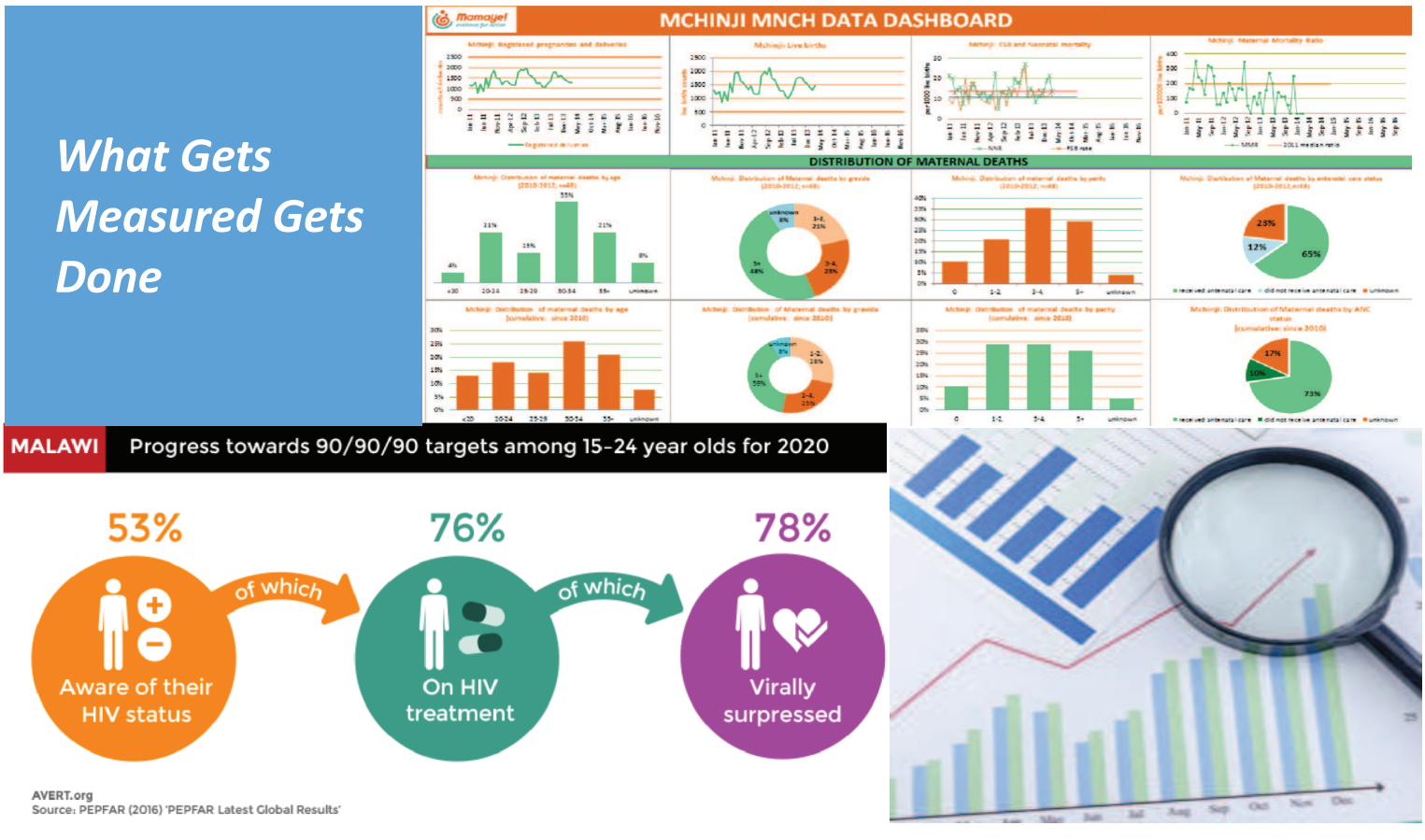
MINISTRY OF HEALTH AND POPULATION

National Health Indicators Handbook
for
Monitoring Health Sector Perfomance



June 2018

MINISTRY OF HEALTH AND POPULATION

National Health Indicators Handbook for Monitoring Health Sector Performance

Towards Universal Health Coverage

June 2018

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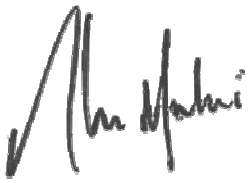
FOREWORD

As part of the 2017-2022 Health Sector Strategic Plan II (HSSP II) towards Universal Health Coverage (UHC), Malawi released an updated set of National Health Indicators and accompanying targets. These indicators support monitoring for the Ministry of Health and Population (MoHP)'s five-year strategic plan. They were developed as part of a consultative process, led by the Central Monitoring and Evaluation Division (CMED) that included all Departments and Programmes of the Ministry.

The new National Health Indicators update a previous list of 110 National Health Indicators released in 2003. The current list was adapted taking into consideration the current Malawi MoHP priorities as outlined in the HSSP II, the WHO Global Reference List of 100 Core Health Indicators, and the Sustainable Development Goals. In addition, every effort was made to create a streamlined high-level list of indicators to allow the MoHP to focus on tracking impact on its key priorities. Beyond this list, CMED will continue working with Departments to define additional programme-level indicators to enable additional monitoring at tactical and operational levels.

Recognizing the strengths and limitations of every data source, the updated National Health Indicators leverage both routine and survey data. While survey measures are sometimes thought to be more reliable than HMIS measures, the MoHP recognizes the importance of utilizing routine HMIS data, in order to strengthen routine data systems, provide frequent opportunities to monitor progress, and allow for facility- and district-level data. Leveraging multiple data sources also allows for greater opportunities for data validation and interpretation.

The indicator matrix included in the HSSP II provided a list of indicators including targets, baselines, and data sources. This indicator handbook serves as a companion to the matrix, providing much more detailed information including calculations, DHIS2 programming information, rationales, and interpretations. It is a working document, which will require regular updates to accommodate ongoing HMIS developments. The goal of this handbook is to ensure that all stakeholders in Malawi – MoHP/CMED, MoHP Departments and Programmes, districts and facilities, development partners, and others – have a common understanding of how the National Health Indicators are measured, calculated, and interpreted. This will improve the quality, utility, and ultimate impact of the data – allowing for greater clarity and harmonization in improving the health of Malawi and evaluating progress toward the goals set out in the HSSP II.



Honourable Atupele Muluzi, MP
Minister of Health and Population
June 2018

ACKNOWLEDGEMENTS

This handbook is a result of a long and complex process of intensive internal and external iterative consultations, drafting and review involving many Ministry of Health and Population (MoHP) departments and programmes, Development Partners and other government ministries, departments and institutions.

The Ministry expresses its profound gratitude to all Departments and Programmes who contributed to the successful completion of this handbook. The efforts required to coordinate all input, and put together vital pieces of information, comments, criticisms and suggestions, have not gone unnoticed.

We also would like to acknowledge and thank all Development Partners that provided funds and technical support towards this process. Specifically, we wish to thank Bloomberg Philanthropies through the Bloomberg Data for Health Initiative (www.bloomberg.org), implemented by Vital Strategies and CDC Foundation; GIZ through the Malawi German Health Programme; and the Fulbright Public Policy Fellowship, U.S. Department of State; for spearheading the work involved in outlining strategic objectives of the handbook and defining indicators, including facilitation of discussions, documentation of the handbook, and publication of the same. Furthermore, we acknowledge support of WHO in guiding the alignment of these indicators to the SDGs and the WHO Global Reference List of 100 Core Health Indicators while keenly taking into consideration national priorities, as well as the Health Data Collaborative for encouraging partner engagement throughout the process. We also acknowledge support by DFID through their support of HSSP II development, BMGF and the Kuunika project for reviewing the proposed list to ensure completeness for monitoring and evaluating HSSP II, and the USAID-funded HP+ project for general technical advisory input in the definition process.

Finally, the Ministry would like to acknowledge with gratitude, the support it receives from many other Partners and Donors, too numerous to mention who continue to provide financial and technical support for the improvement of the health status of the people of Malawi.

Dr Dan Namarika
Secretary for Health and Population
June 2018

General guide for interpreting data from the Health Management Information System (HMIS)

The Ministry uses a comprehensive and integrated Health Management Information System (HMIS) to collect and report on routine health services and disease data, in facilities and in communities. Data is recorded in specially designed registers as health workers are providing services. At the end of each month, data from the registers are compiled, aggregated and reported on a monthly basis using both programme-specific reports (e.g. Maternity, ANC, etc.) and composite reports (HMIS 15 for health centres and hospitals; HMIS 17 for central hospitals).

Epidemiology is the study and analysis of the patterns, causes, and effects of health and disease conditions in defined populations. It relies on careful interpretation to control for biases inherent in data collection and information systems. This general interpretation guide provides an overview of some of the most common biases and guidelines for interpreting data drawn from the HMIS. Further, for each indicator within the full document, whether HMIS-based or survey-based, additional interpretation guidance is given.

Challenges with using HMIS-based indicators to estimate population prevalence or incidence
All HMIS-based indicators depend on the quality and completeness of reporting. Using HMIS-based indicators to measure prevalence and/or incidence in the population will likely lead to underestimation, limited by data capture rates, reporting rates, healthcare seeking behaviours, and healthcare access.

Current HMIS-based Indicator Baselines
Baselines for the HMIS-based indicators are calculated using both HMIS 15 and programme-specific reports when available. Differences in reporting rates result in varying baseline values; reporting rates are shown for context. While the reporting rate for HMIS 15 is roughly 95%, reporting rates for programme-specific reports vary widely. As coverage for each programme report reaches 80%, those programme data elements will be removed from HMIS 15 and will be only included in the programme reports. Eventually indicators will be calculated using programme reports only, nonetheless it will remain important to consider reporting rates.

Population-based estimates for HMIS-based indicators
Many of the HMIS-based indicators currently rely upon population estimates for denominators. The accuracy of these indicators depends on the accuracy of the population estimates. These estimates are most likely to be accurate soon after a census but decrease in accuracy over time. They are also less accurate for small geographic areas. Inaccuracies in estimating the population can lead to over or underestimates. For example, coverage rates of over 100% are possible if estimates of the target population are too low. These errors should be explored and corrected when possible.

Impact of under-reporting from both private and public health facilities
While private health facilities are supposed to report into the HMIS system, the degree to which this happens is inconsistent; the same is sometimes true for public facilities. Central hospital reporting, through HMIS 17, is also under development. When an HMIS-based indicator aims to assess disease occurrence in the general population (e.g. malaria incidence) or coverage of a service in the general population (e.g. immunization), under-reporting from facilities will likely lead to lower estimates. The denominator will be based on population projections for the entire population, but the numerator will only include what is captured in HMIS reports. Reporting rates give an indication of the degree of under-estimating.

For example, if the indicator looks at the quality of care among those who attend facilities (e.g. IPTp >3 times during ANC), the indicator will be representative only of those facilities reporting and not necessarily all

women who have had an ANC visit. Similarly, if road traffic deaths are presented per 100,000 in the population, but reporting rates are low, then the indicator likely represents a proportionately low estimate. As reporting from both private and public facilities improves, this will no longer be a limitation.

Impact of the use of Malawi health facilities by people of other nationalities
Eighteen of Malawi's twenty-eight districts border either Mozambique, Zambia, or Tanzania. As a result, not everyone who seeks care in Malawi's health facilities is Malawian. This may lead to the overestimation of both disease and healthcare coverage for Malawians as individuals from neighbouring countries may receive care and thus be included in the numerator, while they will not be captured in the population projections used as the denominator. In addition to the likelihood of overestimates, rates over 100% are possible in this situation.

In summary, several biases may lead to underestimates, overestimates, or may have little effect. Also, several factors may influence estimates simultaneously, with sometimes differing effects. These potential biases, and others, should be taken into consideration when interpreting each indicator for which they apply.

Description of information included for each indicator

Unique Identifier (code)	All indicators will be assigned a code which references the programme.
Indicator name	A brief description of the indicator gives a general sense of what is being measured.
Indicator Definition	A detailed description of the indicator. After reading the definition, you should understand what the indicator is measuring and what units it uses (e.g. percent, per 1,000 live births).
Alignment (HSSP I; Global 100; SDG)	This indicates whether this indicator (or a similar one) was part of HSSP I, the WHO Global Reference List of 100 Core Health Indicators, or the Sustainable Development Goals.
Numerator	A detailed description of the numerator.
Numerator source (primary; reporting form)	Source of information for the numerator. If a survey, it should specify which one(s). If from the HMIS system, this will give both the register(s) and the reporting form(s).
Denominator	A detailed description of the denominator.
Denominator source	Source of information for the denominator.
Method of calculation	The simple description of the calculation used to produce the indicator.
Calculation (HMIS)	This is only relevant for indicators available in DHIS 2. This section states how the indicator should be calculated within DHIS 2. In many cases, there may be several data elements, stemming from parallel reporting systems, which could be chosen for each necessary variable within the calculation. This section will list the names of the preferred forms and data elements, providing consistent guidance to DHIS 2 programmers and stakeholders. This ensures indicators are programmed according to calculations, and with specific data elements, that are standard and transparent.
Lowest administrative level	This is the lowest administrative unit (health facility, district, region, national) recommended for disaggregation that should be measured as part of the national health indicator process. (Note that while facility-level data and disaggregation is possible for many coverage indicators, it may not be recommended for this process.)
Disaggregation	Aside from administrative level, how the indicator should be disaggregated, e.g. by age, by sex, etc.
Reporting frequency	The frequency with which the indicator should be measured as part of the national health indicator process. (Note: survey indicators cannot be measured more frequently than the survey is conducted; HMIS indicators may be collected monthly, but as part of the national health indicator process, it is recommended to report them annually unless there is clear reason to track them more frequently.)
Rationale	The reason this indicator is important to monitor.
Notes for interpretation	Provides information useful to understanding what the values of the indicator means. Includes quality issues and other potential biases. This is supplemented by general guidance on interpreting HMIS indicators.
Custodian of the indicator	Department or Programme responsible for the indicator. Although multiple departments/programmes may have an interest in, or contribute to, a specific indicator; the custodian has the overall responsibility to solicit feedback from all invested programmes and stakeholders and to coordinate their input, approve revisions to the indicator, and set targets. Other programmes may initiate changes through the custodian.

M&E framework level	Input, output, outcome or impact indicator.
Baseline / recent estimates	The most recent available data on an indicator. For indicators that have baseline values available from multiple sources, several sources are shown to provide more context.
Targets (2018; 2020; 2022)	Targets, set by the custodian, for the years 2018, 2020, and 2022, within HSSP II implementation. It is recommended that targets should be ambitious but achievable. *Some targets reported in the National Health Indicator handbook differ from those reported in the original HSSP II report due to updates available between the launch dates.

1. Child health indicators

Unique Identifier (code)	CHD01N
Indicator name	Children under five years of age with diarrhoea receiving oral rehydration salts (ORS) packets (survey-based)
Indicator Definition	Percentage of children under five with diarrhoea in the past two weeks receiving oral rehydration salts (ORS) packets
Alignment (HSSP I; Global 100; SDG)	No; Yes; No
Numerator	Number of children under five years with diarrhoea in the past two weeks receiving ORS
Numerator source (primary; reporting form)	Survey (DHS, MICS)
Denominator	Number of children under 5 years with diarrhoea in the past two weeks
Denominator source	Survey (DHS, MICS)
Method of calculation	Numerator/Denominator*100
Calculation (HMIS)	NA
Lowest administrative level	District
Disaggregation	None
Reporting frequency	3 – 5 years
Rationale	Dehydration caused by severe diarrhoea is a major cause of morbidity and mortality among young children. Oral rehydration therapy is a simple and effective response to dehydration. Oral rehydration salts are pre-packaged mixtures of sodium and glucose designed to reduce the severity and length of illness.
Notes for interpretation	This indicator measures the proportion of mothers that treated their under five children suffering from diarrhoea with ORS solution. Mothers were asked if their child had a diarrhoea episode in the past two weeks, and, if so, whether the child was given ORS solution during the episode. The indicator may be influenced by recall bias. Further, mothers who have received education around ORS may feel social pressure (known as social desirability bias) to report using it regardless of actual behaviour. However, a positive trend in the indicator is indicative of correct knowledge and practice in mothers to treat diarrhoea with simple and effective means.
Custodian of the indicator	Child Health
M&E framework level	Outcome
Baseline / recent estimates	64.7% (DHS 2015-16) 63.5% (2014 MDG Endline/MICS)
Targets (2018; 2020; 2022)	70%; 79%; 2022 unavailable (Malawi Child Health Strategy 2014 – 2020)

Unique Identifier (code)	CHD02.1N
Indicator name	Percentage of under-1 year-old children fully immunised (survey-based)
Indicator Definition	Proportion of 12-23 month old children who received a vaccination against tuberculosis (BCG), two doses of Rotavirus vaccine (Rota), three doses of DPT-HepB-Hib (Penta), three doses of polio vaccine after the initial dose at birth (Polio III), three doses of pneumococcal conjugate vaccine (PCV), and one dose of measles vaccine, before 12 months of age.
Alignment (HSSP I; Global 100; SDG)	Yes; Yes; Yes
Numerator	Total number of children age 12 -23 months who have received all required under-one vaccinations as listed in the definition
Numerator source (primary; reporting form)	Survey (DHS, MICS)
Denominator	Total number of children from 12-23 months surveyed
Denominator source	Survey (DHS, MICS)
Method of calculation	Numerator / Denominator *100
Calculation (HMIS)	NA
Lowest administrative level	District
Disaggregation	None
Reporting frequency	3 to 5 Years
Rationale	Vaccination is one of the most cost-effective ways to improve child survival. Vaccine preventable diseases (targeted by the routine immunisation programmes) are major causes of childhood morbidity and mortality.
Notes for interpretation	The DHS survey uses children's health passports and other records to determine if children 12 -23 months received vaccinations before the survey, relying on properly filled health cards. When cards were not available (for 15% of children in the 2015 DHS), mothers were asked which vaccines their child had received and the number of doses of each, with potential for recall bias. Additionally, differences in the percentages of children without vaccination cards across survey years may impact the ability to compare survey results across years or populations. Similar methods were used for the MDG Endline/MICS Survey.
Custodian of the indicator	Child Health
M&E framework level	Outcome
Baseline / recent estimates	47.7% (DHS 2015 – 2016) 38.5% (2014 MDG Endline/MICS)
Targets (2018; 2020; 2022)	88%; 90%; 92%

Unique Identifier (code)	CHD02.2N
Indicator name	Percentage of under-1 year-old children fully immunised (HMIS-based)
Indicator Definition	Proportion of under-1 year-old children who received a vaccination against tuberculosis (BCG), two doses of Rotavirus vaccine (Rota), three doses of DPT-HepB-Hib (Penta), three doses of polio vaccine after the initial dose at birth (Polio III), three doses of pneumococcal conjugate vaccine (PCV), and one dose of measles vaccine, before 12 months of age.
Alignment (HSSP I; Global 100; SDG)	Yes; No; Yes
Numerator	Total number of children who have been fully immunised according to list in the definition during the first year of life
Numerator source (primary; reporting form)	Under 2 Register; EPI Health facility monthly vaccination performance and disease surveillance report or HMIS 15*
Denominator	Estimated under-1 midyear population
Denominator source	Target population form
Method of calculation	Numerator/Denominator *100
Calculation (HMIS)	*Numerator*: HMIS 15 (“HMIS # Fully Immunized under 1 Children”) Or *Numerator*: Vaccination Performance and Disease Surveillance (EPI) (“CHD EPI Children Under 1, Static” + “CHD EPI Fully Immunized Children Under 1, Outreach”) *Denominator*: Target Population (“CMED- Under 1 Population”) *The use of HMIS 15 for this indicator will be phased out when reporting rates for the EPI report exceed 80%.
Lowest administrative level	District
Disaggregation	None
Reporting frequency	Annual
Rationale	Vaccination is one of the most effective and cost-effective ways to improve child survival. Vaccine preventable diseases (targeted by the routine immunisation programmes) are major causes of childhood morbidity and mortality.
Notes for interpretation	This indicator is based upon the Malawian EPI program's definition of fully immunised, as outlined in the definition. Health services records are the ideal source of this indicator; however, given the current quality of reporting, survey results are likely more accurate. Underreporting from private and public clinics may alter estimates.* Healthcare utilisation by non-Malawians may result in higher estimates.* Accuracy of population estimate may bias results.* *See General Guidelines
Custodian of the indicator	Child Health
M&E framework level	Outcome
Baseline / recent estimates	63.9% (DHIS2, 2015, HMIS 15 dataset, 94.6% reporting rate) 42.5% (DHIS2, 2015, EPI dataset, 59.6% reporting rate)
Targets (2018; 2020; 2022)	88%; 90%; 92%

Unique Identifier (code)	CHD03.1N
Indicator name	Pentavalent III coverage (survey-based)
Indicator Definition	Proportion of 12-23 month old children that have received the last recommended dose for Pentavalent vaccine (Penta III) as recommended in the national schedule of vaccination before reaching 12 months of age
Alignment (HSSP I; Global 100; SDG)	Yes; Yes; No
Numerator	Number of surveyed children age 12 -23 months who have received the last (third) dose of pentavalent vaccine, before 12 months of age.
Numerator source (primary; reporting form)	Survey (DHS, MICS)
Denominator	Total number of children from 12-23 months surveyed
Denominator source	Survey (DHS, MICS)
Method of calculation	Numerator / Denominator * 100
Calculation (HMIS)	NA
Lowest administrative level	District
Disaggregation	Sex
Reporting frequency	3 -5 Years
Rationale	Immunisation is one of the most well-known and effective methods of preventing childhood diseases. Pentavalent vaccine protects children from 5 life-threatening diseases – Diphtheria, Pertussis, Tetanus, Hepatitis B and Haemophilus influenza type B (Hib). Each child is expected to receive 3 doses of pentavalent vaccine at 6, 10 and 14 weeks respectively. Penta III coverage is an indicator of access to, and utilisation and continuity of services at health facility level.
Notes for interpretation	Penta III coverage is an indicator of access to immunisation services. It is also used to indicate the continuity of vaccination services in a community. The DHS survey uses the child health passport and other records to determine if children 12 -23 months received vaccinations before the survey, relying on properly filled health cards. When cards were not available (for 15% of children in the 2015 DHS), mothers were asked which vaccines their child had received and how many doses of each, with potential for recall bias. Similar methods were used for the MDG Endline survey. Additionally, the percentage of children without vaccination cards may impact the ability to compare survey results across years or populations.
Custodian of the indicator	Child Health (EPI)
M&E framework level	Outcome
Baseline / recent estimates	91.9% (DHS 2015-16) 90.5% (2014 MDG Endline/MICS)
Targets (2018; 2020; 2022)	95%; 97%; 99%

Unique Identifier (code)	CHD03.2N
Indicator name	Pentavalent III coverage (HMIS-based)
Indicator Definition	Proportion of under-1 year-old children that have received the last recommended dose for Pentavalent vaccine (Penta III) as recommended in the national schedule of vaccination
Alignment (HSSP I; Global 100; SDG)	Yes; Yes; No
Numerator	Number of children under-1 of age that received the last dose (third dose) of pentavalent vaccine according to the recommended national schedule of vaccination
Numerator source (primary; reporting form)	Under 2 Register; Health Facility Monthly Vaccination and Disease Surveillance Report (EPI), or HMIS 15
Denominator	Estimated mid-year population under 1-year of age
Denominator source	Target population form
Method of calculation	Numerator / Denominator * 100
Calculation (HMIS)	Numerator: Vaccination Performance and Disease Surveillance (EPI) ("CHD EPI DPTHepBHib3 Childhood Vaccination Under 1, Static" + "CHD EPI DPTHepBHib3 Childhood Vaccination Under, Outreach") OR Numerator: HMIS 15 ("HMIS # of Under 1 Children Given Pentavalent - III") Denominator: Target Population ("CMED Under 1 Population") *The use of HMIS 15 for this indicator will be phased out when reporting rates for the EPI report exceed 80%.
Lowest administrative level	Health facility
Disaggregation	None
Reporting frequency	Annual
Rationale	Immunisation is one of the most well-known and effective methods of preventing childhood diseases. Pentavalent vaccine provides protection to a child from 5 life-threatening diseases – Diphtheria, Pertussis, Tetanus, Hepatitis B and Haemophilus influenza type B (Hib). Each child is expected to receive 3 doses of pentavalent vaccine at 6, 10 and 14 weeks respectively. Penta III coverage is an indicator of access, utilisation of services and continuity of services at health facility level
Notes for interpretation	Healthcare service records are the ideal source of this indicator; however, given the current quality of reporting, survey results are likely more accurate. Underreporting from private and public clinics may alter estimates.* Healthcare utilisation by non-Malawians may result in higher estimates.* Accuracy of population estimate may bias results.* *See General Guidelines
Custodian of the indicator	Child Health (EPI)
M&E framework level	Outcome
Baseline / recent estimates	66.3% (DHIS2, 2015; HMIS 15 dataset 94.6% reporting rate) 45.0% (DHIS2, 2015; EPI data set 59.6% reporting rate)
Targets (2018; 2020; 2022)	95%; 97%; 99%

Unique Identifier (code)	CHD04.1N
Indicator name	Percentage of 1-year-old children immunized against measles (survey-based)
Indicator Definition	Proportion of 12 to 23 month old children that have received at least one measles dose as recommended in the national schedule of vaccination
Alignment (HSSP I; Global 100; SDG)	Yes; Yes; No
Numerator	Number of surveyed children age 12 -23 months who have received measles vaccination, before 12 months of age.
Numerator source (primary; reporting form)	Survey (DHS, MICS)
Denominator	Total number of children from 12-23 months surveyed
Denominator source	Survey (DHS, MICS)
Method of calculation	Numerator / Denominator * 100
Calculation (HMIS)	NA
Lowest administrative level	District
Disaggregation	Sex
Reporting frequency	3 -5 Years
Rationale	Measles is a highly contagious disease that can lead to blindness, encephalitis, or death. Measles can be prevented with immunisation of children under the age of one. Measles vaccine is the last vaccine that children under 1 year of age receive before attaining fully immunised status. Its monitoring provides an opportunity to implement appropriate interventions to improve full immunisation coverage.
Notes for interpretation	The DHS survey uses child health passport and other records to determine if children 12 -23 months received vaccinations before the survey, relying on properly filled health cards. When cards were not available (for 15% of children in the 2015 DHS), mothers were asked which vaccines their child had received and how many doses of each, with potential for recall bias. Similar methods were used for the MDG Endline survey. Additionally, the percentage of children without vaccination cards may impact the ability to compare survey results across years or populations. Note: The measles-rubella vaccine was introduced in 2017, though data collection systems and DHIS2 have not yet been updated. Future indicator revisions should reflect this change.
Custodian of the indicator	Child Health (EPI)
M&E framework level	Outcome
Baseline / recent estimates	85.5% (DHS 2015-16) 85.1% (2014 MDG Endline/MICS)
Targets (2018; 2020; 2022)	93%; 95%; 97%

Unique Identifier (code)	CHD04.2N
Indicator name	Percentage of 1-year-old children immunized against measles (HMIS-based)
Indicator Definition	Proportion of under-1 year-old children that have received measles dose as recommended in the national schedule of vaccination
Alignment (HSSP I; Global 100; SDG)	Yes; Yes; No
Numerator	Number of children under-1 of age that received the first dose of measles vaccination according to the recommended national schedule of vaccination
Numerator source (primary; reporting form)	Under 2 Register; Health Facility Monthly Vaccination and Disease Surveillance Report (EPI), or HMIS 15
Denominator	Estimated mid-year population under 1-year of age
Denominator source	Target population form
Method of calculation	Numerator/Denominator * 100
Calculation (HMIS)	Numerator: Vaccination Performance and Disease Surveillance (EPI) ("CHD EPI Measles Childhood Vaccination Under 1, Static" + "CHD EPI Measles Childhood Vaccination Under 1, Outreach") OR Numerator: HMIS 15 ("HMIS # of Under 1 Children Given Measles 1st doses at 9M") Denominator: Target Population ("CMED Under 1 Population") *The use of HMIS 15 for this indicator will be phased out when reporting rates for the EPI report exceed 80%.
Lowest administrative level	District
Disaggregation	None
Reporting frequency	Annual
Rationale	Measles is a highly contagious disease that can lead to blindness, encephalitis or death. Measles can be prevented with immunisation of children under the age of one. Measles vaccine is the last vaccine that under-1 children receive before attaining fully immunised status. Its monitoring provides an opportunity to implement appropriate interventions to improve full immunisation coverage.
Notes for interpretation	In theory facility records are the ideal source of this indicator; however, given the current quality of reporting, survey results are likely more accurate. Note: The measles-rubella vaccine was introduced in 2017 and future revisions should reflect this change. Underreporting from private and public clinics may alter estimates.* Healthcare utilisation by non-Malawians may result in higher estimates.* Accuracy of population estimate may bias results.* *See General Guidelines
Custodian of the indicator	Child Health (EPI)
M&E framework level	Outcome
Baseline / recent estimates	64.0% (DHIS2, 2015; HMIS 15 dataset, 94.6% reporting rate) 44.3% (DHIS2, 2015; EPI dataset, 59.6% reporting rate)
Targets (2018; 2020; 2022)	93%, 95%, 97%

Unique Identifier (code)	CHD05.1N
Indicator name	Neonatal mortality rate (NMR) (survey-based)
Indicator Definition	Number of deaths during the first 28 days of life per 1000 live births in the last 5 years
Alignment (HSSP I; Global 100; SDG)	Yes; Yes; Yes
Numerator	Number of infants who died during the first 28 days of life in the 5 years preceding the survey
Numerator source (primary; reporting form)	Survey (DHS, MICS)
Denominator	Total number of live births to women surveyed in 5 years preceding the survey
Denominator source	Survey (DHS, MICS)
Method of calculation	Numerator / Denominator * 1,000
Calculation (HMIS)	NA
Lowest administrative level	District
Disaggregation	Age (≤ 7 days, >7 days); Sex
Reporting frequency	3 - 5 years
Rationale	Mortality during the neonatal period accounts for a large proportion of child deaths. They can be prevented by effective pre-pregnancy, antenatal, delivery and postnatal care to women and proper care to newborns. This indicator measures the quality of these services.
Notes for interpretation	Neonatal mortality rate is a measure of access to health care before pregnancy, and during pregnancy (ANC), delivery, and the postnatal period. As measured by the DHS survey, neonatal mortality rates cover the last 5 years and therefore may not reflect recent programmatic interventions. There may also be issues with recall bias, resulting in women giving the wrong timing of death and age misclassification. Additionally, given the sensitivity of these events, some may not choose to disclose information regarding neonatal deaths. As the civil registration system develops, this will become an ideal source of this indicator.
Custodian of the indicator	Child Health
M&E framework level	Impact
Baseline / recent estimates	27 per 1,000 live births (DHS 2015-16) 29 per 1,000 live births (2014 MDG Endline/MICS)
Targets (2018; 2020; 2022)	26 per 1,000; 24 per 1,000; 22 per 1,000

Unique Identifier (code)	CHD05.2N
Indicator name	Institutional neonatal mortality rate (HMIS-based)
Indicator Definition	Number of deaths during the first 28 completed days of life per 1000 live births, as reported in HMIS, in a given period.
Alignment (HSSP I; Global 100; SDG)	Yes; No; Yes
Numerator	Number of infants who died during the first 28 days of life in health facilities
Numerator source (primary; reporting form)	Maternity Register; Maternity Monthly Report (Note: This data is also captured in the Maternal and Neonatal Death Report)
Denominator	Total number of live births recorded in the same period in health facilities
Denominator source	Maternity register (Note: This data is also captured in HMIS 15)
Method of calculation	Numerator / Denominator * 1,000
Calculation (HMIS)	*Numerator*: Maternity Monthly Clinic Health Facility Report ("RHD MAT Newborn Survival/PMTCT Alive Neonatal Death ") *Denominator*: Maternity Clinic Monthly Reporting Form ("RHD MAT Newborn Survival/PMTCT Alive not HIV Exp + RHD MAT Newborn Survival/PMTCT Alive Exp no NVP + RHD MAT Newborn Survival/PMTCT Alive NVP Started + RHD MAT Newborn Survival/PMTCT Alive Unknown Exp + RHD MAT Newborn Survival/PMTCT Alive Neonatal Death") Or *Denominator:* HMIS 15 ("HMIS Total # of Live birth") + HMIS 17 Monthly Reporting Form ("HMIS 17 Live birth")
Lowest administrative level	Health facility
Disaggregation	None
Reporting frequency	Annual
Rationale	Mortality during the neonatal period accounts for a large proportion of child deaths. Some can be prevented by effective antenatal, delivery and postnatal care to women and proper care to newborns. This indicator measures the quality of these services at the facility level.
Notes for interpretation	The institutional neonatal mortality rate captures facility-based neonatal deaths only and gives an indication of the quality of care received during ANC, delivery, and the postnatal period. The neonatal period is 0-28 days, however infants are typically discharged within the first day or two of life and because deaths that occur after discharge are not captured, institutional neonatal mortality rates are expected to be less than population-based estimates. In addition, some neonatal deaths may be captured in either the Helping Babies Breathe or Kangaroo Mother Care registers that are not also included in the maternity register. Further, misclassification between stillbirths and neonatal deaths is common, and may also lead to underreporting of neonatal deaths. As data quality and care-seeking behaviour for sick neonates increase, observed neonatal mortality rates reported may actually increase. As the civil registration system develops, this will become an ideal source of this indicator. Comparing across facilities can be difficult as this indicator is affected by both the quality of care and the types of cases that are seen in the facility. For

	example, referral hospitals which offer a higher quality of care may still have a higher neonatal mortality rate because they see more complicated cases. Central Hospital Data (HMIS 17) currently limited within DHIS2. Underreporting from private and public clinics may alter estimates.* *See General Guidelines
Custodian of the indicator	Child Health
M&E framework level	Impact
Baseline / recent estimates	12.3 per 1,000 live births (DHIS2, 2015; neonatal deaths from maternity reporting form (95.6% reporting rate); live births from HMIS 15 and HMIS 17 (94.6% and 16.7% reporting rate respectively)
Targets (2018; 2020; 2022)	Targets have not been defined at this time. Targets may be set in the future.

Unique Identifier (code)	CHD06N
Indicator name	Infant mortality rate (IMR) (survey-based)
Indicator Definition	Probability of a child born in a specific year or period dying before reaching the age of one year, if subject to age-specific mortality rates of that period.
Alignment (HSSP I; Global 100; SDG)	Yes; Yes; Yes
Numerator	Number of infants who died before their first birthday in the five years preceding the survey
Numerator source (primary; reporting form)	Survey (DHS, MICS)
Denominator	Total number of live births in the five years preceding the survey to women surveyed
Denominator source	Survey (DHS, MICS)
Method of calculation	Numerator / Denominator * 1,000
Calculation (HMIS)	NA
Lowest administrative level	District
Disaggregation	Sex Age (Neonatal, Postneonatal)
Reporting frequency	3- 5 years
Rationale	Infant mortality rates measure child survival. They are impacted by the social, economic and environmental conditions in which children (and others in society) live and their access to health care. Further, they are easier to collect than data on specific disease incidence (morbidity) and are an important way to identify vulnerable populations.
Notes for interpretation	As measured by both the MICS and DHS surveys, infant mortality rates cover the last 5 years and may not reflect current rates. These data are often underestimates due to failure to recall or report deaths. Further, misclassification of age or age-heaping can occur, as mothers may misremember birthdays or be more likely to say that a child died at 12 months of age than 11.5 months. As the civil registration system develops, this will become an ideal source of this indicator.
Custodian of the indicator	Child Health
M&E framework level	Impact
Baseline / recent estimates	42 per 1,000 live births (DHS 2015-16) 53 per 1,000 live births (2014 MDG Endline/MICS)
Targets (2018; 2020; 2022)	40 per 1,000; 37 per 1,000; 34 per 1,000

Unique Identifier (code)	CHD07N
Indicator name	Under-five mortality rate (U5MR) (survey-based)
Indicator Definition	Probability of a child born in a specific year or period dying before reaching the age of five, if subject to age-specific mortality rates of that period
Alignment (HSSP I; Global 100; SDG)	Yes; Yes; Yes
Numerator	Number of deaths of children under five years in the five years preceding the survey
Numerator source (primary; reporting form)	Survey (DHS, MICS)
Denominator	Total number of live births in the five years preceding the survey to women surveyed
Denominator source	Survey (DHS, MICS)
Method of calculation	Numerator / Denominator * 1,000
Calculation (HMIS)	NA
Lowest administrative level	District
Disaggregation	Age (0-11 months; 1- 4 years)
Reporting frequency	3 - 5 years
Rationale	Child mortality (under 5 years of age) represents a large proportion of deaths under age 18, making it a very useful indicator of child survival and an important way to identify the most vulnerable groups. Under-five mortality rates are impacted by the accessibility of health care, education, poverty, and environmental risks such as safe water and sanitation.
Notes for interpretation	As measured by both the MICS and DHS surveys, under-5 mortality rates cover the last 5 years and may not reflect current rates. Under-5 mortality data from surveys is more reliable than infant mortality data because it is less impacted by age misclassification. As the civil registration system develops, this will become an ideal source of this indicator.
Custodian of the indicator	Child Health
M&E framework level	Impact
Baseline / recent estimates	64 per 1,000 live births (DHS 2015-16) 85 per 1,000 live births (2014 MDG Endline/MICS)
Targets (2018; 2020; 2022)	64 per 1,000; 55 per 1,000; 48 per 1,000

Unique Identifier (code)	CHD08N
Indicator name	Pneumonia incidence rate in children under-5 year old children
Indicator Definition	Proportion of under-5 children reported at the health facility with pneumonia per 1000 under-five population
Alignment (HSSP I; Global 100; SDG)	No; Yes; No
Numerator	Number of new cases of pneumonia reported among under 5 children
Numerator source (primary; reporting form)	OPD Register, Pneumonia Register, Sick Neonate Register, Ward Register
Denominator	Under 5 Population estimate
Denominator source	Target population form
Method of calculation	Numerator/Denominator x 100
Calculation (HMIS)	Not yet available in DHIS2
Lowest administrative level	District
Disaggregation	Sex
Reporting frequency	Annually
Rationale	According to the World Health Organization, pneumonia accounts for 16% of all deaths of children under 5 years old, making it the single largest infectious cause of death in children. However, pneumonia can be prevented through various activities, and early and accurate diagnosis and treatment can reduce mortality. Pneumonia can be prevented by immunisation, adequate nutrition, and by addressing environmental factors. Pneumonia caused by bacteria can be effectively treated with antibiotics.
Notes for interpretation	This indicator is affected by prevention strategies and diagnosis of pneumonia. Generally, as programme coverage and service quality increase, incidence of a disease will decrease; however, improved care seeking or diagnostic coverage may result in the appearance of increased incidence. An increase or decrease in incidence is mainly dependent on case load in the catchment area, availability and quality of service at a facility, access to services, and diagnostic methods. Central Hospital Data (HMIS 17) currently limited within DHIS2. Underreporting from private and public clinics may alter estimates.* Healthcare utilisation by non-Malawians may result in higher estimates.* Accuracy of population estimate may bias results.* *See General Guidelines
Custodian of the indicator	ARI (Child Health)
M&E framework level	Outcome
Baseline / recent estimates	Baseline not available.
Targets (2018; 2020; 2022)	Targets have not been defined. Targets may be set in the future.

2. Clinical services indicators

Unique Identifier (code)	CLIN01N
Indicator name	Essential health package (EHP) Coverage
Indicator Definition	The percentage of facilities that are able to deliver the EHP
Alignment (HSSP I; Global 100; SDG)	Yes; No; No
Numerator	Number of facilities meeting EHP standard
Numerator source (primary; reporting form)	Reports from departments implementing components of the EHP
Denominator	Total number of health facilities
Denominator source	SPA survey
Method of calculation	Numerator / Denominator * 100
Calculation (HMIS)	NA
Lowest administrative level	District
Disaggregation	Facility type, ownership
Reporting frequency	Annual
Rationale	One of the goals of the Ministry of Health and Population is to improve access and equity in health care services delivery. To achieve this, the ministry introduced the essential health package (EHP) – a minimum list of cost effective preventive and clinical interventions covering disease conditions that affect most Malawians. The EHP is provided at primary and secondary level of care. All public health facilities in the country should be able to provide this essential health package. Tracking the number and location of facilities unable to provide this minimum service is critical to determine service delivery gaps. The current essential health package includes provision of the following services at primary and secondary levels of care: ● Antenatal care ● Family planning ● Delivery services including caesarean section at secondary level only ● Essential vaccine package ● Prevention, diagnosis and treatment of uncomplicated and complicated malaria ● IMCI package (treatment of pneumonia and diarrhoea with ORS and Zinc; treatment of severe diarrhoea with IV fluids) ● Community health package ● NTDs (Schistosomiasis mass drug administration) ● HIV & AIDS prevention (CPT for children and PMTCT), testing and treatment (all ages) ● Nutrition (Vitamin A supplementation to children and pregnant women, de-worming and management of severe malnutrition in children) ● TB (including treatment and retreatment for TB, MDR case management and isoniazid prevention therapy for children) ● NCDs (mental health and diabetes) ● Oral health
Notes for interpretation	This indicator looks at whether basic services are available at facilities. However, it does not assess whether the facilities have adequately trained staff, equipment or basic amenities needed to provide high quality service.

Custodian of the indicator	Planning and Policy Development
M&E framework level	Output
Baseline / recent estimates	73.25% (Departments and Programmes self-report, 2017)
Targets (2018; 2020; 2022)	75%; 77%; 80%

Unique Identifier (code)	CLIN02N
Indicator name	Outpatient service utilisation (OPD visits per 1,000 population)
Indicator Definition	Number of outpatient department visits per 1 000 population per year
Alignment (HSSP I; Global 100; SDG)	Yes; No; No
Numerator	The number of visits to health facilities for outpatient care, not including immunisation
Numerator source (primary; reporting form)	Outpatient register; HMIS 15 Monthly Reporting Form, HMIS 17 Monthly Reporting Form
Denominator	Estimated mid-year population for the same geographical area
Denominator source	Target population form
Method of calculation	Numerator/Denominator * 1,000/total population
Calculation (HMIS)	Numerator: HMIS 15 ("HMIS # of OPD Attendance") + HMIS 17 Monthly Reporting Form ("HMIS 17 OPD total attendance") Denominator: Target Population ("CMED Total Population")
Lowest administrative level	District
Disaggregation	Age: (<5 yrs, ≥5 yrs)
Reporting frequency	Annual
Rationale	In addition to utilisation, this indicator measures the availability and quality of outpatient services as people are more likely to attend outpatient clinics when barriers to entry are eliminated (cost, distance) and when they feel that they receive quality services. Furthermore, this indicator provides a measure of the patient load in a health facilities OPD that can be used for planning.
Notes for interpretation	In general, rising numbers indicate greater access to services. However, after a certain threshold, rising rates no longer indicate increased access and may indicate a lack of inpatient beds or other services. The indicator does not include visits at village clinic level where under-fives are treated for fever, diarrhoea, and suspected pneumonia. Central Hospital Data (HMIS 17) currently limited within DHIS2. Underreporting from private and public clinics may alter estimates.* Healthcare utilisation by non-Malawians may result in higher estimates.* Accuracy of population estimate may bias results.* *See General Guidelines
Custodian of the indicator	Clinical Services
M&E framework level	Output
Baseline / recent estimates	1,046 visits per 1,000 population (DHIS2, 2015, 94.6% Reporting rate HMIS 15; 16.7% Reporting rate HMIS 17)
Targets (2018; 2020; 2022)	≥1,100; ≥1,100; ≥1,100

Unique Identifier (code)	CLIN03N
Indicator name	Client satisfaction with health services
Indicator Definition	Percentage of survey respondents who report to be satisfied or very satisfied with the health services
Alignment (HSSP I; Global 100; SDG)	Yes; Yes; No
Numerator	Total number of clients who are satisfied or very satisfied with health services
Numerator source (primary; reporting form)	TBD – proposal to include in the DHS or other population-based survey
Denominator	Total number of clients surveyed
Denominator source	TBD – proposal to include in the DHS or other population-based survey
Method of calculation	Numerator / Denominator * 100%
Calculation (HMIS)	NA
Lowest administrative level	Region
Disaggregation	Service type: sick child, family planning, ANC; Facility type: hospital, health centre, dispensary, clinic, health post
Reporting frequency	To be determined
Rationale	Client satisfaction surveys present an excellent opportunity to obtain feedback from clients and patients on the performance of the health system delivery. Client satisfaction can be a proxy for the quality of the service provided and provides important input for health system improvement.
Notes for interpretation	Client satisfaction rating are based on subjective responses from patients. They need to be interpreted with caution because while they may be an indication of quality of services, they depend on the expectations of the patient. Further, treatment outcomes and even compliance with treatment, have been found to be associated with patient satisfaction.
Custodian of the indicator	Clinical Services
M&E framework level	Output
Baseline / recent estimates	Not yet measured – new indicator
Targets (2018; 2020; 2022)	70%; 75%; 80%

3. CMED (Central Monitoring and Evaluation Division) indicators

Unique Identifier (code)	CMED01N
Indicator name	Facility Reporting Rate (Completeness)
Indicator Definition	Percentage of facilities that submit reports
Alignment (HSSP I; Global 100; SDG)	No; Yes; No
Numerator	Number of reports received for a given time period
Numerator source (primary; reporting form)	DHIS; DHIS Reporting Rates
Denominator	Total number of reports expected for a period
Denominator source	DHIS
Method of calculation	Numerator / Denominator * 100
Calculation (HMIS)	NA. This is an automatically generated report from the DHIS2, accessed through the Reports Module, Reporting Rate Summary
Lowest administrative level	Health Facility
Disaggregation	Facility type (Primary, Secondary, Tertiary); Managing authority (Public, Private, CHAM)
Reporting frequency	Annual
Rationale	This indicator provides information about the percentage of missing reports for a period, providing a measure of the completeness of data in the DHIS 2 system. It is important for improving the monitoring system to ensure that it is generating complete data for timely action and feedback.
Notes for interpretation	This indicator does not take into consideration whether reports were submitted within specific deadlines. It should therefore be interpreted in conjunction with other indicators generated by the DHIS 2 system, providing information as to whether the system is collecting complete and timely information. The indicator currently reflects only the reporting rate of HMIS 15, which is a composite multi-programme report. Programme-specific reporting rates tend to be far lower.
Custodian of the indicator	CMED
M&E framework level	Output
Baseline / recent estimates	94.5% for HMIS 15 (DHIS2, 2015)
Targets (2018; 2020; 2022)	99%; 99%; 99%

Unique Identifier (code)	CMED02N
Indicator name	Percentage of facility-based births/deaths reported to civil registration authorities
Indicator Definition	The percentage of facility-based births/deaths reported to civil registration authorities using national registration forms
Alignment (HSSP I; Global 100; SDG)	No; Yes; Yes
Numerator	Number of births/deaths reported to civil registration authorities
Numerator source (primary; reporting form)	Births: Birth report form (NR-8); TBD Deaths: Death report form (NR-10); TBD
Denominator	Total number of live births/deaths
Denominator source	Births: Maternity register Deaths: Maternity register, Ward register
Method of calculation	Numerator/Denominator x 100
Calculation (HMIS)	**Facility-based Live Births** *Numerator:* To be added to DHIS2 *Denominator*: Maternity Clinic Monthly Reporting Form ("RHD MAT Newborn Survival/PMTCT Alive not HIV Exp + RHD MAT Newborn Survival/PMTCT Alive Exp no NVP + RHD MAT Newborn Survival/PMTCT Alive NVP Started + RHD MAT Newborn Survival/PMTCT Alive Unknown Exp + RHD MAT Newborn Survival/PMTCT Alive Neonatal Death") Or *Denominator:* HMIS 15 ("HMIS Total # of Live birth") + HMIS 17 Monthly Reporting Form ("HMIS 17 Live birth") **Facility-based Deaths** *Numerator: To be added to DHIS2* *Denominator*: HMIS 15 ("HMIS Total # of Inpatient Deaths from all causes (Excluding Maternity") + HMIS 17 ("HMIS 17 Inpatient deaths total") + Maternity Monthly reporting form ("RHD MAT Maternal Deaths")
Lowest administrative level	District
Disaggregation	Districts, Facilities
Reporting frequency	Annually
Rationale	The civil registration system is backed by the 2010 National Registration Act and 2015 Regulations, making civil registration universal and compulsory for all Malawians and all live birth and death events occurring within Malawi. Health facilities play a key role in reporting these events to the National Registration Bureau (NBR). The majority of births and a portion of deaths occur in health facilities, requiring the Ministry of Health and Population to report these events to civil registration authorities in accordance with Malawian law. Monitoring reporting/notification rates is important in supporting the development of a strong system. Upon registration by NRB, vital statistics can be generated, such as fertility rates and mortality rates, including cause of death, helping the Ministry of Health and Population in planning and policy development.

Notes for interpretation	The CRVS system takes into account all births and deaths in the country, and this indicator reports on facility-based births and deaths only. Notification does not ensure legal registration, which is the responsibility of NRB. Timeliness and data quality are important considerations and could be built into this indicator in the future. It is important that early neonatal deaths are reported, both the birth and death; underreporting is common and leads to underestimates. For death registration, it is also important to monitor cause of death reporting rates and quality. Central Hospital Data (HMIS 17) currently limited within DHIS2.
Custodian of the indicator	CMED
M&E framework level	Outcome
Baseline / recent estimates	Birth: <1% (2014) 55% (August 2015 to December 2016, in four pilot districts) Death: <1% (2014) (system launched in facilities in early 2018)
Targets (2018; 2020; 2022)	Birth: 60%, 80%, 100% Death: Targets have not been defined at this time. Targets may be set in the future. *Note that facility-based birth registration scaled up nationally only in 2017, and facility-based death registration launched only in 2018. Despite low baseline values, rapid increases are expected.

4. Community Health indicators

Unique Identifier (code)	COMM01N
Indicator name	Health Centre Advisory Committees (HCACs) that are active
Indicator Definition	Percentage of Health Centre Advisory Committees (HCACs) that are meeting monthly and have monthly reports and minutes
Alignment (HSSP I; Global 100; SDG)	No, No, No
Numerator	Number of HCACs that are active (i.e. they meet monthly and have monthly reports and minutes)
Numerator source (primary; reporting form)	Village Health Register
Denominator	Total number of HCACs required (one per health centre)
Denominator source	Master Health Facility list
Method of calculation	Numerator/Denominator*100
Clean calculation	NA
Lowest level of administrative disaggregation	District
Disaggregation	None
Reporting frequency	Annually
Rationale	HCACs is a critical structure for community engagement and social accountability. Health Centre Advisory Committees should be responsible to their communities and local context while also sharing core cross-cutting value. The objectives of HCAC are; support in management of facility health services, overseer of health facility resource management, resource mobilization, community engagement and coordination.
Notes for interpretation	This indicator measures the proportion of HCACs that are meeting monthly and have monthly reports and minutes. This indicator does not provide information on whether concrete decisions are taken at the meeting and whether these are implemented. At present, HCACs are implemented in Mulanje, Mwanza and Rumphi but CHSS is planning to role this out to all districts. Targets are based on roll-out plan.
Custodian of the indicator	Community Health
M&E framework level	Outcome
Baseline / recent estimates	Not available
Targets (2017; 2019; 2021)	10%, 40%, 70%

Unique Identifier (code)	COMM02N
Indicator name	Health Posts operating and supporting integrated community health service delivery
Indicator Definition	Percentage of Health Posts operating & supporting integrated community health service delivery
Alignment (HSSP I; Global 100; SDG)	Yes, No, No
Numerator	Number of health posts are operational in supporting integrated community health service delivery
Numerator source (primary; reporting form)	Community Health Report
Denominator	Number of health posts that exists (including newly constructed health posts)
Denominator source	Community Health Report
Method of calculation	Numerator/Denominator*100
Clean calculation	NA
Lowest level of administrative disaggregation	Community
Disaggregation	None
Reporting frequency	Annually
Rationale	Health posts are community infrastructures designed to operate and support integrated community health service delivery. Good infrastructure is one of the basis of health service delivery. Currently services like growth monitoring, immunisation of under 5 are done under the tree or in poor infrastructure. As such there is need for good infrastructure with enough space and rooms for provision of all essential health care services. Drugs and supplies need to be kept in a conducive environment.
Notes for interpretation	This indicator measures the proportion of health posts that are operating and supporting integrated community health service delivery. The indicator does not provide information on infrastructure of the health posts nor quality of the services offered at the health posts.
Custodian of the indicator	Community Health
M&E framework level	Outcome
Baseline / recent estimates	Not available
Targets (2017; 2019; 2021)	0%, 50%, 95%

5. DHTSS – Pharmacy indicators

Unique Identifier (code)	DHTSSP01N
Indicator name	Percent of facilities reporting stock-outs of essential tracer medicines
Indicator Definition	Percent of health facilities that report a stock-out in any of the essential tracer medicines
Alignment (HSSP I; Global 100; SDG)	Yes; Yes; No
Numerator	Number of health facilities with a stock-out of any tracer medicine
Numerator source (primary; reporting form)	LMIS
Denominator	Total number of health facilities
Denominator source	LMIS
Method of calculation	Numerator / Denominator * 100
Calculation (HMIS)	NA
Lowest administrative level	Facility
Disaggregation	Facility type (Primary, Secondary, Tertiary); Managing authority (Public, Private, CHAM)
Reporting frequency	Annual
Rationale	Availability and access to medicines is a key component of a successful health system. Uninterrupted supply of medicines is critical for the successful treatment of disease and prevents drug resistance and unnecessary deaths.
Notes for interpretation	Stock outs of essential medicines and supplies are indicative of a problem with the supply chain management at the various stages such as procurement and distribution. Stock outs of medicines and supplies on the essential list are an emergency and should be treated as such, and a continuous supply of medicines is critical to personal and public health. All causes of stock out should be identified and rectified. The information on stock outs is however limited. This indicator is a measure of access to essential medicines. In the Logistic Management Information System (LMIS), the primary source of data on drug availability and stock outs is the stock card. Each drug in the pharmacy has a stock card which tracks movements/events pertaining to the drug like drug deliveries, drug issues and adjustments on a daily basis or as when needed. At the end of the month, information on drug availability and stock outs is compiled and transferred to LMIS forms which are sent to the district pharmacy for data entry into the LMIS database. Tracer medicines and supplies are the following: LA 6x1; LA 6X4; Malaria Rapid Diagnostic Test kits; Artesunate Injection 60mg; Magnesium Sulphate 50% 2ml ampoule; Male condoms; Medroxyprogesterone acetate injection, 150mg/ml (Depoprovera); Oxytocin 10 IU/ml, 1ml; Amoxycillin 125mg/5ml suspension; Oral rehydration salt, sachet (WHO formula) for 1L solution; Tetracycline Eye Ointment 1%, 3.5g/5mg; Gentamicin 40mg/ml, 2ml; Benzylpenecillin 3g (5MU), PFR; Determine HIV Test kits; Tenofovir (TDF) + Lamuvidine (3TC)+ Efavirenz (EFV), 300+300+600mg, 30's (5A); RH 60/60; Streptomycin 1g; Cotrimixazole 480mg; Dextrose (glucose) 5%, 500ml; Diazepam 5mg/ml, 2ml; Glove disposable powdered latex large, 100 pieces; Glove disposable powdered latex medium,

	100 pieces; Glove surgeon's size 7 ½ sterile, pair; Metronidazole 200mg; Sodium Chloride injectable 0.9% 500ml; Syringe, autodestruct, 2ml, disposable hypoluer with 23g needle; Syringe, autodestruct, 5ml, disposable hypoluer with 21g needle; Amoxycillin 250mg
Custodian of the indicator	DHTSS (Pharmaceuticals)
M&E framework level	Input
Baseline / recent estimates	20%, (National Pharmaceutical Strategic Plan 2016 – 2020)
Targets (2018; 2020; 2022)	5%; 5%; 5% (National Pharmaceutical Strategic Plan 2016 – 2020)

6. Environmental health indicators

Unique Identifier (code)	ENVT01.1N
Indicator name	Percentage of households with access to an improved water source (survey-based)
Indicator Definition	Percentage of households with access to an improved water sources (piped water, public tap or standpipe, tube well or borehole, and protected well or spring)
Alignment (HSSP I; Global 100; SDG)	Yes; Yes; Yes
Numerator	Number of households with access to an improved water source
Numerator source (primary; reporting form)	Survey (DHS/MICS)
Denominator	Total number of households surveyed
Denominator source	Survey (DHS/MICS)
Method of calculation	Numerator / Denominator * 100
Calculation (HMIS)	NA
Lowest administrative level	Region
Disaggregation	Population: rural, urban
Reporting frequency	3-5 years
Rationale	Contaminated drinking water is a major cause of diarrhoeal disease and therefore childhood mortality. Access to an improved water source is a proxy measure for access to safe drinking water. Improved water sources are those that by their design are less likely to be exposed to external contaminants.
Notes for interpretation	Increasing trends of this indicator should be associated with decreasing trends in diarrhoeal and other water-borne diseases such as cholera. However, access to an improved source of water does not guarantee that the water is safe to drink. Surveys such as DHS and MICS also ask respondents about their water treatment. Further, this indicator does not indicate the amount of water available nor the distance/time required to fetch the water. Finally, the MICS survey measures the percentage of people who use an improved water source, while the DHS measures the percentage of households (consistent with the indicator definition). In contrast to the HMIS indicator, the survey-based indicator measures self-reported use by the population rather than simply potential access.
Custodian of the indicator	Environmental Health (Water and Sanitation)
M&E framework level	Outcome
Baseline / recent estimates	87% (DHS 2015-16) 86.2% (2014 MDG Endline/MICS)
Targets (2018; 2020; 2022)	87%, 91%, 95%

Unique Identifier (code)	ENVT01.2N
Indicator name	Percentage of households with access to an improved water source (HMIS-based)
Indicator Definition	Percentage of households with access to an improved water source (piped water, public tap or standpipe, tube well or borehole, and protected well or spring)
Alignment (HSSP I; Global 100; SDG)	Yes; Yes; Yes
Numerator	Number of households with access to an improved water source
Numerator source (primary; reporting form)	Health Surveillance Assistant (HSA's) WASH report; Water, Sanitation and Hygiene Reporting Form at district level*, HMIS 15 (*Not in DHIS)
Denominator	Total number of households in the catchment area
Denominator source	Environmental Health District Report
Method of calculation	Numerator / Denominator * 100
Calculation (HMIS)	Numerator: HMIS 15 ("HMIS # of Households with Access to Safe Drinking Water") Denominator: Environmental Health District Report ("ENVT EH # of Households in District")
Lowest administrative level	District
Disaggregation	Population: rural, urban
Reporting frequency	Annual
Rationale	Contaminated drinking water is a major cause of diarrhoeal disease, one of the major causes of childhood mortality. Access to an improved water source is a proxy measure for access to safe drinking water. Improved water sources are those that by their design are less likely to be exposed to external contaminants.
Notes for interpretation	Increasing trends of this indicator should be associated with decreasing trends in diarrhoeal and other water-borne diseases such as cholera. However, access to an improved source of water does not guarantee that the water is safe to drink. Further, this indicator does not indicate the amount of water available nor the distance/time required to fetch the water. In contrast to survey-based measures, measures based on administrative data do not ask about use, and therefore may include water sources that are not functional or not actually used by the population. It is worth noting, the numerator is pulled from the HMIS 15 monthly report while the denominator is from the Environmental Health District Report (bi-annual).
Custodian of the indicator	Environmental Health (Water and Sanitation)
M&E framework level	Outcome
Baseline / recent estimates	58% (DHIS2, 2015); calculated using estimated number of households, as the reporting rate for the Environmental Health District Report is lower than the reporting rate for HMIS 15 causing calculation errors
Targets (2018; 2020; 2022)	Targets have not been defined at this time. Targets may be set in the future.

Unique Identifier (code)	ENVT02.1N
Indicator name	Percentage of households with access to improved sanitation (survey-based)
Indicator Definition	Percentage of households with access to a connection to a public sewer, connection to a septic system, pour flush latrine, simple pit latrine with a slab, or ventilated, improved pit latrine that is not shared with another household.
Alignment (HSSP I; Global 100; SDG)	Yes; Yes; Yes
Numerator	Total number of households with access to improved sanitation
Numerator source (primary; reporting form)	Surveys (DHS, MICS)
Denominator	Total number of households surveyed
Denominator source	Surveys (DHS, MICS)
Method of calculation	Numerator / Denominator * 100
Calculation (HMIS)	NA
Lowest administrative level	Region
Disaggregation	Population: rural, urban
Reporting frequency	3 – 5 years
Rationale	Access to an improved sanitation facility is a proxy for access to basic sanitation. It can reduce the incidence of diarrhoeal-related diseases in children by more than 30%.
Notes for interpretation	In Malawi, the Preventive Health Department, through community health workers (HSAs), provides interventions that aim at improving water and sanitation practices in the community. This indicator measures the proportion of the population that has access to improved sanitation that is not shared with other households. Unlike the HMIS-based indicator, the survey-based indicator measures what people actually use. However, it will not be as responsive to recent interventions since it is only measured every few years. Unlike the HMIS version, the survey version of the indicator explicitly excludes those who share facilities with other households (the HMIS version counts them, but only for the household on whose property they sit), making it likely that the survey-based indicator will be lower than the HMIS version. Note that the MICS survey measures the percentage of people who have access to improved sanitation while the DHS measures the percentage of households, as per the definition of the indicator.
Custodian of the indicator	Environmental Health (Water and Sanitation)
M&E framework level	Outcome
Baseline / recent estimates	51.8% (DHS 2015-16) 40.6% (2014 MDG Endline/MICS)
Targets (2018; 2020; 2022)	65%; 75%; 85%

Unique Identifier (code)	ENVT02.2N
Indicator name	Percentage of households with access to improved sanitation (HMIS-based)
Indicator Definition	Percentage of households with access to a connection to improved sanitation (a public sewer, connection to a septic system, pour flush latrine, simple pit latrine with a slab, ventilated, improved pit latrine, or ecosan).
Alignment (HSSP I; Global 100; SDG)	Yes; Yes; Yes
Numerator	Total number of households owning and using improved sanitation
Numerator source (primary; reporting form)	Health Surveillance Assistant (HSA's) WASH report; Water, Sanitation and Hygiene Reporting Form at district level*
Denominator	Total number of households in the catchment area
Denominator source	Environmental Health District Report
Method of calculation	Numerator / Denominator * 100
Calculation (HMIS)	Numerator: Environmental Health District Report ("ENVT EH of Households Owning And Using Improved Sanitary Facilities") Denominator: Environmental Health District Report ("ENVT EH # of Households in the District")
Lowest administrative level	District
Disaggregation	Population: rural, urban Improved latrine type
Reporting frequency	Annual
Rationale	Use of an improved sanitation facility is a proxy for access to basic sanitation. It can reduce the incidence of diarrhoeal-related diseases in children by more than 30%.
Notes for interpretation	In Malawi, the Preventive Health Department, through community health workers (HSAs), provides interventions that aim at improving water and sanitation practices in the community. Survey is the preferred method of data collection for this indicator because surveys measure the types of facilities people use rather than what is present in the community (and yet not used). In between surveys, this information will be obtained from community health workers to provide a general picture of the situation that can be used for short term planning. While some people may share an improved facility with another household, only households with an improved sanitation facility on their premises will actually be counted here. The survey version of the indicator explicitly excludes all who share facilities with other households.
Custodian of the indicator	Environmental Health (Water and Sanitation)
M&E framework level	Outcome
Baseline / recent estimates	13.9% (DHIS2, 2015)
Targets (2018; 2020; 2022)	Targets have not been defined at this time. Targets may be set in the future.

Unique Identifier (code)	ENVT03N
Indicator name	Health facilities with basic WASH facilities
Indicator Definition	Percentage of health facilities with basic WASH facilities. Basic WASH facilities meet the following criteria: 1) water from an **improved source**[1] is available on premises; 2) **Improved toilets**[2] are usable, separated for patients and staff, separated for women and allow for menstrual hygiene management, and meet the needs of people with limited mobility; 3) **hand hygiene materials** [3], either a basin with water and soap, or alcohol hand rub, are available at points of care and toilets. [1]Improved water source refer to piped water, yard or plot; public taps or standpipes; boreholes or tube wells; protected dug wells; protected springs, rainwater, packaged or delivered water) which is located on premises, available when needed, and free of faecal and priority chemical contamination. [2]Improved toilets Include any non-shared toilet of the following types: flush/pour flush toilets to piped sewer systems, septic tanks, and pit latrines; ventilated improved pit (VIP) latrines; pit latrines with slabs; and composting toilets.) and latrines that are usable, separated for patients and staff, separated for women and allowing menstrual hygiene management, and meet the needs of people with limited mobility [3]Basic hand hygiene in health care facilities is defined by two main criteria: (1) either alcohol hand-rub or a basin with water and soap are available at points of care, and (2) handwashing facilities with water and soap are available at the toilets. Points of care are defined here as any location in the outpatient setting where care or treatment is delivered (i.e. consultation/exam rooms).
Alignment (HSSP I; Global 100; SDG)	No; No; No
Numerator	Number of health facilities with basic WASH facilities (See definition of basic WASH facilities above under indicator definition)
Numerator source (primary; reporting form)	Environmental Health District report form
Denominator	Number of health facilities
Denominator source	Environmental Health District Report
Method of calculation	Numerator/Denominator x 100
Calculation (HMIS)	Numerator: Environmental Health District Report ("ENVT EH # Of Health Facilities with Adequate Sanitary Facilities") Denominator: Environmental Health District Report ("ENVT EH # Of Health Facilities in the District")
Lowest administrative level	District
Disaggregation	Rural/Urban; Type of WASH facility (i.e. availability of basic water source; basic toilets and hygiene facilities)
Reporting frequency	Annual
Rationale	Inadequate and poor access to WASH services at the health facilities can contribute to nosocomial infections and diarrhoeal diseases and therefore increase overall morbidity and mortality. Currently there is scanty information

	on the situation of WASH in health facilities in Malawi. Monitoring the WASH situation in health facilities will be crucial to ensuring that no health facility is left behind.
Notes for interpretation	The indicator will be monitored both separately for the different components as well as a single composite indicator. The indicator does not reflect access to WASH facilities (as sometimes facilities are locked or otherwise inaccessible), continuous access (as the report is completed at only one time per month), use of facilities, or whether quantities are sufficient relative to facility size.
Custodian of the indicator	Environmental Health
M&E framework level	Outcome
Baseline / recent estimates	63% (EH Database; Draft EH Policy)
Targets (2018; 2020; 2022)	65%; 75%; 90% (2023) Draft EH Policy

Unique Identifier (code)	ENVT04N
Indicator name	Households with access to handwashing facilities with soap and water
Indicator Definition	Percentage of households with access to handwashing facilities with soap and water
Alignment (HSSP I; Global 100; SDG)	No; No; Yes
Numerator	Number of households with handwashing facilities where water and soap are available
Numerator source (primary; reporting form)	Environmental Health district reporting form
Denominator	Total number of household in the catchment area
Denominator source	Environmental Health district reporting form
Method of calculation	Numerator/Denominator x 100
Calculation (HMIS)	Numerator: Environmental Health District Report ("ENVT EH # households with functioning hand washing facilities with soap")* Denominator: Environmental Health District Report (" ENVT EH Number of households in the district") * this includes availability of water at the handwashing facility
Lowest administrative level	District
Disaggregation	Rural/Urban
Reporting frequency	Annual
Rationale	The Preventive Health Department through community health workers (HSAs) provides interventions that aim at improving water, sanitation and hygiene practices. Good hygiene practices, such as handwashing with soap after toilet use and other critical times, are essential to limiting the spread of communicable diseases and is considered a top priority.
Notes for interpretation	The indicator does not reflect continuous access to facilities (as the report is completed at only one time per month), use of facilities, or whether facilities are sufficient relative to household size.
Custodian of the indicator	Environmental Health
M&E framework level	Outcome
Baseline / recent estimates	11.3% (EH Database) 10.5% (MDHS 2015-16)
Targets (2018; 2020; 2022)	35%; 75%; 85% (Draft EH Strategy)

Unique Identifier (code)	ENVT05N
Indicator name	Villages that are declared open defaecation free (ODF)
Indicator Definition	Percentage of villages that are declared Open Defaecation Free (ODF). A village is declared ODF if it satisfies the following criteria: 100% of the households must have latrines, and all the latrines must be in use; the latrines must have drop hole covers that are tightly fitting; all latrines offer privacy; all latrines have good roofs; all latrines are in good state of repair; all households demonstrate safe faecal disposal for children and open defaecation is not observed; availability of hand washing facility with soap at the toilets.
Alignment (HSSP I; Global 100; SDG)	No; No; Yes
Numerator	Number of villages declared Open Defaecation Free.
Numerator source (primary; reporting form)	Environmental Health Reporting form
Denominator	Total number of villages in the catchment area (District/National)
Denominator source	Environmental Health Reporting form
Method of calculation	Numerator / Denominator x 100
Calculation (HMIS)	Numerator: Environmental Health District Report ("ENVT EH # Of Villages Declared ODF") Denominator: Environmental Health District Report ("ENVT EH # Of Villages in the District")
Lowest administrative level	District
Disaggregation	Traditional Authority
Reporting frequency	Annual
Rationale	Open defaecation (OD) is considered as a public bad. It is estimated that OD costs Malawi US$14 million annually due to health and productivity losses. In Malawi, the Preventive Health Department through community health workers (HSAs), provide interventions that aim to stimulate the demand for toilet facilities with the purpose of ensuring sanitation and hygiene for all. This indicator will provide crucial information that can be used for planning and resource allocation.
Notes for interpretation	As this is a composite indicator, a low percentage could indicate that one or many components of Open Defaecation Free are lacking in a village.
Custodian of the indicator	Environmental Health
M&E framework level	Outcome
Baseline / recent estimates	41.7% (EH database)
Targets (2018; 2020; 2022)	42%; 75%; 100% (2023)

7. Epidemiology indicators

Unique Identifier (code)	EPID01N
Indicator name	International Health Regulations (IHR) core capacity index
Indicator Definition	Percentage of the 13 core capacities that have been attained at a specific point in time. The 13 core capacities are: (1) National legislation, policy and financing; (2) Coordination and National Focal Point communications; (3) Surveillance; (4) Response; (5) Preparedness; (6) Risk communication; (7) Human resources; (8) Laboratory; (9) Points of entry; (10) Zoonotic events; (11) Food safety; (12) Chemical events; (13) Radionuclear emergencies.
Alignment (HSSP I; Global 100; SDG)	No; Yes; Yes
Numerator	Number of core capacities attained
Numerator source (primary; reporting form)	WHO monitoring questionnaire
Denominator	Total number of core capacities
Denominator source	WHO monitoring questionnaire
Method of calculation	Numerator/Denominator *100
Calculation (HMIS)	NA
Lowest administrative level	National
Disaggregation	None
Reporting frequency	Yearly (IHR core capacity monitoring framework), 2-3 years (Full IHR Core Capacity Assessment)
Rationale	Malawi (along with the 196 other WHO member states) is a party to the International Health Regulations (IHR, 2005), which require countries to have the capacity to detect, assess and report major public health events of international concern to WHO. The index measures a country's capacity in 13 areas in order to assess whether the country is able to fulfil the requirements of the IHR.
Notes for interpretation	Data for calculating the IHR is mostly obtained through the use of a self-administered questionnaire developed by the WHO. Once completed, the questionnaire is returned to WHO which provides a score. Some of the data reported maybe subjective and therefore should be interpreted with caution
Custodian of the indicator	Epidemiology
M&E framework level	Output
Baseline / recent estimates	50% - IHR self-monitoring questionnaire (2014), National IHR core capacity assessment (2015)
Targets (2018; 2020; 2022)	60%; 80%; 100%

8. HIV / AIDS indicators

Unique Identifier (code)	HIV01N
Indicator name	HIV incidence
Indicator Definition	Number of new HIV infections per 1,000 person years in adults aged 15 – 49
Alignment (HSSP I; Global 100; SDG)	No; Yes; Yes
Numerator	The estimated total number of adults (15-49 years) newly infected, diagnosed and undiagnosed, with HIV in a given year.
Numerator source (primary; reporting form)	Spectrum
Denominator	Total adult population (15-49 years) not infected at the start of the same year.
Denominator source	Spectrum
Method of calculation	Numerator / Denominator * 100
Calculation (HMIS)	NA
Lowest administrative level	National
Disaggregation	Sex, Age (15-24, 25-34, 35-44, 45-49)
Reporting frequency	2 Years
Rationale	HIV and AIDS is a major public health problem in Malawi, with approximately 9% of adults aged 15-49 living with HIV in 2015. Monitoring the number of new HIV infections is important to assess the success of HIV prevention efforts, to understand where to target future prevention efforts, and to plan for future HIV care and treatment.
Notes for interpretation	Estimates of HIV incidence are created using the Spectrum software. These estimates take into account programme data on HIV prevention and treatment programmes, HIV prevalence information from surveys, and demographic data. Estimations rely on assumptions grounded in the scientific literature and will always have a degree of uncertainty (as reflected by the confidence limits around the estimates). Estimates are updated annually – both for the current year and for past years. Trends should not be analysed comparing different sets of estimates, but should always use the most recently updated version.
Custodian of the indicator	Epidemiology
M&E framework level	Impact
Baseline / recent estimates	4.1/1000 person-years among adults (15–49) (2014/15 Annual Review Report for the Health Sector)
Targets (2018; 2020; 2022)	2.6 per 1,000 person years; 2.2 per 1,000 person years; 2.0 per 1,000 person years (2020)

Unique Identifier (code)	HIV02N
Indicator name	ART coverage among known HIV-infected pregnant women at ANC
Indicator Definition	Percent of known HIV-infected pregnant women at ANC provided with ART
Alignment (HSSP I; Global 100; SDG)	Yes; Yes; No
Numerator	Total number of HIV-infected pregnant women already on ART plus HIV infected women starting ART during pregnancy
Numerator source (primary; reporting form)	ANC Register; ANC Report or Maternity Register; Maternity Monthly report
Denominator	Estimated number of HIV-infected pregnant women
Denominator source	Spectrum
Method of calculation	Numerator/Denominator*100
Calculation (HMIS)	NA
Lowest administrative level	District
Disaggregation	None
Reporting frequency	Annual
Rationale	Without intervention, approximately one-third of infants born to HIV-infected mothers will acquire HIV infection. Provision of ART to pregnant women living with HIV is one of the key strategies to reduce transmission of HIV from mother to child during pregnancy, delivery and breastfeeding. Malawi's PMTCT programme aims to provide lifelong ART to all HIV-infected pregnant women. The indicator will be used to track progress toward elimination of mother-to-child transmission; to inform policy and strategic planning; for advocacy; and for leveraging resources. It will help measure trends in coverage of antiretroviral prophylaxis and treatment.
Notes for interpretation	This indicator captures pregnant women who were started on ART during ANC, labour and delivery (or who were on ART before pregnancy). It does not capture whether or not the infant also received PMTCT or cases where only the infant received it. Further, it cannot measure whether women actually consumed the ART or adhered to their suggested regimen. Because the denominator is the estimated number of HIV-infected pregnant women, this indicator measures both whether HIV-infected pregnant women are identified and provision of services to women know to be HIV-infected. Underreporting from private and public clinics may alter estimates.* Healthcare utilisation by non-Malawians may result in higher estimates.* *See General Guidelines
Custodian of the indicator	HIV AIDS Unit
M&E framework level	Outcome
Baseline / recent estimates	85% (Malawi Integrated HIV Program Report 2016_Q4)
Targets (2018; 2020; 2022)	85%; 85%; 85% (2020; National HIV/AIDS Strategic Plan 2015 - 2020)

Unique Identifier (code)	HIV03N
Indicator name	Antiretroviral Therapy (ART) coverage
Indicator Definition	Percent of adults and children living with HIV currently receiving antiretroviral combination therapy in accordance with the nationally approved treatment protocols (WHO/UNAIDS standards) among the estimated number of adults and children living with HIV
Alignment (HSSP I; Global 100; SDG)	No; Yes; No
Numerator	Number of eligible adults and children currently receiving antiretroviral therapy in accordance with the nationally approved treatment protocol (WHO/UNAIDS standards) at the end of the reporting period
Numerator source (primary; reporting form)	ART Clinic register; Integrated Supervision Reporting form
Denominator	Estimated number of HIV-infected children and adults
Denominator source	Spectrum
Method of calculation	Numerator / Denominator * 100
Calculation (HMIS)	NA
Lowest administrative level	National
Disaggregation	Sex, Age
Reporting frequency	Annual
Rationale	Antiretroviral therapy (ART) has been shown to reduce mortality among people living with HIV. Malawi has embraced UNAIDS ambitious 90-90-90 treatment targets and aims to place 90% of people living with HIV on ART by 2020. This indicator will measure the progress toward this ambitious goal.
Notes for interpretation	Because the denominator is an estimation of the total population living with HIV, the measure represents the percent of all HIV+ people on who are ART, regardless of whether their status is known. Additionally, the indicator is sensitive to the quality of the estimates and may be affected if the estimation model changes over time. Because the estimates of people living with HIV have uncertainty bounds, this indicator does too. The indicator does not distinguish between different ART regimens or provide insight on the quality of care. Underreporting from private and public clinics may alter estimates.* Healthcare utilisation by non-Malawians may result in higher estimates.* *See General Guidelines
Custodian of the indicator	HIV AIDS Unit
M&E framework level	Outcome
Baseline / recent estimates	69% (679,056) (Malawi Integrated HIV Program Report 2016_Q4)
Targets (2018; 2020; 2022)	68%; 78%; 90% (2020; National HIV/AIDS Strategic Plan 2015 - 2020)

Unique Identifier (code)	HIV04N
Indicator name	ART retention rate (12 months)
Indicator Definition	Adults and children with HIV, known to be on treatment 12 months after initiation of ARV therapy (%)
Alignment (HSSP I; Global 100; SDG)	No; Yes; Yes
Numerator	Number of adults and children who are still alive and on antiretroviral therapy at 12 months after initiating treatment
Numerator source (primary; reporting form)	ART Clinic Register
Denominator	Total number of adults and children who initiated antiretroviral therapy who were expected to achieve 12-month outcomes within the reporting period, including those who have died since starting therapy, those who have stopped therapy, and those recorded as lost to follow up.
Denominator source	ART Clinic Register
Method of calculation	Numerator / Denominator * 100
Calculation (HMIS)	NA
Lowest administrative level	National
Disaggregation	Sex, Age
Reporting frequency	Annual
Rationale	Malawi's HIV and AIDS programme has committed to the ambitious 90-90-90 targets which includes retaining 90% of ART patients in care. This indicator looks at the percent of HIV patients retained on ART after 12 months. Patients not retained on ART have either died or dropped out of ART. Regardless of whether patients died or dropped out, this indicator measures the effectiveness of ART programmes, which is critical in the face of a massive scale-up of ART.
Notes for interpretation	This indicator is often considered to be a proxy of survival on ART, however, it is unclear what percentage of patients not retained on ART die versus drop out of care, particularly in the context of a rapid scale up of ART. This indicator, therefore, is likely to underestimate true "survival". Changes in the indicator over time can be difficult to interpret, especially in light of changing treatment guidelines. People put on ART earlier may be more likely to survive 12 months but also more likely to stop taking ARVs. Retention on ART at 12 months should be interpreted in light of the baseline characteristics of the patients at the start of ART. Additionally, when patients are transferred between clinics, this information is often not recorded in the register. The HIV programme estimates that these transfers make up ~10% of those enrolled in treatment. Therefore the indicator will underestimate true retention on ART. Underreporting from private and public clinics may alter estimates.* Healthcare utilisation by non-Malawians may result in higher estimates.* *See General Guidelines
Custodian of the indicator	HIV AIDS Unit
M&E framework level	Output
Baseline / recent estimates	80% (Malawi Integrated HIV Program Report 2016_Q3)
Targets (2018; 2020; 2022)	76%, 76%, 76

9. Human resource indicators

Unique Identifier (code)	HR01N
Indicator name	Health worker density and distribution
Indicator Definition	Number of health workers per 10,000 population
Alignment (HSSP I; Global 100; SDG)	No; Yes; No
Numerator	Number of health workers per cadre
Numerator source (primary; reporting form)	IHRIS, Medical Council of Malawi; Nurses and Midwives Council of Malawi registries; SPA survey as alternative source
Denominator	Estimated mid-year population
Denominator source	Target population form
Method of calculation	Numerator / Denominator * 10,000
Calculation (HMIS)	NA
Lowest administrative level	District
Disaggregation	Cadre type (Doctor, Clinical officer, Medical Assistant, Nurse-Midwives, Medical technician, Environmental Health Officer, Hospital attendant) Sector (Public, private, NGO, etc.)
Reporting frequency	Public sector: Annual Private and NGO sectors: per HR census schedule
Rationale	Preparing the health workforce to meet a country's health objectives is a major challenge of the health system. The 2006 World Health Report estimated that countries with fewer than 23 physicians, nurses and midwives per 10 000 population fail to achieve adequate coverage of critical primary health care interventions. Currently Malawi faces an acute shortage of health workers. This indicator provides information on the availability of health workers in relation to population size. It is used to monitor whether the size and specialties of the current workforce meets the threshold required for the provision of most basic levels of health care (EHP) coverage in a country.
Notes for interpretation	Counts of workers outside the public sector (i.e., private, non-governmental, community-based) rely on the HR census which is conducted very infrequently (last measured in 2005 and will be conducted again in 2017). While this indicator measures the availability of service providers, it does not take into account whether they are equally spaced across the population, whether the services they provide are free or affordable, or the quality of care they provide/training they received.
Custodian of the indicator	Human Resource
M&E framework level	Input
Baseline / recent estimates	Across all facilities, regardless of ownership • Doctors – 0.4 (All) and 0.21 (Government) per 10,000 population • Nurses (all nurses and midwives) 8.3 (All) and 3.44 (Government) per 10,000 • Clinical Officers – 0.7 (All) and 0.82 (Government) per 10,000 • Medical Assistant – 0.6 (All) and 0.76 (Government) per 10,000 • HSA – 0.82 per 1000 population (Government) Sources: Medical Council of Malawi, December 2016, Nurses and Midwives Council of Malawi December 2016, iHRIS, 2017

Targets (2018; 2020; 2022)	Government only Doctors: 0.2 (447); 0.3 (625); 0.4 (804); Nurses: 4.2 (7,559); 5.1 (9,814); 5.9 (12,070) Clinical Officer: 0.86 (1,506); 0.87 (1,668); 0.90 (1,831) Medical Assistant: 0.77 (1,378); 0.79 (1,504); 0.80 (1,630)

Unique Identifier (code)	HR02N
Indicator name	Health centres that meet minimum staffing norms
Indicator Definition	Percent of health centres that meet minimum staff norms to meet EHP requirements
Alignment (HSSP I; Global 100; SDG)	Yes; No; No
Numerator	Number of health centres meeting the minimum staffing norm
Numerator source (primary; reporting form)	
Denominator	Number of health centres
Denominator source	DHIS2
Method of calculation	Numerator / Denominator * 100
Calculation (HMIS)	NA
Lowest administrative level	District
Disaggregation	Facility ownership
Reporting frequency	Public sector: Annual
Rationale	This minimum staff norm is the basic requirement for provision of basic health package (BHP). All health centres must meet this minimum requirement.
Notes for interpretation	Minimum staffing norms for providing EHP services at health centres include: ● 1 medical personnel (doctor, clinical officer or medical assistant) ● 2 Nurse-Midwives ● 1 Medical Technician ● 1 Environmental Health Officer ● 2 Hospital Attendants
Custodian of the indicator	Human Resource
M&E framework level	Output
Baseline / recent estimates	Not available – New indicator
Targets (2018; 2020; 2022)	Not available

10. Malaria indicators

Unique Identifier (code)	NMCP01N
Indicator name	Malaria incidence rate (presumed and confirmed)
Indicator Definition	Number of presumed and confirmed reported malaria cases per 1000 persons per year
Alignment (HSSP I; Global 100; SDG)	No; Yes; Yes
Numerator	Number of malaria cases (presumed or confirmed)
Numerator source (primary; reporting form)	Outpatient Register, Ward Register, Village clinic register; Malaria Health Facility Reporting Form (MHFRF), IMCI Village Clinic Monthly Consolidated Report, HMIS 15, HMIS 17
Denominator	Estimated mid-year population
Denominator source	Target population form
Method of calculation	Numerator / Denominator * 1000
Calculation (HMIS)	*Numerator*: Confirmed cases: **Malaria Health Facility Monthly Report** ("NMCP OPD Confirmed Malaria Cases through Microscopy <5Yrs" + "NMCP OPD Confirmed Malaria Cases through Microscopy >5Yrs" + "NMCP OPD Confirmed Malaria Cases through RDT <5Yrs" + "NMCP OPD Confirmed Malaria Cases through RDT >5Yrs" + "NMCP IPD Suspected Malaria Cases < 5 Yrs" + "NMCP IPD Suspected Malaria Cases > 5Yrs" + "NMCP IPD Confirmed Malaria Cases <5Yrs" + "NMCP IPD Confirmed Malaria Cases >5Yrs") + **IMCI Village Clinic Monthly Consolidated Report** ("CHD IMCI mRDT Positive New Cases 2 – 4M" + "CHD IMCI mRDT Positive New Cases 5 – 35M" + "CHD IMCI mRDT Positive New Cases 36 – 59M") [*mRDT Positive is a summation of mRDT Positive for new cases, mRDT Positive for referrals with dangers signs, mRDT Positive for referrals made because of drug stockout, and mRDT Positive deaths. According to IMCI, this is incorrect. First, those referred with danger signs are not tested with mRDT, to avoid delays in referrals, and therefore there should be no data that shows positive mRDT among those referred with danger signs. Further those referred because of drug stockout or those who have died are also counted as 'new cases' and should not be added to these values as this results in double-counting.] Presumed cases: *Numerator:* OPD and Ward registers are being reviewed to include presumed malaria - needs to be added when available. *Note – Use of HMIS 15 to report on Malaria has been discontinued, but is used in the baseline. *Denominator:* Target Population "CMED Total Population"
Lowest administrative level	District
Disaggregation	Sex Age (<5; 5+) Diagnosis (presumed and confirmed)

Reporting frequency	Annual
Rationale	Malaria is endemic throughout Malawi and continues to be a major public health problem, with an estimated six million cases occurring annually (NMCP, 2010a). Incidence represents the burden of disease and success of prevention measures. It also provides needed information to health planners to estimate needs for future malaria control, treatment, and prevention.
Notes for interpretation	Because this is a facility-based measure, it only includes cases where patients sought medical care. However, because cases may be counted both in outpatient and inpatient wards, double-counting may occur. Additionally, while people transferred from the village clinic to health facility are not supposed to be retested, if they are, it will lead to double counting. Presumed cases may also include malaria-like illnesses that are not truly malaria. Malaria cases are also reported through IDSR. Central Hospital Data (HMIS 17) currently limited within DHIS2. Underreporting from private and public clinics may alter estimates.* Healthcare utilisation by non-Malawians may result in higher estimates.* Accuracy of population estimate may bias results.* *See General Guidelines
Custodian of the indicator	NMCP
M&E framework level	Outcome
Baseline / recent estimates	304 per 1,000 population (DHIS2, 2015, HMIS 15, HMIS 17 & Village clinic reports; 94.6% reporting rate HMIS 15; 16.7% reporting rate HMIS 17; 83.8% reporting rate Village clinic summary) 242 per 1,000 population (DHIS2, 2015, Malaria report, HMIS 17 & Village clinic report; 70.5% reporting rate Malaria report)
Targets (2018; 2020; 2022)	320 per 1000; 260 per 1000; 200 per 1000

Unique Identifier (code)	NMCP02N
Indicator name	Malaria parasite prevalence among children 6-59 months
Indicator Definition	Proportion of children aged 6-59 months with confirmed malaria infection
Alignment (HSSP I; Global 100; SDG)	No; Yes; No
Numerator	Number of children aged 6-59 months with malaria infection detected by microscopy
Numerator source (primary; reporting form)	Surveys (MIS)
Denominator	Total number of children aged 6-59 months tested for malaria parasites by microscopy
Denominator source	Surveys (MIS)
Method of calculation	Numerator/Denominator * 100
Calculation (HMIS)	N/A
Lowest administrative level	National
Disaggregation	Sex Age
Reporting frequency	Every 2 years
Rationale	Malaria is endemic in Malawi. Malaria microscopy tests detect both clinical and subclinical malaria (i.e. where parasites are present without showing signs and symptoms of any infection). The presence of malaria parasites in a child's blood, whether symptomatic or asymptomatic, can lead to transmission and morbidity. Knowing this prevalence is needed for planning prevention and treatment measures.
Notes for interpretation	Decreasing trends in parasite prevalence in blood of children may indicate successful prevention and control strategies, however given seasonal variations in malaria prevalence rates, it is important to compare data across time from comparable seasons (e.g. June 2014 and June 2015).
Custodian of the indicator	NMCP
M&E framework level	Impact
Baseline / recent estimates	33% MIS 2014
Targets (2018; 2020; 2022)	28%, 24%, 20%

Unique Identifier (code)	NMCP03N
Indicator name	Inpatient malaria deaths
Indicator Definition	Inpatient malaria deaths per 100,000 persons in the population
Alignment (HSSP I; Global 100; SDG)	No; Yes; No
Numerator	Number of inpatient malaria deaths in the last year
Numerator source (primary; reporting form)	Ward Register; Malaria Health Facility Reporting Form (MHFRF), HMIS 17, IMCI Village Clinic Monthly Consolidated Report
Denominator	Estimated mid-year population
Denominator source	Target population form
Method of calculation	Numerator / Denominator * 100,000
Calculation (HMIS)	*Numerator*: Malaria Health Facility Monthly Report ("NMCP IPD Total Malaria Deaths <5Yrs " + "NMCP IPD Total Malaria Deaths >5Yrs" + "HMIS 17 Malaria Under 5 years Deaths" + "HMIS 17 Malaria 5 years and older Deaths" + "CHD IMCI mRDT Positive Deaths 5-35M" + "CHD IMCI mRDT Positive Deaths 36-59M") *Denominator*: Target Population "CMED Total Population" (Note: Data on inpatient malaria deaths is also captured in IDSR and IMCI)
Lowest administrative level	District
Disaggregation	Age (<5, 5+); Diagnosis (presumed, confirmed)
Reporting frequency	Annual
Rationale	In the absence of complete data on the number of all deaths due to malaria, measuring inpatient deaths provides the best way to track malaria deaths over time. This indicator reflects the overall performance of the National Malaria Control Programme to deliver effective interventions. Death rates due to malaria will decline if malaria incidence declines. They will also decline due to effective and high-quality malaria case management that prevents severe malaria cases and reduces malaria mortality.
Notes for interpretation	This indicator measures the impact of malaria interventions at the population level. However, it is likely to underestimate the death rate as only people who died at a facility are included in the numerator. Trends in inpatient malaria deaths are expected to align with those for the number of confirmed malaria cases and any differences should be investigated to see if real or based on changes in reporting. As the civil registration system develops, this will become an ideal source of this indicator. In addition, with a fully functional CRVS system, this indicator need not be limited to inpatient deaths. Note: the baseline is measured using HMIS 15 reporting form, but this has been phased out going forward. Central Hospital Data (HMIS 17) currently limited within DHIS2. Underreporting from private and public clinics may alter estimates.* Healthcare utilisation by non-Malawians may result in higher estimates.* Accuracy of population estimate may bias results.* *See General Guidelines

Custodian of the indicator	NMCP
M&E framework level	Impact
Baseline / recent estimates	23 per 100,000 (Malaria Reporting Form, 70.5% reporting) 22 per 100,000 (HMIS 15 + HMIS 17, DHIS2, 2015; 94.6% reporting rate HMIS 15; 16.7% reporting rate HMIS 17)
Targets (2018; 2020; 2022)	20 per 100,000; 17 per 100,000; 14 per 100,000

Unique Identifier (code)	NMCP04N
Indicator name	Use of insecticide-treated nets (ITN)
Indicator Definition	Percentage population in malaria endemic areas who slept under an ITN the previous night
Alignment (HSSP I; Global 100; SDG)	Yes; Yes; Yes
Numerator	Number of people in malaria endemic areas who slept under an ITN the previous night in surveyed households
Numerator source (primary; reporting form)	Surveys (MIS, DHS, MICS)
Denominator	Total number of people in malaria endemic areas who spent the previous night in surveyed households
Denominator source	Surveys (MIS, DHS, MICS)
Method of calculation	Numerator / Denominator * 100
Calculation (HMIS)	NA
Lowest administrative level	National
Disaggregation	Age (<5, 5+); Type of area (Urban, Rural); Pregnant women
Reporting frequency	2 - 5 years
Rationale	Promotion of insecticide-treated nets is a primary prevention strategy to reduce malaria transmission in Malawi. This indicator allows for monitoring the success of this strategy, particularly in high-risk populations such as children under 5 and pregnant women.
Notes for interpretation	Since malaria is seasonal, usage of bednets may be higher during periods of high malaria transmission. Caution should be used in interpreting surveys that were conducted at different times of year.
Custodian of the indicator	NMCP
M&E framework level	Outcome
Baseline / recent estimates	MIS 2014: 67% Under 5, 62% Pregnant Women, 53% All; DHS 2015-16: 44.7% Under 5, 46.7% Pregnant Women
Targets (2018; 2020; 2022)	75%; 80%; 85%

Unique Identifier (code)	NMCP05.1N
Indicator name	Intermittent preventive therapy for malaria during pregnancy (IPTp) (Survey-based)
Indicator Definition	Percentage of women who received three or more doses of intermittent preventive treatment during antenatal care visits during their last pregnancy
Alignment (HSSP I; Global 100; SDG)	Yes; Yes; No
Numerator	Number of eligible pregnant women receiving three or more doses of intermittent preventive treatment for malaria during antenatal care visits in two years preceding the survey
Numerator source (primary; reporting form)	Surveys (MIS, DHS, MICS)
Denominator	Total number of women age 15-49 with a live birth in the two years preceding the survey
Denominator source	Surveys (MIS, DHS, MICS)
Method of calculation	Numerator / Denominator * 100
Calculation (HMIS)	NA
Lowest administrative level	National
Disaggregation	None
Reporting frequency	2 – 5 years
Rationale	Malaria infection during pregnancy is a major public health problem, with substantial risks for the mother, her foetus, and the neonate. In high transmission areas such as Malawi, malaria in pregnant women is often asymptomatic, but is frequently associated with anaemia and can interfere with the maternal-foetal exchange, leading to complications for the foetus/infant such as low birthweight, anaemia, and foetal death. Intermittent preventive treatment of malaria in pregnancy is a full therapeutic course of antimalarial medicine given to pregnant women at routine antenatal care visits, regardless of whether the recipient is infected with malaria. Provision of intermittent preventive treatment of malaria (IPTp) is one of the key strategies to prevent malaria in pregnancy.
Notes for interpretation	This indicator is a measure of women's access to ANC, adherence to attending three or more visits, and ANC quality of care. This survey-based indicator measures IPTp administration among only live births, unlike facility-based measures which include all pregnant women captured in ANC. Further, it may be subject to recall bias, as it surveys women with deliveries in the prior two years. Since malaria can cause miscarriage or stillbirth, it is likely that looking only at live births will overestimate IPTp.
Custodian of the indicator	NMCP
M&E framework level	Outcome
Baseline / recent estimates	30% (DHS, 2015) 19.3 (2014 MDG Endline/MICS)
Targets (2018; 2020; 2022)	40%; 50%; 60%

Unique Identifier (code)	NMCP05.2N
Indicator name	Intermittent preventive therapy for malaria during pregnancy (IPTp) (HMIS-based)
Indicator Definition	Percentage of women attending ANC who received three* or more doses of intermittent preventive treatment during antenatal care visits during their last pregnancy *Policy being updated from two to three doses (2017)
Alignment (HSSP I; Global 100; SDG)	Yes; Yes; No
Numerator	Number of eligible pregnant women (not on cotrimoxazole prophylactic treatment (CPT)) receiving three or more doses of intermittent preventive treatment for malaria during antenatal care visits
Numerator source (primary; reporting form)	ANC Register; Antenatal monthly reporting form
Denominator	Total number of pregnant women attending at least one ANC visit (total number of women in the cohort) minus pregnant women on cotrimoxazole prophylactic treatment (CPT)
Denominator source	ANC Register
Method of calculation	Numerator / Denominator * 100
Calculation (HMIS)	*Numerator*: ANC Clinic Monthly Report ('ANC Received 2x3 SP tabs'); ('ANC Received 3x3 SP tabs') once policy updated *Denominator*: ANC Clinic Monthly Report [('ANC Total with 1 visit' + 'ANC Total with 2 visits' + 'ANC Total with 3 visits' + 'ANC Total with 4 visit' + 'ANC Total with 5+ visits') – 'ANC Women on CPT')] or ['ANC Tot. women in total' – 'ANC Women on CPT']
Lowest administrative level	District
Disaggregation	None
Reporting frequency	Annual
Rationale	Malaria infection during pregnancy is a major public health problem, with substantial risks for the mother, her foetus, and the neonate. In high transmission areas such as Malawi, malaria in pregnant women is often asymptomatic, but is frequently associated with anaemia and can interfere with the maternal-foetal exchange, leading to complications for the foetus/infant such as low birthweight, anaemia, and foetal death. Intermittent preventive treatment of malaria in pregnancy is a full therapeutic course of antimalarial medicine given to pregnant women at routine antenatal care visits, regardless of whether the recipient is infected with malaria. Provision of intermittent preventive treatment of malaria (IPTp) is one of the key strategies to prevent malaria in pregnancy
Notes for interpretation	This indicator is a measure of women's access to ANC, adherence to attending three or more visits, and ANC quality of care. As a proxy measure for the population percentage, it likely overestimates IPTp coverage as women not in ANC are not included. If triangulated with the survey-based measure of the percentage of pregnant women receiving ANC care, one could estimate the prevalence of all pregnant women receiving IPTp.

	Due to a change in treatment guidelines, baseline figures or recent estimates may not be directly applicable. Central Hospital Data (HMIS 17) currently limited within DHIS2. Underreporting from private and public clinics may alter estimates.* Healthcare utilisation by non-Malawians may result in higher estimates.* *See General Guidelines
Custodian of the indicator	NMCP
M&E framework level	Outcome
Baseline / recent estimates	66% (IPTp for ≥2 doses of SP, to be updated once reporting form captures IPTp for ≥3 doses of SP) DHIS2, 2015; ANC Reporting form 90.7% reporting rate
Targets (2018; 2020; 2022)	Targets have not been defined at this time. Targets may be set in the future.

11. Non-communicable diseases indicators

Unique Identifier (code)	NCD01N
Indicator name	Road traffic accident mortality rate
Indicator Definition	Number of road accident deaths per 100,000 population (health facility-based proxy indicator)
Alignment (HSSP I; Global 100; SDG)	No; Yes; No
Numerator	Number of road traffic accident deaths recorded at health facility
Numerator source (primary; reporting form)	Outpatient, emergency department, male ward, female ward, and children's ward registers; Non-communicable Disease Reporting Form; HMIS 15
Denominator	Estimated mid-year population
Denominator source	Target population form
Method of calculation	Numerator / Denominator * 1000
Calculation (HMIS)	*Numerator*: Noncommunicable Diseases (NCD) Reporting form ("NCD Deaths From Road Traffic Accidents Male" + "NCD Deaths From Road Traffic Accidents Female") OR HMIS 15 form ("HMIS # of Road Accidents - inpatient death") + HMIS 17 ("HMIS 17-Road Traffic Accidents Deaths") *Denominator*: Target Population Form ("Year - Total population") *The use of HMIS 15 for this indicator will be phased out when reporting rates for the NCD report exceed 80%.
Lowest administrative level	District
Disaggregation	None;
Reporting frequency	Annual
Rationale	Road safety is a major concern in Malawi. According to the Global Burden of Disease Study, road traffic injuries were the 10th largest contributor to premature mortality. Road traffic deaths are influenced by the number of accidents, the severity of the accidents, the time to reach a health facility, and the availability of effective care at the health facility.
Notes for interpretation	Baseline data is based on global WHO estimates. In the HMIS system, road traffic deaths are limited to those recorded at the health facility. Since many deaths from road traffic injuries occur outside of the facility (e.g. dying at the accident site or after discharge from a facility), they are unlikely to be included in the numerator and therefore this will underestimate the actual road traffic accident mortality rate. Further, trends in mortality may reflect changes in the actual rate or changes in the rate at which fatalities are recorded. Additional data for more robust estimates may be available from the police. The optimal source of data for this indicator would be a fully functioning civil registration system with high quality cause of death data. As Malawi's system is expanded and improved, measurement of this indicator should switch. Central Hospital Data (HMIS 17) currently limited within DHIS2. Underreporting from private and public clinics may alter estimates.*

	Healthcare utilisation by non-Malawians may result in higher estimates.* Accuracy of population estimate may bias results.* *See General Guidelines
Custodian of the indicator	Noncommunicable diseases and mental health
M&E framework level	Impact
Baseline / recent estimates	2.1 per 100,000 population (DHIS2, 2015; NCD dataset at 16.7% reporting rate summary 1.1 per 100,000 population (DHIS2, 2015; HMIS 15 dataset at 94.6% reporting rate summary) 35 per 100,000 population (WHO estimate, 2013, using police data)
Targets (2018; 2020; 2022)	33/100,000; 31/100,000; 29/100,000

Unique Identifier (code)	NCD02N
Indicator name	Suicide mortality rate
Indicator Definition	Number of suicide related deaths per 100 000 population (health facility-based proxy indicator)
Alignment (HSSP I; Global 100; SDG)	No; Yes; Yes
Numerator	Total number of suicide deaths recorded at health facility
Numerator source (primary; reporting form)	Outpatient, emergency department, male ward, female ward, and children's ward registers; NCD Reporting form
Denominator	Estimate mid-year population
Denominator source	Target population form
Method of calculation	Numerator / Denominator * 100,000
Calculation (HMIS)	Numerator: NCD Reporting form ("NCD Deaths From Suicide Male" + "NCD Deaths From Suicide Female ") Denominator: Target Population Form ("CMED Total population")
Lowest administrative level	District
Disaggregation	Sex
Reporting frequency	Annual
Rationale	Suicide is a serious public health problem and the second most common cause of death globally among youth 15 - 29 years old. Suicide may be the result of mental health disorders such as anxiety and depression, and is often more common in marginalized groups. Knowing the suicide mortality rate can help monitor and inform suicide prevention efforts.
Notes for interpretation	Using the HMIS system, the suicide rate is likely to be under-reported as most suicides occur in the community and are never reported to the health facilities. Additional data for more robust estimates may be available from the police. The optimal data source for this indicator is a fully functioning civil registration system with high quality cause of death data. As Malawi's system is expanded and improved, measurement of this indicator should switch. Underreporting from private and public clinics may alter estimates.* Healthcare utilisation by non-Malawians may result in higher estimates.* Accuracy of population estimate may bias results.* *See General Guidelines
Custodian of the indicator	Noncommunicable diseases and mental health
M&E framework level	Impact
Baseline / recent estimates	0.3 per 100,000 (DHIS2, 2015; NCD dataset at 16.7% reporting rate summary) (Note: 5.5 per 100,000 (WHO, 2012))
Targets (2018; 2020; 2022)	Targets have not been defined at this time. Targets may be set in the future.

Unique Identifier (code)	NCD03N
Indicator name	Probability of death from cardiovascular diseases, cancer, diabetes, or chronic respiratory diseases
Indicator Definition	Unconditional probability of dying between the exact ages of 30 and 70 years from cardiovascular diseases, cancer, diabetes or chronic respiratory diseases.
Alignment (HSSP I; Global 100; SDG)	No; Yes; Yes
Numerator	Number of deaths between ages 30 and 70 years due to the four causes.
Numerator source (primary; reporting form)	NA
Denominator	Number of years of exposure
Denominator source	NA
Method of calculation	Lifetable
Calculation (HMIS)	NA
Lowest administrative level	National
Disaggregation	None
Reporting frequency	As data is available
Rationale	Globally, cardiovascular disease, cancer, diabetes and chronic respiratory diseases are together the leading cause of death among people under 70. While this is not yet true in Malawi, the rate of mortality due to NCDs is expected to rise. This indicator allows for the monitoring of this new epidemic as well as the success of NCD prevention efforts.
Notes for interpretation	The optimal data source for this indicator is a fully functioning vital registration system with high quality cause of death data. The present baseline is based on estimates from WHO estimates extrapolated from regional data. As Malawi's vital registration system improves and expands, the indicator will be measured using the vital registration system rather than estimates
Custodian of the indicator	Noncommunicable diseases and mental health
M&E framework level	Impact
Baseline / recent estimates	19% (WHO NCD Profile, 2014)
Targets (2018; 2020; 2022)	15.2%; 11.4%; 7.6%

Unique Identifier (code)	NCD04N
Indicator name	Prevalence of heavy episodic drinking among adults
Indicator Definition	Percentage of adults (15+ years) who have had at least 60 grams or more of pure alcohol on at least one occasion in the past 30 days (approximately equivalent to 6 standard alcoholic drinks)
Alignment (HSSP I; Global 100; SDG)	No; No; No
Numerator	The number of respondents (15+ years) who reported drinking 60 grams or more of pure alcohol in the past 30 days
Numerator source (primary; reporting form)	Survey (STEPS)
Denominator	Total number of people 15+ years surveyed responding to the corresponding question in the survey plus abstainers
Denominator source	Survey (STEPS)
Method of calculation	Numerator/Denominator x 100
Calculation (HMIS)	N/A
Lowest administrative level	National
Disaggregation	Sex
Reporting frequency	5 years (depending on survey)
Rationale	Harmful use of alcohol is one of the risk factors contributing to premature mortality and disability globally. High alcohol intake increases the risk of CVD, cancer, injuries, and liver disease among others. Prevalence of heavy episodic drinking is one of the indicators that provides information regarding patterns of alcohol consumption. It highlights the proportion of the population which consumes high levels of alcohol at single occasions and therefore at higher risk of experiencing acute effects of alcohol related harm but also experiencing developing chronic health complications
Notes for interpretation	The baseline data for the indicator was based on the STEPS survey in 2009 which defined heavy drinking as ≥5 drinks for men and ≥4 drinks for women. Additionally, the survey only included adults from 25 – 64 years of age. Potential limitations include the fact that participants may be reluctant to report heavy drinking on a survey leading to under-reporting. Additionally, the question relies on a common understanding of the size of a standard drink.
Custodian of the indicator	Noncommunicable Diseases and Mental Health
M&E framework level	Outcome
Baseline / recent estimates	19% male; 2.3% female STEPS Survey 2009. Awaiting results from 2017 STEPS survey.
Targets (2018; 2020; 2022)	Men: Annual decline of 0.2% from 2017 result Women: Annual decline of 0.1% from 2017 result

Unique Identifier (code)	NCD05N
Indicator name	Tobacco use among persons aged 18+ years
Indicator Definition	Age-standardized prevalence of current tobacco use among persons aged 18+ years
Alignment (HSSP I; Global 100; SDG)	No; Yes; Yes
Numerator	Number of current tobacco users aged 18+ years. "Current users" include both daily and non-daily users of smoked or smokeless tobacco.
Numerator source (primary; reporting form)	Survey (STEPS)
Denominator	All respondents of the survey aged 18+ years
Denominator source	Survey (STEPS)
Method of calculation	Numerator / Denominator * 100
Calculation (HMIS)	NA
Lowest administrative level	National
Disaggregation	Sex
Reporting frequency	5 years (depending on survey)
Rationale	Use of tobacco is one of the main risk factors for noncommunicable diseases, increasing the risk of lung cancer, cardiovascular disease, chronic obstructive pulmonary disease and many others. Monitoring rates of tobacco use allows countries to monitor progress toward tobacco control and NCD prevention.
Notes for interpretation	The optimal data source for this indicator is survey data, either from a GATS or a STEPS survey; however, the present baseline is based the 2009 STEPS survey and may be outdated.
Custodian of the indicator	Noncommunicable diseases and mental health
M&E framework level	Outcome
Baseline / recent estimates	14% (2009 STEPS survey)
Targets (2018; 2020; 2022)	14%; 12%; 10%

11 Nursing and Midwifery indicators

Unique Identifier (code)	NMW01N
Indicator name	Average length of stay (ALOS)
Indicator Definition	Average length of stay
Alignment (HSSP I; Global 100; SDG)	Yes; No; Yes
Numerator	Number of inpatient days
Numerator source (primary; reporting form)	Ward register (HMIS 15, HMIS 17)
Denominator	Number of discharges
Denominator source	Ward Register, Maternity register (HMIS 15, HMIS 17)
Method of calculation	Numerator/Denominator
Calculation (HMIS)	Numerator: HMIS 15 ("HMIS Total Inpatient days") + HMIS 17 ("HMIS 17 Inpatient days") Denominator: HMIS 15 ("HMIS Total # of discharges") + HMIS 17 ("HMIS 17 Discharges Total")
Lowest administrative level	District
Disaggregation	Facility type; Ward type (maternity, surgical, paediatrics, medical)
Reporting frequency	Annually
Rationale	ALOS is often used as an indicator of efficiency and effectiveness of inpatient care. If all else remains equal, a shorter stay reduces the cost per discharge and shifts care from inpatient to less expensive settings.
Notes for interpretation	HMIS defines "inpatient days" as the sum of the number of days spent in the hospital for each inpatient who was discharged during the time period under review regardless of when the patient was admitted. In some references, this is referred to as, "discharge days." Discharges refer to inpatients released from the hospital during the period under review. Discharges should include referrals, abscondees, and deaths. Average length of stay is better interpreted together with other indicators of bed turnover and bed occupancy rate. A high average length of stay coupled with low bed occupancy and low bed turnover maybe the norm for long stay facilities. A low average length of stay for tertiary facilities may indicate treatment of primary level cases. The type of facility, ward, or case should also be considered in the interpretation of this indicator. Central Hospital Data (HMIS 17) currently limited within DHIS2. Underreporting from private and public clinics may alter estimates.* *See General Guidelines
Custodian of the indicator	Nursing and Midwifery Department
M&E framework level	Output
Baseline / recent estimates	Baseline not available.
Targets (2018; 2020; 2022)	Targets have not been defined. Targets may be set in the future.

Unique Identifier (code)	NMW02N
Indicator name	Bed turnover rate
Indicator Definition	Bed turnover rate
Alignment (HSSP I; Global 100; SDG)	Yes; No; No
Numerator	Number of discharges (including deaths) during the period under review
Numerator source (primary; reporting form)	Ward register; Maternity register (HMIS 15, HMIS 17)
Denominator	Number of Beds in the facility (Bed capacity)
Denominator source	HMIS 15; HMIS 17
Method of calculation	Numerator/Denominator
Calculation (HMIS)	Numerator: Numerator: HMIS 15 ("HMIS Total Inpatient days") + HMIS 17 ("HMIS 17 Inpatient days") Denominator: HMIS 15 ("HMIS bed capacity") + HMIS 17
Lowest administrative level	District
Disaggregation	Facility type
Reporting frequency	Annually
Rationale	Bed turnover rate is a measure of hospital utilisation. It calculates the number of times each hospital bed changes occupants. The turnover ratio is a measure of productivity of hospital beds and represents the number of patients treated per bed in a year.
Notes for interpretation	The turnover rate is dependent on the type of care provided and the complexity of the health conditions that are treated in the hospital facility. A high turnover rate indicates that only simple types of treatment and procedures are provided. A low turnover rate indicates that patients are admitted for longer periods of time. However, a low turnover rate could also indicate that fewer people are utilising the hospital facility or that patients are being unnecessarily retained on the premises. However, in the case of hospitals dealing with chronic diseases like TB, a low turnover rate is expected. Central Hospital Data (HMIS 17) currently limited within DHIS2. Underreporting from private and public clinics may alter estimates.* Healthcare utilisation by non-Malawians may result in higher estimates.* *See General Guidelines
Custodian of the indicator	Nursing and Midwifery Department
M&E framework level	Output
Baseline / recent estimates	Baseline not available.
Targets (2018; 2020; 2022)	Targets have not been defined. Targets may be set in the future.

Unique Identifier (code)	NMW03N
Indicator name	Bed occupancy rate
Indicator Definition	Percentage of available beds that have been occupied over a given period
Alignment (HSSP I; Global 100; SDG)	Yes; No; Yes
Numerator	Number of inpatient days during the period
Numerator source (primary; reporting form)	Ward Register, Maternity Register (HMIS 15, HMIS 17)
Denominator	Bed days availability (number of beds available x number of days in the period)
Denominator source	HMIS 15; HMIS 17
Method of calculation	Numerator/Denominator*100
Calculation (HMIS)	Numerator: HMIS 15 ("HMIS Total Inpatient days") + HMIS 17 ("HMIS 17 Inpatient days") Denominator: HMIS 15 ("HMIS bed capacity") + HMIS 17 x 365
Lowest administrative level	District
Disaggregation	Facility type
Reporting frequency	Annually
Rationale	The bed occupancy rate compares the number of patients treated over a given period of time to the total number of beds available for that same period of time. This indicator is used for assessing the efficient use of inpatient facilities. The occupancy rate is a measure of utilisation of the available bed capacity. It indicates the percentage of beds occupied by patients in a year.
Notes for interpretation	Ideally, bed occupancy rate should be 90% or more. Two major factors: the need for the service and quality of service, generally determine the bed occupancy rate. However, this indicator does not provide an indication of whether the beds were correctly utilised or not. There is need to interpret the bed occupancy rate in conjunction with other similar indicators of efficiency (average length of stay and bed turnover rate). Central Hospital Data (HMIS 17) currently limited within DHIS2. Underreporting from private and public clinics may alter estimates.* Healthcare utilisation by non-Malawians may result in higher estimates.* *See General Guidelines
Custodian of the indicator	Nursing and Midwifery Department
M&E framework level	Output
Baseline / recent estimates	Baseline not available.
Targets (2018; 2020; 2022)	Targets have not been defined. Targets may be set in the future.

Unique Identifier (code)	NMW04N
Indicator name	Hospital bed density
Indicator Definition	Hospital bed density per 10,000 population
Alignment (HSSP I; Global 100; SDG)	No; Yes; No
Numerator	Number of hospital beds (excluding delivery beds)
Numerator source (primary; reporting form)	HMIS 15; HMIS 17
Denominator	Total population
Denominator source	Survey (DHS, MICS)
Method of calculation	Numerator/Denominator*10000
Calculation (HMIS)	NA
Lowest administrative level	District
Disaggregation	Hospital type; Ownership (provider type)
Reporting frequency	Annual
Rationale	Hospital bed density is a measure of availability, access and distribution of inpatient services to the population. If disaggregated by location (rural/urban) is can measure equity
Notes for interpretation	There is no global norm for the density of hospital beds in relation to total population but the higher the ratio the better the access and availability of inpatient services. However, note that indicators of service availability cannot accurately reflect access to services and therefore needs to be interpreted with caution.
Custodian of the indicator	Nursing and Midwifery Department
M&E framework level	Input
Baseline / recent estimates	13/10,000 (WHO, 2011); 11/10,000 (DHIS2, 2017: HMIS 15 dataset, 83.5% reporting rate + Central Hospital data)
Targets (2018; 2020; 2022)	Targets have not been defined. Targets may be set in the future.

Unique Identifier (code)	NMW05N
Indicator name	Crude in-patient death rate
Indicator Definition	Percentage of inpatient deaths
Alignment (HSSP I; Global 100; SDG)	No; No; No
Numerator	Number of deaths occurring in health facilities
Numerator source (primary; reporting form)	Ward Register, Maternity Register, Nursing daily report; HMIS 15, Maternity Monthly report
Denominator	Total admissions
Denominator source	Ward Register, Maternity Register, Nursing daily report; HMIS 15, Maternity Monthly report
Method of calculation	Numerator/Denominator x 100
Calculation (HMIS)	Numerator: HMIS 15 ("HMIS Total # of Inpatient Deaths from all causes (Excluding Maternity") + HMIS 17 ("HMIS 17 Inpatient deaths total") + (Maternity Monthly reporting form ("RHD MAT Maternal Deaths") Denominator: HMIS 15 ("HMIS Admissions from all causes") + HMIS 17 ("HMIS 17 Admission from all causes")
Lowest administrative level	District
Disaggregation	Facility Type, Age, Sex, Time of occurrence of death (within 24 hours of admission, after 24 hours of admission)
Reporting frequency	Annually
Rationale	Crude inpatient death rate measures the percentage of admissions that die in hospitals. It is a crude measure of the quality of inpatient care.
Notes for interpretation	Hospitals should always aim at reducing hospital mortality. An increase or higher crude death rate maybe indicative of falling standards of care and should be investigated, though this could also suggest improved reporting. Crude death rate may be affected by the level and complexity of care provided. As such, the crude death rate of referral hospitals receiving patients with more advanced health conditions could be higher than other facilities because of the nature of cases they see. Central Hospital Data (HMIS 17) currently limited within DHIS2. Underreporting from private and public clinics may alter estimates.* Healthcare utilisation by non-Malawians may result in higher estimates.* *See General Guidelines
Custodian of the indicator	Nursing and Midwifery Department
M&E framework level	Outcome
Baseline / recent estimates	Baseline not available.
Targets (2018; 2020; 2022)	Targets have not been defined. Targets may be set in the future.

12 Nutrition indicators

Unique Identifier (code)	NUT01.1N
Indicator name	Vitamin A supplementation coverage (survey-based)
Indicator Definition	Percentage of children 6–59 months who received at least one age-appropriate dose of vitamin A in the past 6 months
Alignment (HSSP I; Global 100; SDG)	No; Yes; No
Numerator	Number of living children 6 to 59 months who received vitamin A supplements in the six months preceding the interview
Numerator source (primary; reporting form)	Survey (DHS)
Denominator	Number of living children 6 to 59 months of age
Denominator source	Survey (DHS)
Method of calculation	Numerator/Denominator*100
Calculation (HMIS)	NA
Lowest administrative level	District
Disaggregation	Age (6-11 months; 12-59 months)
Reporting frequency	5 years
Rationale	Vitamin A deficiency can cause blindness and increase the risk of severe illness and mortality from childhood infections such as measles and diarrhoeal disease. Periodic vitamin A supplementation (usually every six months) is a key strategy to increase child survival and decrease under-5 mortality.
Notes for interpretation	In the DHS survey, mothers are asked whether their children under 5 received vitamin A supplementation in the last six months. The results may be subject to recall bias if mothers do not remember when their children last received Vitamin A supplements or do not know whether they received it.
Custodian of the indicator	Nutrition
M&E framework level	Outcome
Baseline / recent estimates	64.1% (DHS 2015-16)
Targets (2018; 2020; 2022)	99%; 99%; 99%

Unique Identifier (code)	NUT01.2N
Indicator name	Vitamin A supplementation coverage (HMIS-based)
Indicator Definition	Percentage of children 6–59 months who received at least one age-appropriate dose of vitamin A in the past 6 months
Alignment (HSSP I; Global 100; SDG)	No; Yes; No
Numerator	Number of children 6 to 59 months old given at least one dose of vitamin A supplements in the past six months
Numerator source (primary; reporting form)	Under 2 Register; 2-5 Register and special campaign data; Health facility monthly vaccination performance and disease surveillance report
Denominator	Estimated midyear population of 6 to 59 month olds (based on population estimates, this represents 16.5% of the total population)
Denominator source	Target population form
Method of calculation	Numerator/Denominator*100
Calculation (HMIS)	*Numerator*: EPI – Health Facility Monthly Vaccination Performance and Disease Surveillance Report ("CHD EPI Vitamin A number of Supplemented Monthly 6-11 Months Static" + "CHD EPI Vitamin A number of Supplemented 12 - 59 Months Outreach") *Denominator*: CMED Population 6-59 months
Lowest administrative level	District
Disaggregation	Method of delivery (campaign, routine)
Reporting frequency	Every 6 months
Rationale	Vitamin A deficiency can cause blindness and increase the risk of severe illness and mortality from childhood infections such as measles and diarrhoeal disease. Periodic vitamin A supplementation (usually every six months) is a key strategy to increase child survival and decrease under-5 mortality.
Notes for interpretation	Many children in Malawi receive vitamin A through special campaigns rather than through routine use of health services. Currently, campaign data is not consistently added into DHIS2 leading to under estimates. At the moment, this indicator presents data on vitamin A from routine sources only, therefore it can be difficult to determine the true proportion of children who received vitamin A. However, there are plans to add campaign data into DHIS2 in order to fully understand vitamin A supplementation coverage. Routine supplementation represents positive health seeking behaviour by mothers who bring their children for Vitamin A supplementation while campaign supplementation on the other hand is a health intervention by the health system. Underreporting from private and public clinics may alter estimates.* Healthcare utilisation by non-Malawians may result in higher estimates.* Accuracy of population estimate may bias results.* *See General Guidelines
Custodian of the indicator	Nutrition
M&E framework level	Outcome
Baseline / recent estimates	29.3% (DHIS2, 2015; HMIS 15 dataset, 94.6% reporting rate) 18.3% (DHIS2, 2015; EPI dataset, 59.6% reporting rate)
Targets (2018; 2020; 2022)	99%; 99%; 99%

Unique Identifier (code)	NUT02N
Indicator name	Stunting prevalence (under-five)
Indicator Definition	Percentage of children under 5 years of age with moderate or severe stunting (height-for-age < -2 standard deviations of the WHO Child Growth Standards median) among children under five
Alignment (HSSP I; Global 100; SDG)	Yes; Yes; Yes
Numerator	Number of stunted children under five years of age
Numerator source (primary; reporting form)	Survey (DHS, MICS)
Denominator	Total number of surveyed children under five years of age
Denominator source	Survey (DHS, MICS)
Method of calculation	Numerator / Denominator * 100
Calculation (HMIS)	NA
Lowest administrative level	District
Disaggregation	Sex Age (0-5, 6-11, 12-23, 24-59 months) Severity (severe, moderate)
Reporting frequency	3 – 5 years
Rationale	Lack of adequate nutrition is a key driver of child mortality, making children more susceptible to disease. Children more than 2 standard deviations shorter than the median height in the WHO reference population are considered to be stunted (or too short for their age). Stunting is a measure of long-term exposure to undernutrition and poor health. It is especially influenced by conditions during the first two years of life.
Notes for interpretation	Stunting prevalence is a measure of population child health. Rates less than 20% are considered low prevalence, and above 40% very high.
Custodian of the indicator	Nutrition
M&E framework level	Outcome
Baseline / recent estimates	37% (DHS 2015-16) 42.4% (2014 MDG Endline/MICS)
Targets (2018; 2020; 2022)	35%; 33%; 31%

Unique Identifier (code)	NUT03N
Indicator name	Wasting prevalence (under-five)
Indicator Definition	Percentage of children under 5 years of age with moderate or severe wasting (weight-for-height <-2 standard deviations of the WHO Child Growth Standards median)
Alignment (HSSP I; Global 100; SDG)	Yes; Yes; Yes
Numerator	Number of wasted children under five years of age
Numerator source (primary; reporting form)	Survey (DHS, MICS)
Denominator	Total number of surveyed children under five years of age
Denominator source	Survey (DHS, MICS)
Method of calculation	Numerator / Denominator * 100
Calculation (HMIS)	NA
Lowest administrative level	District
Disaggregation	Sex Age (0-5, 6-11, 12-23, 24-59 months) Severity (severe, moderate)
Reporting frequency	3 – 5 years
Rationale	Lack of adequate nutrition is a key driver of child mortality, making children more susceptible to disease. Wasting (low weight-for-height) identifies children suffering from current or acute undernutrition. Causes include severe disease or recent starvation.
Notes for interpretation	Unlike stunting, wasting is a short-term indicator and may vary seasonally with changes in either food availability or disease prevalence. Prevalence of wasting above 5% is a sign of poor nutrition in the population and can lead to increased mortality.
Custodian of the indicator	Nutrition
M&E framework level	Outcome
Baseline / recent estimates	Baseline: 2.7% (DHS 2015-16) Recent estimate: 3.8% (2014 MDG Endline/MICS);
Targets (2018; 2020; 2022)	2.2%; 1.7%; 1.2%

Unique Identifier (code)	NUT04N
Indicator name	Overweight prevalence (under-five)
Indicator Definition	Percentage of children under 5 years of age who are overweight (weight-for-height >2 standard deviations of the WHO Child Growth Standards median)
Alignment (HSSP I; Global 100; SDG)	Yes; Yes; No
Numerator	Number of children under 5 years of age that fall above two standard deviations from the median weight-for-height of the WHO Child Growth Standards
Numerator source (primary; reporting form)	Survey (DHS, MICS)
Denominator	Total number of children aged 0-5 years of age that were measured
Denominator source	Survey (DHS, MICS)
Method of calculation	Numerator / Denominator * 100
Calculation (HMIS)	NA
Lowest administrative level	District
Disaggregation	Sex Age (0-5, 6-11, 12-23, 24-59) Level (SD > +3; SD between +2 and +3)
Reporting frequency	3- 5years
Rationale	Globally, childhood obesity is a major challenge and the prevalence is growing rapidly. Children who are overweight or obese are more likely to remain overweight or obese as adults and are more susceptible to non-communicable diseases such as diabetes and cardiovascular diseases.
Notes for interpretation	Some children with high weight-for-height may not be obese; however, on a population level, a high prevalence of overweight is an indication of overnutrition in a portion of the population.
Custodian of the indicator	Nutrition
M&E framework level	Outcome
Baseline / recent estimates	5.1% (2014 MDG Endline/MICS); 4.5% (DHS 2015-16)
Targets (2018; 2020; 2022)	3.9%; 3.3%; 2.7%

Unique Identifier (code)	NUT05N
Indicator name	Minimum acceptable diet for children 6-23 months
Indicator Definition	Percentage of breastfed children 6-23 months who have the minimum dietary diversity and the minimal meal frequency during the previous day AND Percentage of non-breastfed children 6-23 months who receive at least two milk feedings and had at least the minimum dietary diversity not including milk feeds and the minimum meal frequency during the previous day
Alignment (HSSP I; Global 100; SDG)	No; Yes; No
Numerator	1) Breastfed children 6–23 months of age who had at least the minimum dietary diversity and the minimum meal frequency during the previous day AND 2) Non-breastfed children 6-23 months who receive at least two milk feedings and had at least the minimum dietary diversity and the minimum meal frequency during the previous day
Numerator source (primary; reporting form)	Survey (DHS, MICS)
Denominator	1) Breastfed children 6 – 23 months 2) Non-breastfed children 6 – 23 months
Denominator source	Survey (DHS, MICS)
Method of calculation	Numerator / Denominator x 100
Calculation (HMIS)	NA
Lowest administrative level	District
Disaggregation	Breastfeeding status
Reporting frequency	3 - 5 years
Rationale	Adequate nutrition is essential for children's health and development. Feeding practices for infants and young children directly affect the nutritional status of children under two and impact child survival. Improving infant and young child feeding practices is therefore critical to improved nutrition, health and development of the children. This is a composite indicator combining the quality (dietary diversity) and quantity of diets for children under 2 years of age.
Notes for interpretation	This indicator asks mothers what they fed their children in the last 24 hours and therefore relies on memory. If mothers have been exposed to interventions to improve child feeding, they be more likely to report what they know to be correct rather than what they did (social desirability bias).
Custodian of the indicator	Nutrition
M&E framework level	Outcome
Baseline / recent estimates	7.8% (DHS 2015-16) 1) 15%; 2) 5.2% (2014 MDG Endline/MICS)
Targets (2018; 2020; 2022)	13%; 18%; 23%

Unique Identifier (code)	NUT06N
Indicator name	Percentage of children 6-59 months with anaemia
Indicator Definition	Percentage of children aged 6−59 months with a haemoglobin level of less than 110 g/L, adjusted for altitude.
Alignment (HSSP I; Global 100; SDG)	No; Yes; No
Numerator	Number of children aged 6−59 months with a haemoglobin level of less than 110 g/L, adjusted for altitude.
Numerator source (primary; reporting form)	Survey (DHS)
Denominator	Total number of children aged 6−59 months who had haemoglobin levels obtained during the survey
Denominator source	Survey (DHS)
Method of calculation	Numerator / Denominator * 100
Calculation (HMIS)	NA
Lowest administrative level	District
Disaggregation	Severity (mild, moderate and severe)
Reporting frequency	5 years
Rationale	Anaemia is a serious concern for young children because it can impede normal growth and both physical and mental development. In addition, it can also increase vulnerability to infectious diseases. Monitoring the prevalence of anaemia in children can be useful for the development of health intervention programmes designed to prevent anaemia, such as iron fortification programmes.
Notes for interpretation	This indicator is not able to distinguish the cause of anaemia which can be due to iron deficiency (50% of cases globally) or as the result of infections or other nutritional deficiencies.
Custodian of the indicator	Nutrition
M&E framework level	Outcome
Baseline / recent estimates	63% (DHS 2015-16)
Targets (2018; 2020; 2022)	61%; 59%; 58%

Unique Identifier (code)	NUT07.1N
Indicator name	Percentage of low birthweight (LBW) infants (survey-based)
Indicator Definition	Percentage of live births that weighed less than 2500 grams
Alignment (HSSP I; Global 100; SDG)	No; Yes; No
Numerator	Number of live born neonates that weigh less than 2500g at birth (in the last five years DHS; in the last 2 years MICS)
Numerator source (primary; reporting form)	Survey (DHS, MICS)
Denominator	Number of live births whose birthweight was recorded (in the last five years DHS; in the last 2 years MICS) of surveyed women
Denominator source	Survey (DHS, MICS)
Method of calculation	Numerator / Denominator * 100
Calculation (HMIS)	NA
Lowest administrative level	District
Disaggregation	None
Reporting frequency	3 – 5 years
Rationale	Birthweight is an important indicator of the risk of childhood morbidity and mortality. Children born weighing less than 2500 g (or reported to be 'very small' or 'smaller than average,') have an elevated risk of mortality in early childhood and an elevated risk of disease throughout the life course. The main causes of LBW include preterm birth and Intrauterine Growth Restriction (IUGR). Both preterm deliveries and IUGR may be caused by undernutrition during pregnancy or other underlying infections such as malaria during pregnancy or anaemia.
Notes for interpretation	This indicator gives the prevalence of low birthweight in the population over the last 2 or 5 years (depending on the survey used). In addition to providing an indicator of children's future susceptibility to morbidity and mortality, low birthweight can be interpreted as a reflection of maternal wellbeing. This may be affected by recall bias as the MICS asks about birthweight among children born in the last two years and the DHS about birthweight for children born in the last 5 years. However, DHS obtained information from written records in roughly 79% of cases. Further, this only reflects birthweight among children whose birthweight was measured (84% in the 2015 DHS; 88% in the MICS) and may not be an accurate representation of the population rate given the inability to report on birthweights of infants born at home.
Custodian of the indicator	Nutrition
M&E framework level	Outcome
Baseline / recent estimates	12.9% (2014 MDG Endline/MICS) 12.3% (2015/16 DHS)
Targets (2018; 2020; 2022)	11%; 9.5%; 8%

Unique Identifier (code)	NUT07.2N
Indicator name	Institutional percentage of low birthweight infants (HMIS-based)
Indicator Definition	Percentage of live births that weighed less than 2500 grams in health facilities
Alignment (HSSP I; Global 100; SDG)	No; Yes; No
Numerator	Number of live born neonates that weigh less than 2500g at birth
Numerator source (primary; reporting form)	Maternity register; Maternity Clinic Monthly Report
Denominator	Number of live births
Denominator source	Maternity Clinic Monthly Report; HMIS 15, HMIS 17
Method of calculation	Numerator / Denominator * 100
Calculation (HMIS)	*Numerator*: Maternity Clinic Monthly Report ("RHD MAT Newborn Complications Weight < 2500g") *Denominator*: Maternity Clinic Monthly Report ("RHD MAT Survival/Survival Alive not HIV exp" + "RHD MAT Survival/Survival Alive Exp No NVP" + "RHD MAT Survival/Survival Alive NVP Started" + "RHD MAT Survival/Survival Alive unknown Exp" + "RHD MAT Survival/Survival Alive Neonatal death") OR *Denominator*: HMIS 15 ("HMIS Total # of Live birth") + HMIS 17 ("Live birth")
Lowest administrative levl	Health Facility
Disaggregation	None
Reporting frequency	Annual
Rationale	Birthweight is an important indicator of the risk of childhood morbidity and mortality. Children born weighing less than 2500 g (or reported to be 'very small' or 'smaller than average,') have an elevated risk of mortality in early childhood and an elevated risk of disease throughout the life course. The main causes of LBW include preterm birth and Intrauterine Growth Restriction (IUGR). Both preterm deliveries and IUGR may be caused by undernutrition during pregnancy or other underlying infections such as malaria during pregnancy or anaemia.
Notes for interpretation	This indicator gives the prevalence of low birthweight among children born at a health facility. It provides an indication of children's future risk of morbidity and mortality. Additionally, low birthweight can be interpreted as a reflection of maternal wellbeing. Facility-based estimates may underestimate the population prevalence of low birthweight as women who give birth in a facility may be more likely to receive ANC and therefore receive preventive care for malaria and other illnesses that could lead to low birthweight. The denominator of this indicator is all babies born in the facility. If some babies were not weighed at birth, this may result in an underestimate of the percent of low birthweight babies. Central Hospital Data (HMIS 17) currently limited within DHIS2.

	Underreporting from private and public clinics may alter estimates.* *See General Guidelines
Custodian of the indicator	Nutrition
M&E framework level	Outcome
Baseline / recent estimates	4.2% (DHIS2, 2015; Maternity dataset at 95.6% reporting rate) 5.0% (DHIS2, 2015; HMIS 15 dataset at 94.6% reporting rate)
Targets (2018; 2020; 2022)	Challenges setting targets in the context of known underreporting

13 Physical assets management (PAM) indicators

Unique Identifier (code)	PAM01N
Indicator name	Health facilities with functioning water, electricity, communication and HVAC
Indicator Definition	Percentage of days with functioning (working and safe) water supply, electricity, communication systems, and HVAC (heat, ventilation, air conditioner) in health facilities
Alignment (HSSP I; Global 100; SDG)	Yes; No; No
Numerator	Number of days that health facilities have functioning (working and safe) water supply, electricity, communication systems and HVAC
Numerator source	To be developed
Denominator	Number of days per year
Denominator source	Calendar for the year
Method of calculation	Numerator/Denominator x 100
Calculation (HMIS)	NA
Lowest administrative level	District
Disaggregation	Infrastructure type (water, electricity, communication (radio, land line, mobile phone, Internet), HVAC)
Reporting frequency	Quarterly
Rationale	i) Running, clean, and potable water is to be available at critical points of care, 95% of the time in central and district hospitals and 85% of the time in community hospitals and health centres, in any given quarter. Water supply is essential for the functioning of each health facility, to keep the facility clean and maintain the quality of services. Water systems require routine monitoring to maintain function. ii) Electricity it to be available in essential areas of the facility, 95% of the time, in any given quarter. Electricity is a basic necessity for every health facility. Its supply has to be reliable and continuous. iii) Communication systems are to be functional and capable of being used as intended, 95% of the time, in any given quarter. Communication systems include a landline phone, cell phone, radio, and internet. It is important to have a well-functioning communication system for proper reporting, feedback and referral. It is most important for reporting notifiable diseases and referring emergency cases. iv) HVAC (heating, ventilation, and air conditioning) systems are to be available in critical points in central and district hospitals, 100% of the time, in any given quarter.
Notes for interpretation	These components are monitored independently for planning purposes and combined as a single indicator for quality assessment. Each facility is expected to have each of these components functioning. The concepts of essential areas and critical points need to be understood while measuring and interpreting this indicator.
Custodian of the indicator	PAM
M&E framework level	Input
Baseline / recent estimates	Baselines not available
Targets (2018; 2020; 2022)	70%, 80%, 90%

Unique Identifier (code)	PAM02N
Indicator name	Functional essential medical equipment
Indicator Definition	Percentage of days health facilities have functional (working and safe) essential medical equipment in line with level of care
Alignment (HSSP I; Global 100; SDG)	No; No; No
Numerator	Number of days that health facilities have functional (working and safe) essential medical equipment in line with level of care
Numerator source (primary; reporting form)	Primary: Job card Reporting form: Quarterly maintenance report
Denominator	Number of days per year
Denominator source	Calendar for the year
Method of calculation	Numerator/Denominator x 100
Calculation (HMIS)	NA
Lowest administrative level	District
Disaggregation	Equipment type; health facility type (central hospital, district hospital, community hospital, health centre)
Reporting frequency	Annual
Rationale	Availability of medical equipment is essential for the provision of health care. Without proper medical equipment, health care is incomplete, as it helps in diagnosing and treating illnesses and diseases. Each level of care is supposed to have a minimum amount and types of medical equipment. – Essential equipment at Health Centre: Oxygen concentrator, Sterilizer, Sphygmomanometer (analogue), Suction apparatus, Microscope, Stethoscope, Diagnostic equipment set, Vacuum extractor, Vaccine refrigerator – Essential equipment at Community Hospital: Anaesthetia machine, Patient monitor (multiparameter), Oxygen concentrator, Sterilizer, X-ray machine, Ultrasound scanner, Microscope, Sphygmomanometer (digital), Diagnostic equipment set, Vacuum extractor, Vaccine refrigerator – Essential equipment at District Hospital: Oxygen concentrator, Sterilizer, Anaesthesia machine, Ventilator, X-ray machine, Ultrasound scanner, Patient monitor (multiparameter), Point of care viral load, Microscope, Suction apparatus, Vacuum extractor, Vaccine refrigerator, Diagnostic equipment set – Essential equipment at Central Hospital: Oxygen concentrator, Sterilizer, Anaesthesia machine, Ventilator, X-ray machine, Ultrasound scanner, Patient monitor (multiparameter), Viral load testing equipment, Blood chemistry analyser, Microscope, Dialysis machine, Suction apparatus, Diagnostic equipment set, Haematology analyser, Slit lamp
Notes for interpretation	At present this data is not systematically collected but self-reported. This may result in variations in reporting, limiting the interpretation.
Custodian of the indicator	PAM
M&E framework level	Input
Baseline / recent estimates	Baselines not available.
Targets (2018; 2020; 2022)	80%, 85%, 90%

14 Policy and planning indicators (DPPD)

Unique Identifier (code)	DPPD01N
Indicator name	Percentage of the population living within 8 km of a health facility
Indicator Definition	The proportion of the population that resides within an 8 km radius of a static health facility. Health facilities include public, non-governmental (NGO), and community-based health facilities are defined as static facilities (i.e., Government, CHAM and NGO facilities that have a designated building) in which general health services are offered.
Alignment (HSSP I; Global 100; SDG)	No; Yes; No
Numerator	Estimated total population living within an 8 km radius of a health facility
Numerator source (primary; reporting form)	Geo-spatial modelling
Denominator	Mid-year population
Denominator source	Target population form
Method of calculation	Numerator / Denominator * 100
Calculation (HMIS)	NA
Lowest administrative level	District
Disaggregation	Facility type, ownership
Reporting frequency	Annual
Rationale	This indicator measures one dimension of access to health services, physical access. This indicator can be used to identify under-served areas, and will allow comparisons within and between districts, regions, sectors. Geographic mapping will allow identification of where there are coverage gaps for certain populations.
Notes for interpretation	While this indicator includes all health facilities, NGO and other facilities may not be identified with the same accuracy as government facilities, leading to undercounting. Limitations of this indicator include the fact that this is independent of facility size, facility type or local population density. The indicator does not provide information on the services offered at the health facilities although these can be assumed for government facilities based on the facility type.
Custodian of the indicator	Department of Planning and Policy Development (Infrastructure Unit)
M&E framework level	Input
Baseline / recent estimates	90% (2016, HSSP II)
Targets (2018; 2020; 2022)	92%; 94%; 96%

Unique Identifier (code)	DPPD02N
Indicator name	Government total expenditure on health as a percentage of total government expenditure
Indicator Definition	Total public health spending as a percentage of total government expenditure
Alignment (HSSP I; Global 100; SDG)	Yes; No; No
Numerator	Government of Malawi public health sector expenditure
Numerator source (primary; reporting form)	GoM expenditure data, National Health Accounts
Denominator	Government of Malawi total expenditures
Denominator source	GoM expenditure data, National Health Accounts
Method of calculation	Numerator / Denominator * 100%
Calculation (HMIS)	NA
Lowest administrative level	National
Disaggregation	None
Reporting frequency	Annual
Rationale	This indicator illustrates the Government's commitment to the health sector. The Abuja Declaration states that Government should at least allocate 15% of their overall budget to the health sector. Increased allocation reveals the level of government's commitment to the improvement of health of the people.
Notes for interpretation	While this indicator shows the commitment of the Government of Malawi towards the health sector, it does not give a sense of overall spending on health or the sustainability of that funding. It can be best understood along with other indicators around the sources of health expenditure in Malawi. For instance, the 2016 National Health Accounts found that donors contributed roughly 62% of total health expenditure, though only a small proportion of that was spent through the MoHP.
Custodian of the indicator	Department of Planning and Policy Development
M&E framework level	Output
Baseline / recent estimates	10.8% (NHA, 2014/15 data, 2016 report)
Targets (2018; 2020; 2022)	15%; 15%; 15%

Unique Identifier (code)	DPPD03N
Indicator name	Out-of-pocket payment for health care
Indicator Definition	Share of total current expenditure on health paid by households out-of-pocket, expressed as a percentage of total current expenditure on health
Alignment (HSSP I; Global 100; SDG)	No; Yes; Yes
Numerator	Total household out-of-pocket expenditure for health (12-month period)
Numerator source (primary; reporting form)	National Health Accounts
Denominator	Total current expenditure on health
Denominator source	National Health Accounts
Method of calculation	Numerator / Denominator * 100
Calculation (HMIS)	NA
Lowest administrative level	National
Disaggregation	None
Reporting frequency	Annual
Rationale	This is an indicator of financial risk protection. It gives an indication of the proportion of total health expenditures that are paid for directly by households. High levels of out-of-pocket expenditure may lead to catastrophic or impoverishing expenditures on health care.
Notes for interpretation	Out-of-pocket expenditure also measures access to health services. High levels of out-of-pocket expenditure may be indicative of restrictive access to health services due to lack of pooled financing, e.g. health insurance schemes.
Custodian of the indicator	Department of Planning and Policy Development
M&E framework level	Input
Baseline / recent estimates	10.9% (NHA,2015)
Targets (2018; 2020; 2022)	10.9%; 9.5%; 7%

Unique Identifier (code)	DPPD04N
Indicator name	Total health expenditure per capita
Indicator Definition	The amount in US Dollars that is spent per person on health in Malawi
Alignment (HSSP I; Global 100; SDG)	No; No; No
Numerator	Total Expenditure on health (USD)
Numerator source (primary; reporting form)	National Health Accounts
Denominator	Estimated mid-year Population
Denominator source	NSO
Method of calculation	Numerator / Denominator
Calculation (HMIS)	NA
Lowest administrative level	National
Disaggregation	None
Reporting frequency	Annual
Rationale	This indicator helps to understand spending on health in relation to the size of the population.
Notes for interpretation	Expenditures can come from any source including public sector, out-of-pocket expenses, health insurance, etc. Because of this, expenditures may be underestimated as it can be difficult to obtain data from local government, private sector companies, NGOs and insurance companies.
Custodian of the indicator	Department of Planning and Policy Development
M&E framework level	Input
Baseline / recent estimates	$39.2 (NHA 2014-15)
Targets (2018; 2020; 2022)	$43; $45; $47

Unique Identifier (code)	DPPD05N
Indicator name	Universal Health Coverage (UHC) Index
Indicator Definition	The UHC indicator is calculated using two indices; a Health Services coverage index and a Financial protection coverage index. The health services coverage index is a composite indicator calculated from 16 indicators across 4 health services categories while the financial services indicator uses the proportion of the population with high household expenditures on health as a share of total household consumption expenditure or income This is a composite indicator that measures the availability, acceptability and affordability of health services (prevention, promotion, treatment, rehabilitation and palliative) to those who needs them without experiencing financial hardship or catastrophic expenditure.
Alignment (HSSP I; Global 100; SDG)	No; Yes; Yes:
Numerator	Financial protection: Total household health expenditure Health service coverage – all indicators will be calculated separately and an aggregate measure/index calculated for all indicators categories
Numerator source (primary; reporting form)	Financial protection – IHS; Welfare Monitoring Survey; NHA; Health services coverage index –DHS, Malaria Indicator Survey; STEPS survey; SPA
Denominator	Financial protection: total household consumption expenditure or total household income Health service coverage – all indicators will be calculated separately and an aggregate measure/index calculated for all indicators categories
Denominator source	Financial protection – IHS; Welfare Monitoring Survey; NHA Health service coverage – all indicators will be calculated separately and an aggregate measure/index calculated for all indicators categories
Method of calculation	Financial protection – Numerator x Denominator x 100 Service coverage indicator – varies by indicator included
Calculation (HMIS)	NA
Lowest administrative level	National
Disaggregation	None
Reporting frequency	Annual
Rationale	UHC has been defined as a situation where all people who need health services (prevention, promotion, treatment, rehabilitation and palliative) receive them, without undue financial hardship (World Health Report 2010), and there has been growing demand for UHC worldwide. UHC has been adopted as Target 3.8 of the Sustainable Development Goals (SDGs) broken down into two related indices, namely; health services coverage and financial protection against the cost of health services coverage.
Notes for interpretation	The health services coverage is measured using a set of 16 tracer indicators in four service coverage categories. These tracer indicators are combined into an index that summarizes national coverage with a single numeric value on a scale of 0 – 100%. The indicators in the index according to category are*:

	1) Reproductive, Maternal, neonatal and child health category indicators a) Demand for family planning satisfied with modern methods b) Antenatal care coverage (at least four visits) c) Pentavalent III coverage d) Care seeking behaviour for pneumonia (% U5 years children with suspected pneumonia 2) Infectious diseases a) TB detection and treatment b) ART coverage c) ITN for malaria prevention coverage d) Access to improved sanitation 3) Non-communicable diseases a) Prevalence of non-raised blood pressure b) Mean fasting plasma glucose (mmol/L) c) Tobacco non-use (% adults ≥15 years not smoking in the last 30 days) 4) Service capacity and access a) Hospital beds per 10,000 population b) Health worker density (Physicians per 10,000; Psychiatrists per 100,000 population and Surgeons per 100,000 population) c) International Health Regulations capacity index A low or average value for the composite indicator could be due to either low or mixed findings from the individual indicators. For the financial protection indicator, health expenditures are considered high if the ratio of health expenditures to either other expenditures or household income exceeds a threshold which is either set at 10% or 25%. *these are expected to be refined further through internal consultations.
Custodian of the indicator	Department of Planning and Policy Development
M&E framework level	Input
Baseline / recent estimates	Baseline not available.
Targets (2018; 2020; 2022)	Targets have not been defined. Targets may be set in the future.

15 Reproductive health indicators

Unique Identifier (code)	RHD01.1N
Indicator name	Maternal Mortality Ratio (survey-based)
Indicator Definition	Number of maternal deaths from any cause related to or aggravated by pregnancy or its management during pregnancy and childbirth or within two months of termination of pregnancy, irrespective of the duration and site of the pregnancy, per 100 000 live births.
Alignment (HSSP I; Global 100; SDG)	Yes; Yes; Yes
Numerator	Age standardized maternal mortality rate for women 15 – 49 years of age in the last 7 years (calculated by asking about deaths of sisters of women interviewed)
Numerator source (primary; reporting form)	Surveys (DHS, MICS)
Denominator	General fertility rate
Denominator source	Surveys (DHS, MICS)
Method of calculation	Numerator/Denominator* 100,000
Calculation (HMIS)	NA
Lowest administrative level	National
Disaggregation	None
Reporting frequency	3 - 5 years
Rationale	Complications during pregnancy and childbirth are a leading cause of death and disability among women of reproductive age in Malawi. Survey-based data provides the best available estimate of nationally-representative maternal mortality.
Notes for interpretation	MMR obtained through DHS reflects deaths at the time of pregnancy and does not differentiate between true pregnancy-related deaths and deaths from accidents or injuries. Because maternal deaths are rare, estimates have wide confidence intervals, therefore small changes in MMR may not reflect true population-level change. Furthermore, DHS measures maternal deaths over the past 5 years while MICS measures death over the last 7 years. Neither reflect recent changes. As the civil registration system develops, this will become an ideal source of this indicator.
Custodian of the indicator	Reproductive Health Department
M&E framework level	Impact
Baseline / recent estimates	574 per 100,000 live births (2014 MDG Endline/MICS) 439 per 100,000 live births (DHS 2015-2016)
Targets (2018; 2020; 2022)	380 per 100,000; 345 per 100,000; 314 per 100,000

Unique Identifier (code)	RHD01.2N
Indicator name	Institutional Maternal Mortality Ratio (HMIS-based)
Indicator Definition	Number of maternal deaths from any cause related to or aggravated by pregnancy or its management during pregnancy or childbirth or within 42 days of termination of pregnancy, as recorded in facilities, per 100 000 live births.
Alignment (HSSP I; Global 100; SDG)	Yes; Yes; Yes
Numerator	Number of maternal deaths in health facilities/institutions
Numerator source (primary; reporting form)	Maternity Register, Gynaecology Register; Maternity Clinic Monthly Report, Gynaecology Report, MDSR Report
Denominator	Number of live births in health facilities/institutions.
Denominator source	Maternity Clinic Monthly Report
Method of calculation	Numerator/Denominator* 100,000
Calculation (HMIS)	*Numerator*: Maternity Monthly Report ("RHD MAT Maternal Deaths") *Denominator*: Maternity Monthly Report ("RHD MAT Survival/Survival Alive not HIV exp" + "RHD MAT Survival/Survival Alive Exp No NVP" + "RHD MAT Survival/Survival Alive NVP Started" " + "RHD MAT Survival/Survival Alive unknown Exp" + "RHD MAT Survival/Survival Alive Neonatal death") OR *Denominator*: HMIS 15 ("HMIS Total # of Live births") + HMIS 17 ("HMIS 17 Live Births") (Note: This data is also available through MDSR, IDSR, and the Maternal and Neonatal Death Report. Data should be triangulated on a regular basis)
Lowest administrative level	District
Disaggregation	Primary Complication
Reporting frequency	Annual
Rationale	Complications during pregnancy and childbirth are a leading cause of death and disability among women of reproductive age in Malawi. This indicator monitors deaths related to pregnancy and childbirth that occur within facilities. This is both a proxy measure for the national maternal mortality ratio and reflects the capacity of the health system to provide effective and quality health care in preventing maternal deaths.
Notes for interpretation	As a facility-based measure, this will underestimate maternal deaths, given that many that occur during pregnancy or postpartum may take place at home or outside maternity wards. It is also important to note other data sources capturing maternal deaths, such as maternal death surveillance and response (MDSR) and maternal death notification forms, and to use these sources to verify data coming from the Maternity register. The denominator, total live births, means that mothers who die during pregnancy or during/after the birth of a stillborn child will not be included in the denominator. This may lead to an overestimation of the maternal death rate. Some comparable indicators may use total deliveries. While global definitions of maternal mortality do not consider deaths from accidental or incidental causes to be maternal deaths, the HMIS system does

	not differentiate between true pregnancy-related deaths and deaths from accidents or injuries. As the civil registration system develops, this will become an ideal source of this indicator. Central Hospital Data (HMIS 17) currently limited within DHIS2. Deliveries in private clinics not captured in DHIS may alter estimates.* *See General Guidelines
Custodian of the indicator	Reproductive Health Department
M&E framework level	Outcome
Baseline / recent estimates	311 per 100,000 (DHIS2, 2015; Maternity dataset at 95.6% reporting rate)
Targets (2018; 2020; 2022)	Targets have not been defined. Targets may be defined in the future.

Unique Identifier (code)	RHD02N
Indicator name	Total Fertility Rate
Indicator Definition	The average number of children a woman would have by the end of her child bearing period if she bore children at the current age-specific fertility rates.
Alignment (HSSP I; Global 100; SDG)	Yes; Yes; No
Numerator	Number of children born in the year to women within each age group (for seven 5-year age groups from 15 – 49 years old)
Numerator source (primary; reporting form)	Survey (DHS, MICS); Census
Denominator	Number of women-years of exposure in the age group (for seven 5-year age groups from 15 – 49 years old [DHS]
Denominator source	Survey (DHS, MICS)
Method of calculation	*Sum of age-specific fertility rates (numerator/denominator) * 5
Calculation (HMIS)	N/A
Lowest administrative level	Region
Disaggregation	Residence
Reporting frequency	3 - 5 years
Rationale	Fertility is one of the dynamics of population change. Rapid population growth is a major problem for Malawi, and monitoring the trend in total fertility rates will track efforts to reduce the rapid population growth in Malawi. TFR measures the impact of family planning programmes in the country.
Notes for interpretation	The number of children a woman bears in her lifetime is a factor of many variables including her age at the birth of her first child, the interval between births, and fecundity. Because changes in total fertility rate are based on the most recent measurement of age-specific fertility rates only, they can only be interpreted as the number of children per women in the case that fertility rates are constant. For the DHS and MICS surveys, age-specific fertility rates are measured for the three years prior to the survey and may not reflect the most recent rates. Ultimately, the civil registration system will be the ideal source of this data.
Custodian of the indicator	Reproductive Health Department
M&E framework level	Impact
Baseline / recent estimates	4.4 children per woman (DHS 2015-16) 5.0 children per woman (MDG Endline Survey, 2014)
Targets (2018; 2020; 2022)	4.0; 3.5; 3.0

Unique Identifier (code)	RHD03N
Indicator name	Adolescent fertility rate
Indicator Definition	Annual number of births to women aged 10-14 and 15-19 years per 1000 women in that age group
Alignment (HSSP I; Global 100; SDG)	No; Yes; Yes
Numerator	Total number of births in the past three years to women who were 10-14 AND Total number of births in the past three years to women who were 15-19 years old at the time of birth
Numerator source (primary; reporting form)	Survey (DHS, MICS)
Denominator	Total number of person years lived between the ages 10-14 in the past three years by surveyed women AND Total number of person-years lived between 15-19 in the past three years by surveyed women
Denominator source	Survey (DHS, MICS)
Method of calculation	Numerator / Denominator * 1000
Calculation (HMIS)	NA
Lowest administrative level	Region
Disaggregation	Age (10 – 14; 15 – 19)
Reporting frequency	3-5 years
Rationale	Women who become pregnant and give birth at a young age are at higher risk of complications and death. Their children are also at higher risk of low birthweight and death. Further, there may be socio-economic consequences as women may not be able to finish school. The adolescent birth rate provides evidence of the success of reproductive health programmes targeted at this age group.
Notes for interpretation	Survey data provides an approximation of the adolescent fertility. When available, data from the CRVS system will provide a more accurate estimate. This indicator is an average of the adolescent fertility rate over the last three years.
Custodian of the indicator	Reproductive Health Department
M&E framework level	Impact
Baseline / recent estimates	15 – 19 year olds: 136 per 1,000 women (DHS 2015-16) 15 – 19 year olds: 143 per 1,000 (2014 MDG Endline/MICS)
Targets (2018; 2020; 2022)	15 – 19 year olds: 125 per 1,000; 115 per 1,000; 100 per 1,000

Unique Identifier (code)	RHD04.1N
Indicator name	Antenatal care coverage (Survey-based)
Indicator Definition	Percentage of women aged 15-49 with a live birth in the last five years (two years for MICS) that received antenatal care, four times or more.
Alignment (HSSP I; Global 100; SDG)	Yes; Yes; Yes
Numerator	Number of women aged 15 to 49 with a live birth in the last five years (two years for MICS) who received antenatal care four or more times
Numerator source (primary; reporting form)	Survey (DHS, MICS)
Denominator	Total number of women aged 15-49 years with a live birth in the last five years (two years for MICS)
Denominator source	Survey (DHS, MICS)
Method of calculation	Numerator / Denominator * 100
Calculation (HMIS)	N/A
Lowest administrative level	Region
Disaggregation	Age; Birth order; Residence; Mother's education; Wealth quintile
Reporting frequency	3 - 5 years
Rationale	WHO guidelines recommend a minimum of 4 ANC visits for pregnant women without complications. Antenatal care enables (1) early detection of complications and prompt treatment, (2) prevention of diseases through immunisation and micronutrient supplementation; (3) birth preparedness and complication readiness; and (4) health promotion and disease prevention through health messages and counselling.
Notes for interpretation	This indicator measures whether women received antenatal care during their most recent live birth in the last five years, and therefore should be seen as an average measure across the last five years. Further, because women are asked about pregnancies that occurred in the past, their answers may be subject to recall bias. Finally, while having at least 4 ANC visits makes it likely that women received the full range of ANC services, it does not guarantee quality of care and, in fact, does not ask whether the care was provided by a skilled provider (doctor, nurse, midwife).
Custodian of the indicator	Reproductive Health Department
M&E framework level	Outcome
Baseline / recent estimates	50.6% (DHS 2015-16) 45% (2014 MDG Endline/MICS)
Targets (2018; 2020; 2022)	55%; 60%; 65%

Unique Identifier (code)	RHD04.2N
Indicator name	Antenatal care coverage (HMIS-based)
Indicator Definition	Percentage of women with a live birth in a given time period that received antenatal care four or more times.
Alignment (HSSP I; Global 100; SDG)	Yes; Yes; Yes
Numerator	Number of women who received antenatal care four or more times
Numerator source (primary; reporting form)	ANC Clinic Register; ANC monthly reporting tool
Denominator	Total number of live births in the same period in the facility
Denominator source	Maternity Monthly Report (Maternity Register); HMIS 15
Method of calculation	Numerator / Denominator * 100
Calculation (HMIS)	*Numerator*: ANC Monthly Facility Report ("RHD ANC visits per woman Total with 4 visits" + "RHD ANC Visits per woman Total with 5+ visits") *Denominator*: Maternity Monthly Report ("RHD MAT Survival/Survival Alive not HIV exp" + "RHD MAT Survival/Survival Alive Exp No NVP" + "RHD MAT Survival/Survival Alive NVP Started" + "RHD MAT Survival/Survival Alive unknown Exp" + "RHD MAT Survival/Survival Alive Neonatal death") OR *Denominator*: HMIS 15 ("HMIS Total # of Live births") + HMIS 17 ("HMIS 17 Live Births")
Lowest administrative level	District
Disaggregation	None
Reporting frequency	Annual
Rationale	WHO guidelines recommend a minimum of 4 ANC visits for pregnant women without complications. Antenatal care enables (1) early detection of complications and prompt treatment; (2) prevention of diseases through immunisation and micronutrient supplementation; (3) birth preparedness and complication readiness; and (4) health promotion and disease prevention through health messages and counselling.
Notes for interpretation	Note that the numerator and denominator of this indicator do not exactly match. Using the total number of live births as the denominator may count women who had twins or triplets more than once. At the same time, women who had term deliveries with a stillbirth would also not be included in the denominator (though they might have attended 4 ANC visits). This facility-based indicator shows the percentage of women giving birth at facilities who receive at least 4 ANC visits and is a measure of ANC compliance for women who are already receiving some care at facilities. It assumes that women who receive ANC will also deliver in facilities, but it is possible that some women will still deliver at home despite having received ANC. This indicator likely overestimates the percentage of all women who receive ANC as women who don't deliver in facilities are less likely to receive ANC than women who do. Central Hospital Data (HMIS 17) currently limited within DHIS2.

	Underreporting from private and public clinics may alter estimates.* Healthcare utilisation by non-Malawians may result in higher estimates.* *See General Guidelines.
Custodian of the indicator	Reproductive Health Department
M&E framework level	Outcome
Baseline / recent estimates	28.7% (2015, DHIS2; ANC dataset 90.7% reporting rate)
Targets (2018; 2020; 2022)	55%; 60%; 65%

Unique Identifier (code)	RHD05.1N
Indicator name	Births attended by skilled health personnel (Survey-based)
Indicator Definition	Percentage of births attended by skilled health personnel during the last five years
Alignment (HSSP I; Global 100; SDG)	Yes; Yes; Yes
Numerator	Number of live births attended by skilled health personnel (doctor, clinical officer, medical assistant, nurse, or midwife)
Numerator source (primary; reporting form)	Survey (DHS, MICS)
Denominator	Number of live births in the last five years
Denominator source	Survey (DHS, MICS)
Method of calculation	Numerator / Denominator * 100
Calculation (HMIS)	NA
Lowest administrative level	Region
Disaggregation	Age (<20, 20-34, 35-49); Type of skilled provider (Doctor/Clinical officer, Nurse/Midwife, medical assistant)
Reporting frequency	3 – 5 years
Rationale	Complications during pregnancy and childbirth are a leading cause of death and disability among women of reproductive age in Malawi. Access to skilled care during childbirth is a key strategy to reduce both maternal and neonatal deaths. Maternal mortality itself can be very difficult to measure, making it critical to track related indicators.
Notes for interpretation	While having a skilled personnel attend a delivery is a marker of access to quality care during delivery, it does not measure whether there are adequate resources or referral options available should complications arise. This indicator includes any live births to surveyed women in the past five years and should be understood as a five-year average and therefore less reflective of recent patterns. Additionally, responses may be subject to recall bias. This indicator measures skilled birth attendance among live births only, which differs from the HMIS-based indicator and could lead to slight variations in findings. As the civil registration system develops, this will become an ideal source of this indicator.
Custodian of the indicator	Reproductive Health Department
M&E framework level	Outcome
Baseline / recent estimates	89.8% (DHS 2015-16) 87.4% (2014 MDG Endline/MICS)
Targets (2018; 2020; 2022)	91%; 93%; 95%

Unique Identifier (code)	RHD05.2N
Indicator name	Births attended by skilled health personnel (HMIS-based)
Indicator Definition	Percentage of births attended by skilled health personnel
Alignment (HSSP I; Global 100; SDG)	Yes; Yes; Yes
Numerator	Number of births attended by skilled health personnel (doctor, clinical officer, medical assistant, nurse, midwife)
Numerator source (primary; reporting form)	Maternity Register; Maternity Monthly Report
Denominator	Total number of expected deliveries
Denominator source	Target population form
Method of calculation	Numerator / Denominator * 100
Calculation (HMIS)	*Numerator*: Maternity Health Facility Report ("RHD MAT Staff conducting delivery MO/CO/MA/Nurse/MW") OR HMIS 15 ("HMIS delivery by skilled personnel") *Denominator*: Target Population form ("CMED Expected pregnant women")
Lowest administrative level	District
Disaggregation	None
Reporting frequency	Annual
Rationale	Complications during pregnancy and childbirth are a leading cause of death and disability among women of reproductive age in Malawi. Access to skilled care during childbirth is a key strategy to reduce both maternal and neonatal deaths. Maternal mortality itself can be very difficult to measure, making it critical to track associated indicators.
Notes for interpretation	When comparing this indicator to the comparable survey-based indicator, it is important to note that this indicator captures skilled delivery rates for all births, whereas the survey-based indicator only captures skilled delivery rates for live births. The maternity register distinguishes between skilled deliveries and unskilled deliveries (HSAs, etc.). However, because births in health facilities are supposed to be attended by a skilled professional, there may be a reluctance to record unskilled deliveries. This could lead to over-estimation of the indicator. As the civil registration system develops, this will become an ideal source of this indicator. Underreporting from private and public clinics may alter estimates.* Healthcare utilisation by non-Malawians may result in higher estimates.* Accuracy of population estimate may bias results.* *See General Guidelines.
Custodian of the indicator	Reproductive Health Department
M&E framework level	Outcome
Baseline / recent estimates	57.9% (DHIS2, 2015, Maternity report, 95.3% reporting rate) 53.8% (DHIS2, 2015 HMIS 15, 94.6% reporting rate)
Targets (2018; 2020; 2022)	91%, 93%, 95%

Unique Identifier (code)	RHD06N
Indicator name	Modern contraceptive prevalence rate
Indicator Definition	Percentage of women aged 15-49 years of age who are currently using, or whose sexual partner is using, at least one modern method of contraception, regardless of the method used
Alignment (HSSP I; Global 100; SDG)	Yes; Yes; No
Numerator	Women aged 15-49 years who are currently using, or whose sexual partner is using, at least one modern method of contraception, regardless of the method used
Numerator source (primary; reporting form)	Survey (DHS, MICS)
Denominator	Total number of women of reproductive age who are married or in-union + total number of sexually active, unmarried women
Denominator source	Survey (DHS, MICS)
Method of calculation	Numerator / Denominator * 100
Calculation (HMIS)	NA
Lowest administrative level	Region
Disaggregation	Marital status (married or in union; sexually active unmarried) Age (15-19, 20-24, 25-29, 30-34, 35-39, 40-44, 45-49) Method (short, long, and permanent)
Reporting frequency	3 – 5 years
Rationale	Modern contraception prevalence measures access to and utilisation of family planning. Modern contraceptive prevalence rate is also a proxy measure for access to reproductive health services and can help track progress toward universal access.
Notes for interpretation	This indicator can be difficult to interpret as an indicator of access to reproductive services as it does not take into account whether women have a demand for contraception (i.e. would like to prevent or delay pregnancy). This indicator is currently calculated separately for women who are married or in a union and sexually active unmarried women in DHS. MICS only provides data on women who are married or in a union.
Custodian of the indicator	Reproductive Health Department
M&E framework level	Outcome
Baseline / recent estimates	Married women: 58%; Sexually active unmarried women: 44% (DHS 2015-16) Married women: 57%; (2014 MDG Endline/MICS) 45% FPET, Track 20
Targets (2018; 2020; 2022)	Married: 61%,67%, 73% Unmarried: 50%; 54%; 58% All women: 54%; 58%; 62%

Unique Identifier (code)	RHD07N
Indicator name	Demand for family planning satisfied with modern methods
Indicator Definition	Percentage of women of reproductive age (15-49 years), who are sexually active, who have their need for family planning satisfied with modern methods
Alignment (HSSP I; Global 100; SDG)	No; Yes; Yes
Numerator	Number of women in need of family planning who use modern methods
Numerator source (primary; reporting form)	Surveys (DHS, MICS)
Denominator	Total number of women in need of family planning
Denominator source	Surveys (DHS, MICS)
Method of calculation	Numerator / Denominator * 100
Calculation (HMIS)	NA
Lowest administrative level	Region
Disaggregation	Marital status (unmarried, sexually active; married) Age (15-19, 20-24, 25-29, 30-34, 35-39, 40-44, 45-49) Residence (urban, rural) Education (No education, Primary, Secondary, More than secondary) Wealth quintile (Lowest, Second, Middle, Fourth, Highest)
Reporting frequency	3 - 5 years
Rationale	This indicator can be a proxy for access to reproductive health services and complements the contraceptive prevalence indicator. It provides a way to monitor whether the system is able to meet the demand for modern family planning methods.
Notes for interpretation	Unlike the contraceptive prevalence indicator, this indicator includes both married and unmarried sexually active women. Additionally, even if contraception prevalence is increasing it is possible for this indicator to still decrease if demand for family planning services are also increasing. Values less than 75% are considered very low and greater than 95% are considered very high.
Custodian of the indicator	Reproductive Health Department
M&E framework level	Outcome
Baseline / recent estimates	Married: 74.6%; Sexually active, unmarried: 51.3% (DHS 2015-16) 75.1% (married women, 2014 MDG Endline/MICS)
Targets (2018; 2020; 2022)	Married: 80%, 82%, 84% Unmarried: 54%, 57%, 60%

Unique Identifier (code)	RHD08N
Indicator name	Postpartum care coverage
Indicator Definition	Percentage of mothers who received postpartum care within two days of childbirth (regardless of place of delivery)
Alignment (HSSP I; Global 100; SDG)	Yes; Yes; Yes
Numerator	Women who had a live birth in the past two years who received postpartum care within two days of childbirth (regardless of place of delivery)
Numerator source (primary; reporting form)	Surveys (DHS, MICS)
Denominator	Total number of women with a live birth in the last two years
Denominator source	Surveys (DHS, MICS)
Method of calculation	Numerator / Denominator * 100
Calculation (HMIS)	NA
Lowest administrative level	District
Disaggregation	None
Reporting frequency	3 - 5 years
Rationale	A large proportion of maternal and neonatal deaths occur during the early postpartum period. Thus, prompt postnatal care is important to treat complications arising from the delivery as well as to provide the mother with important information on caring for herself and her baby.
Notes for interpretation	This indicator covers live births in the last 2 years and may be subject to recall bias. Further, women with a stillbirth are not included in the numerator or the denominator and therefore this indicator is not representative of their care. Postpartum care represents a package of services but does not have a clear definition. The content and quality of the postpartum care therefore cannot be assessed based on this indicator.
Custodian of the indicator	Reproductive Health Department
M&E framework level	Outcome
Baseline / recent estimates	75% (2014 MDG Endline/MICS) 39.2% (DHS 2015-16)
Targets (2018; 2020; 2022)	84%; 87%; 90%

Unique Identifier (code)	RHD09N
Indicator name	Cervical cancer screening
Indicator Definition	Percentage of women aged 30-49 screened for cervical cancer using any of the following methods: Visual Inspection with Acetic Acid/vinegar (VIA), pap smear and Human Papillomavirus (HPV) test
Alignment (HSSP I; Global 100; SDG)	No; Yes; Yes
Numerator	Number of women between the ages 30–49 who had an initial screening for cervical cancer.
Numerator source (primary; reporting form)	Cervical cancer register; Malawi Cervical cancer quarterly reporting tool
Denominator	Estimated mid-year population of women between the ages of 30-49 years
Denominator source	Target population form
Method of calculation	Numerator / Denominator * 100
Calculation (HMIS)	*Numerator*: Cervical Cancer Prevention Program Quarterly Report ("NCD CC Initial VIA 30-49")* *Denominator*: Target population form ("Estimated 30 – 49 year population")**
Lowest administrative level	National
Disaggregation	Age (30-34, 35-39, 40-44, 45-49)
Reporting frequency	Annual
Rationale	Cervical cancer is the most common female cancer in low- and middle-income countries and is often fatal. Widespread cervical cancer screening can result in dramatic declines in cervical cancer mortality. WHO recommends that women between 30 and 49 are screened every 3-5 years (depending on the method used). Even a single screening can dramatically reduce the risk of cervical cancer.
Notes for interpretation	Women who undergo repeat screening may be included in the numerator as it is difficult to uniquely identify patients. This indicator is dependent on access to health care and does not reflect quality of screening, outcome of the screening and access to appropriate treatment thereafter. Underreporting from private and public clinics may alter estimates.* Healthcare utilisation by non-Malawians may result in higher estimates.* Accuracy of population estimate may bias results.* *See General Guidelines
Custodian of the indicator	Reproductive Health Department
M&E framework level	Outcome
Baseline / recent estimates	Baseline not available.
Targets (2018; 2020; 2022)	Targets have not been defined. Targets may be set in the future.

16 Tuberculosis indicators

Unique Identifier (code)	TB01N
Indicator name	TB Notification rate
Indicator Definition	Number of all tuberculosis (TB) cases detected in a given year per 100,000 population. (The term "case detection", as used here, means that TB is diagnosed in a patient and is reported within the national surveillance system, and then to WHO.)
Alignment (HSSP I; Global 100; SDG)	No; Yes; No
Numerator	Number of TB cases detected
Numerator source (primary; reporting form)	TB register at registration centre in designated health facilities; Quarterly TB reporting form
Denominator	Estimated mid-year population
Denominator source	Target population form
Method of calculation	Numerator / Denominator * 100,000
Calculation (HMIS)	*Numerator*: 1) New TB Cases - TB Case Findings Reporting Form “Total Totals” - (” Total Treatment after lost to follow up M” + Total Treatment after lost to follow up F” + “ Total Treatment after failure M” + “Total Treatment after failure F”) OR 2) New TB Smear positive Cases and Relapses - New TB Cases - TB Case Findings Reporting Form “Total Smear Positive M” + “Total Smear Positive F” + “Total Relapse M” + Total Relapse F” OR 3) All TB Cases - TB Case Findings Reporting Form “Total Totals” OR 4) New Smear Positive Pulmonary – TB Case Findings Reporting Form “ Total Smear Positive M” + “Total Smear Positive F” *Denominator*: Estimated total population
Lowest administrative level	District
Disaggregation	TB diagnosis (smear positive, clinically diagnosed) Type of TB (pulmonary, extrapulmonary) New / relapsed Age (0-4, 5-14, 15-24, 25-34, 35-44, 45-54, 55-64, ≥ 65), Sex
Reporting frequency	Annual
Rationale	TB is an important contributor to morbidity and mortality in Malawi. According to the 2010 Global Burden of Diseases, it is the 9th leading cause of premature mortality in Malawi. The TB notification rate gives an indication of the burden and distribution of TB in a population, helping the national TB programme monitor the effectiveness of TB control efforts and prioritise and plan for future control efforts.
Notes for interpretation	TB notification is a proxy for TB incidence (rate of new cases per year). However, TB notification depends additionally on whether people with TB seek care and are appropriately diagnosed. While a drop in TB notification rates usually indicates a drop in TB incidence, it is possible that it indicates less effective case finding.

	Because TB can develop in people who became infected many years previously, the effect of TB control on incidence is less rapid than the effect on prevalence or mortality. TB Reporting form under revision in 2017. Underreporting from private and public clinics may alter estimates.* Healthcare utilisation by non-Malawians may result in higher estimates.* Accuracy of population estimate may bias results.* *See General Guidelines
Custodian of the indicator	TB
M&E framework level	Impact
Baseline / recent estimates	121 per 100,000 (TB Control Programme National Strategic Plan 2015 – 2020)
Targets (2018; 2020; 2022)	196 per 100,000; 196 per 100,000; unavailable (TB Control Programme, National Strategic Plan 2015 – 2020)

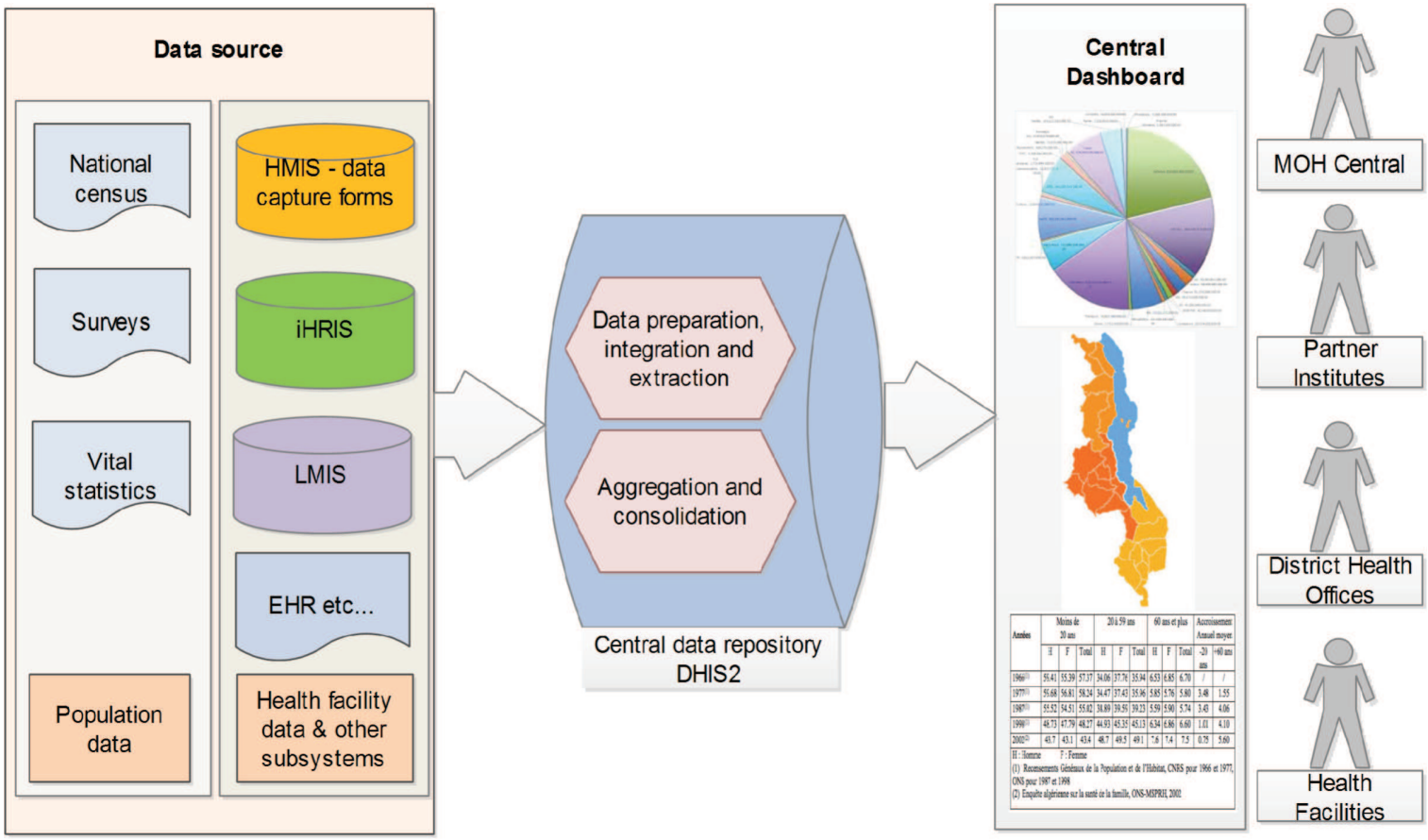
Unique Identifier (code)	TB02N
Indicator name	Second line treatment coverage among MDR-TB cases
Indicator Definition	Percentage of notified TB patients who have been detected with MDR-TB and enrolled in second-line anti-TB treatment
Alignment (HSSP I; Global 100; SDG)	No; Yes; No
Numerator	Number of notified TB patients who have been detected with MDR-TB and enrolled in second-line anti-TB treatment
Numerator source (primary; reporting form)	Category IV TB register
Denominator	Total number of confirmed MDR-TB patients
Denominator source	Category IV TB register (District level - 2nd register); Tuberculosis Laboratory Register NTRL-TB (national level - 1st register)
Method of calculation	Numerator / Denominator * 100
Calculation (HMIS)	NA
Lowest administrative level	District
Disaggregation	New, Relapsed
Reporting frequency	Annual
Rationale	MDR-TB is more difficult and costly to cure. MDR-TB accounted for 0.4% of all new cases of TB and 4.8% of retreated cases in 2011. Prompt treatment of patients with MDR-TB both improves the likelihood of the patients' survival and reduces the risk of transmission of MDR-TB.
Notes for interpretation	This indicator measures the percent of known cases of MDR-TB currently receiving a second-line treatment. Thus, cases of MDR-TB that are not detected will not be included. Further, the indicator does not assess whether the correct second-line treatment was provided or whether the patient successfully completed treatment. Underreporting from private and public clinics may alter estimates.* *See General Guidelines
Custodian of the indicator	TB
M&E framework level	Outcome
Baseline / recent estimates	100% (Central Reference Lab, 2014)
Targets (2018; 2020; 2022)	100%; 100%; 100%

Unique Identifier (code)	TB03N
Indicator name	TB Treatment success rate
Indicator Definition	Percentage of TB cases registered in a specified period that successfully completed treatment / were cured (cured plus treatment completed) OR (for smear positives): Percentage of a cohort of new smear-positive TB cases registered in a specified period that successfully completed treatment / were cured (cured plus treatment completed)
Alignment (HSSP I; Global 100; SDG)	No; Yes; No
Numerator	Number of notified TB cases registered in a specified period that successfully completed treatment/were cured (cured plus treatment completed) OR (for smear positives only) Number of notified new smear positive TB cases registered in a specified period that successfully completed treatment/were cured (cured plus treatment completed)
Numerator source (primary; reporting form)	TB Unit register (TB Treatment Outcome Quarterly Reporting form)
Denominator	All TB cases notified to the health facilities All new smear positive TB cases notified to the health facilities
Denominator source	Facility TB register (TB Treatment Outcome Quarterly Reporting form)
Method of calculation	Numerator / Denominator * 100
Calculation (HMIS)	1) - All Forms of TB: *Numerator*: TB Treatment Outcome Form ("TBTO New Smear +ve cured" + "TBTO New Smear +ve completed " + "TBTO Relapse Cured" + "TBTO Relapse Completed" + "TBTO Smear –ve Completed" +"TBTO EPTB Completed" + "TBTO RxAfter Lost Cured" + "TBTO Rx After Lost Completed" + "TBTO After Failure Cured" + "TBTO After Failure Completed" + "TBTO Others Completed") *Denominator*: TB Treatment Outcome Quarterly Reporting Form ("TBTO New Smear +ve No Evaluated" + "TBTO Relapse No Evaluated" + "TBTO New Smear +ve No Evaluated" + "TBTO EPTB No Evaluated" + "TBTO Rx After Lost No Evaluated" + "TBTO After Failure No Evaluated" + "TBTO Others.No Evaluated") OR 2) – Smear positive *Numerator*: TB Treatment Outcome Form ("TBTO New Smear +ve cured" + "TBTO New Smear +ve completed " *Denominator*: TB Treatment Outcome Form ("TBTO New Smear +ve No Evaluated")
Lowest administrative level	Health facility
Disaggregation	Age (0-4, 5-14, 15 and above), TB diagnosis (smear positive versus all)
Reporting frequency	Annual
Rationale	Treating TB patients with a complete course is not only life-saving for patients but also a primary means of preventing the spread of this airborne, infectious disease. This indicator measures a programme's capacity to retain patients

	through a complete course of chemotherapy with a favourable clinical result. There is a direct and immediate link between this outcome of treatment success and the impact of reduced TB mortality.
Notes for interpretation	This indicator defines treatment success as either a complete course of treatment where the patient is known to be cured or a complete course where there is no evidence of failure but status is unknown. It is possible that some patients in this second category do not have fully cured TB. Patients who do not successfully complete treatment may have dropped out, died, or failed to be cured by the treatment. An increasing trend indicates that the TB programme has been successful in managing treatment and hopefully in interrupting the spread of TB. TB Reporting form under revision in 2017. Underreporting from private and public clinics may alter estimates.* *See General Guidelines
Custodian of the indicator	TB
M&E framework level	Output
Baseline / recent estimates	84% (smear positives; TB Control Programme, National Strategic Plan 2015 – 2020)
Targets (2018; 2020; 2022)	89%; 90%; unavailable (TB Control Programme, National Strategic Plan 2015 – 2020)

Unique Identifier (code)	TB04N
Indicator name	HIV-positive TB patients on ART during TB treatment
Indicator Definition	Percentage of HIV-positive TB patients who received (or are receiving) ART during or at the end of TB treatment
Alignment (HSSP I; Global 100; SDG)	No; Yes; No
Numerator	Number of HIV-positive TB patients who received (or are receiving) ART during or at the end of TB treatment
Numerator source (primary; reporting form)	District TB register; Quarterly TB reporting form
Denominator	Total number of HIV-positive TB patients registered during the same period of time
Denominator source	District TB register
Method of calculation	Numerator / Denominator * 100
Calculation (HMIS)	Numerator: TB-HIV Quarterly Reporting Form ("TBHIVC- Started ART B4 Treatment age 0-4 male" + "TBHIVC- Started ART B4 Treatment age 0-4 female" + "TBHIVC- Started ART while on Treatment age 0-4 male" + "TBHIVC- Started ART while on Treatment age 0-4 female" + "TBHIVC- Started ART B4 Treatment age 5-14 male " + "TBHIVC- Started ART B4 Treatment age 5-14 female" + "TBHIVC- Started ART while on Treatment age 5-14 male" + "TBHIVC- Started ART while on Treatment age 5-14 female" + "TBHIVC- Started ART B4 Treatment age 15-24 male" + "TBHIVC- Started ART B4 Treatment age 15-24 female" + "TBHIVC- Started ART while on Treatment age 15-24 male" + "TBHIVC- Started ART while on Treatment age 15-24 female" + "TBHIVC- Started ART B4 Treatment age 25-34 male" + "TBHIVC- Started ART B4 Treatment age 25-34 female" + "TBHIVC- Started ART while on Treatment age 25-34 male" + "TBHIVC- Started ART while on Treatment age 25-34 female" + "TBHIVC- Started ART B4 Treatment age 35-44 male" + "TBHIVC- Started ART B4 Treatment age 35-44 female" + "TBHIVC- Started ART while on Treatment age 35-44 male" + "TBHIVC- Started ART while on Treatment age 35-44 female" + "TBHIVC- Started ART B4 Treatment age 45-54 male" + "TBHIVC- Started ART B4 Treatment age 45-54 female" + "TBHIVC- Started ART while Treatment age 45-54 male" + "TBHIVC- Started ART while on Treatment age 45-54 female" + "TBHIVC- Started ART B4 Treatment age 55-64 male" + "TBHIVC- Started ART B4 Treatment age 55-64 female" + "TBHIVC- Started ART while on Treatment age 55-64 male" + "TBHIVC- Started ART while on Treatment age 55-64 female" + "TBHIVC- Started ART B4 Treatment age 65+ male" + "TBHIVC- Started ART B4 Treatment age 65+ female" + "TBHIVC- Started ART while on Treatment age 65+ male" + "TBHIVC- Started ART while on Treatment age 65+ female" *** **The numerator is the sum of HIV positive TB patients by age on ART before or during TB treatment** Denominator: TB-HIV Quarterly Reporting Form ("TBHIVC- Total Tested positive age 0-4 male" + "TBHIVC- Total Tested positive age 0-4 female" + "TBHIVC- Total Tested positive age 5-14 male" + "TBHIVC- Total Tested positive age 5-14 female" + "TBHIVC- Total Tested positive age 15-24 male" + "TBHIVC- Total Tested positive age 15-24 female" + "TBHIVC- Total Tested positive age 25-34 male" + "TBHIVC- Total Tested positive age 25-34 female" + "TBHIVC- Total Tested positive age 35-44 male" + "TBHIVC- Total Tested

	positive age 35-44 female" + "TBHIVC- Total Tested positive age 45-54 male" + "TBHIVC- Total Tested positive age 45-54 female" + "TBHIVC- Total Tested positive age 55-64 male" + "TBHIVC- Total Tested positive age 65+ male" + "TBHIVC- Total Tested positive age 65+ female" ***__The denominator is the sum of all age-specific HIV positive TB patients__
Lowest administrative level	Health facility
Disaggregation	Age (15-24; 25-34; 35-44; 45-49); Sex; new/relapsed
Reporting frequency	Annual
Rationale	TB is the leading cause of death among people living with HIV. The WHO recommends that all patients with diagnosed and presumptive TB should be tested for HIV and those found positive should be offered ART regardless of their CD4 count. In addition to reducing mortality, TB patients are the largest groups already in the health care system who could benefit from ART.
Notes for interpretation	This indicator measures whether ART has become a routine component of TB care and treatment. Included in this are the following components: accessibility of ART, provider willingness to provide ART to TB patients, referrals between TB and HIV care. However, this indicator only looks at TB treatment within patients known to be HIV-positive -- if patients are not being routinely tested it could appear as if a high proportion are being treated when in fact only those who already know their status or are already on ART are being treated. Further, it does not measure at what point in the process patients are put on ART, the regimen, or the effectiveness of treatment. TB Reporting form under revision in 2017. Underreporting from private and public clinics may alter estimates.* *See General Guidelines
Custodian of the indicator	TB (and HIV)
M&E framework level	Outcome
Baseline / recent estimates	92.6 % (TB Control Programme National Strategic Plan 2015 – 2020)
Targets (2018; 2020; 2022)	95%; 95%; unavailable (TB Control Programme National Strategic Plan 2015 – 2020)


Data source
National census
Surveys
Vital statistics
Population data
HMIS - data capture forms
iHRIS
LMIS
EHR etc...
Health facility data & other subsystems
Data preparation, integration and extraction
Aggregation and consolidation
Central data repository DHIS2
Central Dashboard
MOH Central
Partner Institutes
District Health Offices
Health Facilities