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Health Systems in Action

Tajikistan



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Health Systems in Action (HSiA) Insights

Tajikistan

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European Region



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This edition of the Health Systems in Action Insight for Tajikistan was written by Susannah Robinson, Ilker Dastan and Bernd Rechel.

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The Health Systems in Action Insights series supports Member States in the WHO European Region that are not in the European Union.

The Insights for each country are intended to:

- provide core information and data on health systems succinctly and accessibly;
- outline the country health system context in which WHO Europe's Programme of Work is set;
- flag key concerns, progress and challenges; and
- build a baseline for comparisons, so that Member States can see how their health systems develop over time and in relation to other countries.

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It draws on the knowledge and understanding of the WHO Country Offices and of the Division of Country Health Policies and Systems (CPS), the WHO Barcelona Office for Health Systems Financing and other WHO/Europe technical programmes; as well as the Health Systems in Transition series and the work of the European Observatory on Health Systems and Policies.

The Insights follow a common template that provides detailed guidance and allows comparison across countries. The series is publicly available on the websites of the WHO Regional Office for Europe and the European Observatory on Health Systems and Policies (eurohealthobservatory.who.int).

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HEALTH SYSTEMS IN ACTION

INSIGHTS: TAJIKISTAN

Key points

- Tajikistan's health system provides a publicly financed basic benefits package of services, but a significant number of people fall outside the scope of eligibility.
- Health spending per capita is the second lowest in the WHO European Region in absolute terms, although public spending on health has increased over the past two decades. Out-of-pocket (OOP) payments have declined slightly but remain high, amounting to 63.5% of health spending in 2021.
- Life expectancy has improved, reaching 74.5 years in 2017. This was higher than in neighbouring Central Asian countries but still below the average in the WHO European Region.
- Infant and maternal mortality in Tajikistan remain relatively high but have seen steady improvements over the past two decades. Childhood vaccination coverage rates are high.
- Rates for many communicable diseases have improved, but access to pharmaceuticals is an ongoing challenge to further improvement.
- Noncommunicable diseases (NCDs) are a major driver of mortality, accounting for 24 718 deaths in 2017, with cardiovascular disease the most common cause of death.
- Leading risk factors affecting health include high blood pressure, poor nutrition and high blood sugar. Overweight and obesity are not a major concern – although rates are slowly rising – but child and maternal malnutrition are still a challenge.
- The COVID-19 pandemic is estimated to have affected overall mortality rates, but to a lesser degree than in many other countries in the WHO European Region.
- Ratios of health workers to population are well below regional averages, and there are major regional inequalities in the geographic distribution of health workers. A high rate of migration exacerbates health workforce gaps, particularly for skilled workers.

1 ORGANIZING THE HEALTH SYSTEM

Health policy-making is centralized, but health service provision is decentralized

Almost all health care in Tajikistan is public and managed by the government. The organization and governance of the health system follow the general system of public administration, with different levels of government responsible for specific functions. The Ministry of Health and Social Protection is responsible for national health policy, as well as for regulating service provision and overall health service management. Health policy-making is centralized and primarily managed by the government, while health service provision is decentralized. This structure allows for tailored local service delivery but can also lead to disparities in the quality and availability of health care between different regions.

Public funding for health has several layers, creating a relatively complex financial landscape. The Ministry of Finance is responsible for the implementation of budgets provided by the state, whilst the Ministry of Health and Social Protection is responsible for funding the republican (national level) health facilities. Local government bodies at the provincial (viloyat or oblast) and city/district (rayon) levels are responsible for health service provision and funding at these levels. This multi-tiered approach can sometimes delay funding distribution, affecting the timely delivery of health services. Service provision is generally provided via subnational facilities, such as health houses, rural health centres, city health centres and district-level family medicine centres. Some vertical services operate from the national to the district level through specialized structures.

There are different models for health service delivery in rural and urban areas. In urban areas, basic primary care is delivered by district or city health centres, and more complex or specialist care through either provincial or national hospitals. In rural areas, primary care is delivered through health houses, rural health centres and rural hospitals. Populations are automatically assigned to subnational health facilities within their local area, and their referral pathway is intended to be linear, moving incrementally to higher levels of care. In practice, patients often bypass various levels of care and show up directly at district, provincial or even national-level specialized facilities.

Private sector involvement remains small, although it has grown in recent years: in 2019, there were 479 private health care facilities in the country, including 403 outpatient facilities (Neelson et al., 2021). Whilst health care providers are mainly public, the government has been progressively legalizing private ownership of health facilities and options for private service provision. Most dental services are now run privately, and the pharmaceutical sector is fully privatized. Private services tend to be limited to specific areas, mainly focused on high-technology diagnostic services, and specialized

ambulatory or surgical care. Various nongovernmental organizations (NGOs) are also involved in providing health and social services in Tajikistan, usually focusing on areas not well covered by public health services, such as community awareness, tuberculosis (TB), HIV/AIDS prevention, reproductive health and health service access for vulnerable groups. International agencies also play an important role in supporting the health sector.

A heavy reliance on OOP payments undermines financial protection, especially for low-income and vulnerable groups

According to the Constitution, health services are provided formally free of charge in Tajikistan. In reality, this is rarely the case for many people, as evidenced in the high levels of OOP payments (see Section 2).

Government Decree 600, adopted in 2008, identifies vulnerable groups of the population who are officially exempt from co-payments for certain health services. User charges of up to 80% apply to other groups of the population. However, due to underfunding of Decree 600, OOP payments are extremely common for patients. This contributes to catastrophic health spending and health-related impoverishment. Although there are some exceptions, in general health care providers are not allowed to raise and manage their own funds through the introduction of additional official charges. This creates further budgetary pressures, and in some cases contributes to the presence of informal payments for services.

A pilot for a different model of benefits was introduced in 2007 in some districts and gradually scaled up to cover 31 of the country's 65 districts by 2022. The pilot provided all citizens with access to basic primary care and emergency services that were nominally free at the point of use, and some specialist health services were covered for people who met specific social, age and disability criteria or had certain health conditions. However, in May 2023 the package was withdrawn and it is unclear whether a new version will be made available and in what districts. It has also been generally acknowledged that funding the pilot version of the package at a national scale would not have been viable under the current public fund allocation for health.

The introduction of a mandatory health insurance system has been envisaged for many years but postponed several times due to political, administrative and financial challenges, and voluntary health insurance is almost non-existent.

Reforms are ambitious and centred on universal health coverage (UHC)

Under the current National Health Strategy, the government is committed to promoting universal health coverage for the population by 2030. To deliver this vision, it has identified strategic priorities for health system

development in key areas, including governance, financing, workforce and health service quality. Recent legislative initiatives have focused on pharmaceutical regulations, access to health care and social protection, as well as specific disease areas such as TB and mental health, and the introduction of capitation-based financing norms that are intended to guide budget planning in primary health care (PHC). Reforms anticipated for the future include the design and rollout of a new basic benefits package, pooling funds at the oblast level, and improvements in per capita funding mechanisms for primary care facilities.

2 FINANCING AND ENSURING FINANCIAL PROTECTION

Health spending relies largely on OOP spending

Given its status as the poorest country in the region (in terms of gross domestic product (GDP) per capita), Tajikistan's health spending as a percentage of GDP was high compared to other countries in the WHO European Region. In 2021, health spending amounted to 8.0% of GDP, only slightly lower than the average of the WHO European Region of 8.7%. However, the figure does not provide any direct insights into health spending efficiency.

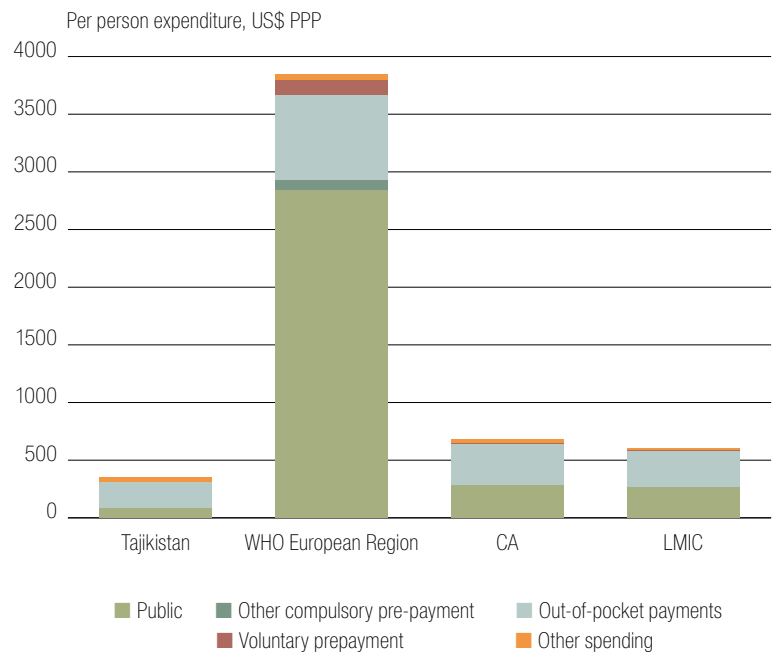
In absolute terms Tajikistan's spending on health in 2021 was the second lowest in the WHO European Region, at US\$ 351 per capita (adjusted for purchasing power). This was only about half of the average for Central Asian countries (US\$ 680 PPP), and far below the average in the WHO European Region of US\$ 3841 PPP (Fig. 1). Public spending on health per capita was the lowest in the WHO European Region in absolute terms, amounting to just US\$ 85 PPP per person in 2021, compared to an average of US\$ 266 PPP for the lower middle-income countries (LMICs) in the WHO European Region. It was also less than half of per capita OOP spending, which totalled US\$ 223 PPP per person. This imbalance between public and private spending indicates a need for greater public investment in health, and creates challenges for financial protection.

Public spending on health per capita in Tajikistan equated to only 3% of the average in the WHO European Region of US\$ 2834 PPP in 2021. Spending on health as a share of general government spending in 2021, at just 7.0%, was the second-lowest in the WHO European Region, barely half the regional average (13.9%), indicating that health is afforded a relatively low priority compared to other areas of government spending.

The largest source of funding for health is OOP payments from patients. In 2021, public spending on health accounted for only 24.2% of health spending (WHO, 2024c). This was higher than in Turkmenistan (16.0%), but below the levels in Kyrgyzstan (53.4%), Kazakhstan (65.3%), Uzbekistan (39.2%) and the WHO European Region as a whole (67.4%).

Fig. 1

Health spending per capita is very low and dominated by OOP spending



Source: WHO, 2024c.

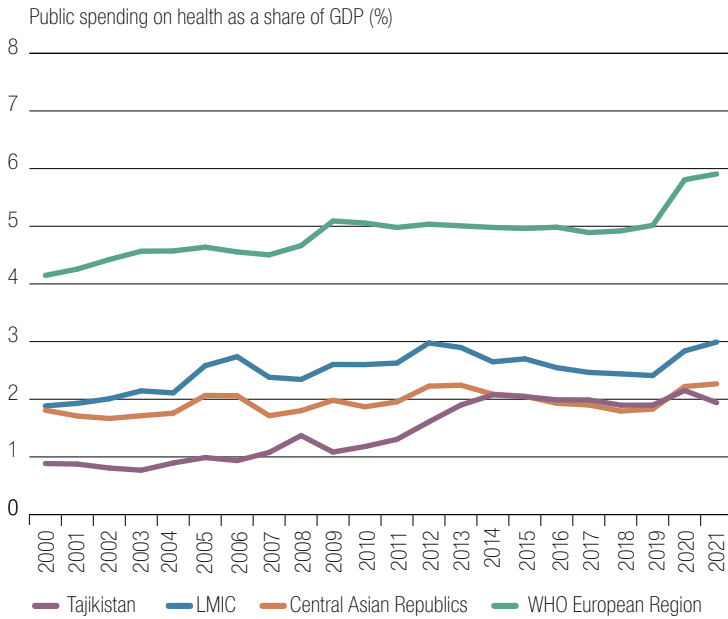
Notes: Data refer to 2021. Public refers to transfers from government budgets and social health insurance contributions. Other compulsory pre-payment refers to premiums for mandatory health insurance schemes in Belgium, Finland, France, Germany, the Netherlands (Kingdom of the) and Switzerland. Other refers to external funding and other marginal sources of funding. CA: Central Asian Republics.

International and bilateral agencies play an important role in supporting the country's health system. Between 2011 and 2019 their contribution to health spending declined from a peak of 14.5% in 2011 to 1.3% in 2019, but it rose sharply back up to 12% in 2021, likely in part due to the COVID-19 pandemic.

Public spending on health as a share of GDP is very low

Public spending on health as a share of GDP has historically been one of the lowest in the WHO European Region. It increased from 0.9% of GDP in 2000 to 1.9% in 2021, leaving it slightly below the Central Asian average of 2.3%. This is the first time that Tajikistan's spending has dropped below the Central Asian average since 2014 (Fig. 2). It was also less than half of the average in the WHO European Region (5.9%).

Fig.2
Public spending on health as a share of GDP is the lowest in the WHO European Region



Source: WHO, 2024c.

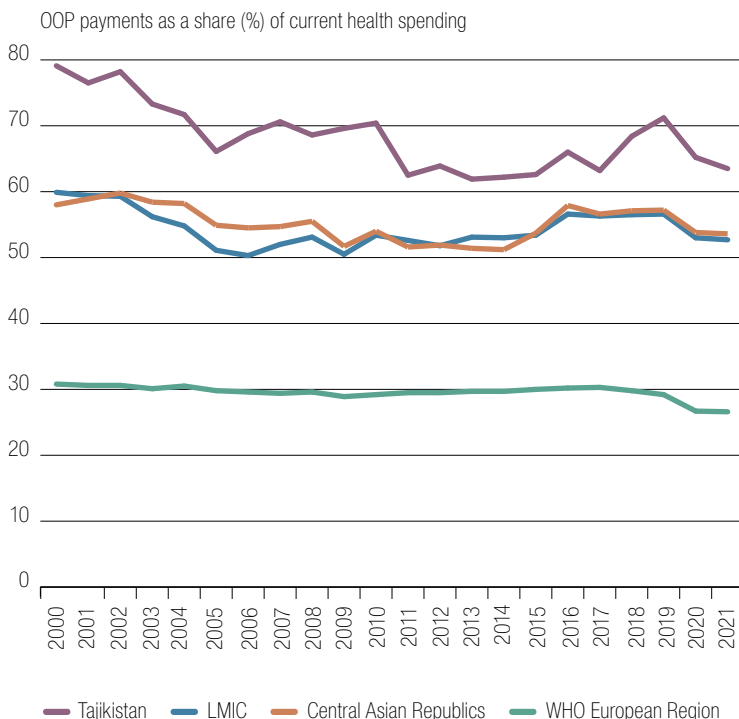
The central government is the primary public funder of health services in Tajikistan, with state funding decided and allocated by the Ministry of Finance. These funds are then distributed to the Ministry of Health and Social Protection and subsequently to subnational authorities based on an input-based financing model. Oblast-level authorities often supplement their central allocations with local revenues, and there are notable regional inequalities correlating to wealth, with the poorest regions spending the least on health per person. Reforms are needed to establish more equitable and needs-based funding mechanisms.

OOP payments continue to undermine financial protection. WHO recommends that OOP spending should account for less than 15% of current spending on health to ensure good financial protection (WHO Regional Office for Europe, 2019). In Tajikistan, OOP payments from patients – both formal and informal – have historically dominated health spending, amounting to 63.5% of health spending in 2021, resulting in major financial barriers to accessing health services. Whilst this share has gradually declined over the past two decades, it is still higher than the Central Asian average (53.6%) and the average of LMICs in the WHO European Region (52.7%). It is more than double the WHO European average of 26.6% (Fig. 3).

As a result of this high share of OOP payments, affordability continues to be a major barrier to services and many households in Tajikistan are vulnerable to catastrophic or impoverishing health spending. In 2022, 18% of households were estimated to have experienced catastrophic health spending, which was one of the highest incidence rates of catastrophic health spending in Europe. Catastrophic health spending is heavily concentrated in households with low incomes and driven mainly by OOP payments for outpatient medicines (WHO Regional Office for Europe, 2024a). This aligns with a broader trend in the WHO European Region, where outpatient medications are the primary driver of catastrophic health spending for countries with higher rates (WHO Regional Office for Europe, 2023a).

Due to high levels of OOP payments patients often delay seeking care, meaning diseases are frequently detected in the advanced stages. Informal OOP payments also represent a significant challenge to health service affordability. The Ministry of Health and Social Protection has made some attempts to improve the financial protection of the population, such as Government Decree 600, but so far these have had little impact.

Fig.3
OOP payments continue to dominate health spending in Tajikistan



Source: WHO, 2024c.

Input-based financing creates inefficiencies in health system spending

According to the latest data from the WHO Global Health Expenditure database, in 2019 inpatient care received the bulk of health spending (44.3%). A smaller share went to outpatient care (25.2%), and just 2.1% of health spending was allocated to prevention. These relatively small shares of spending on outpatient and preventive care indicate substantial scope for improved allocative efficiency and cost-effectiveness.

Reasons for the continued dominance of inpatient care – despite the country's limited public resources and comparatively young population – include an oversized hospital sector and an input-based allocation of public resources for health. Physical hospital resources are underused, with bed occupancy rates low in district-level hospitals. At the same time, patients stay longer in hospital than in other countries, and there are unnecessary hospitalizations. A lack of effective PHC is a contributing factor, with many hospitalized cases of diabetes, congestive heart failure and maternal and child health complications considered avoidable (Wilkens & Goroshko, 2023).

There have been some attempts to rationalize the hospital sector, for example by reducing the number of beds and reforming provider payment systems. However, many health services in Tajikistan continue to be provided in inpatient facilities that could be more efficiently managed at the primary care level.

3 GENERATING RESOURCES, PROVIDING SERVICES AND ENSURING ACCESS

Hospital overcapacity has been reduced

Since independence, Tajikistan has struggled to simultaneously improve its health infrastructure whilst also reducing excess capacity. Due to the low level of public investment in the health sector, basic infrastructure and equipment are often missing or in poor condition, especially in rural health clinics. Health spending on capital only accounted for 3.0% of total health spending in 2018, which was below the

averages for LMICs (6.6%) and even for low income countries (LICs) (3.3%) (Neelsen et al., 2021).

One of the key challenges facing Tajikistan has been excessive hospital infrastructure, partly due to a financing model based on inputs, such as the number of hospital beds. The country has made sustained efforts to reduce this overcapacity. Between 2000 and 2021 the ratio of hospital beds declined from 654 to 432 per 100 000 population. However, the overall number of beds remains high relative to population size – especially given Tajikistan's comparatively young population – and a low bed occupancy rate (below 60%) indicates continued overcapacity.

Box 1

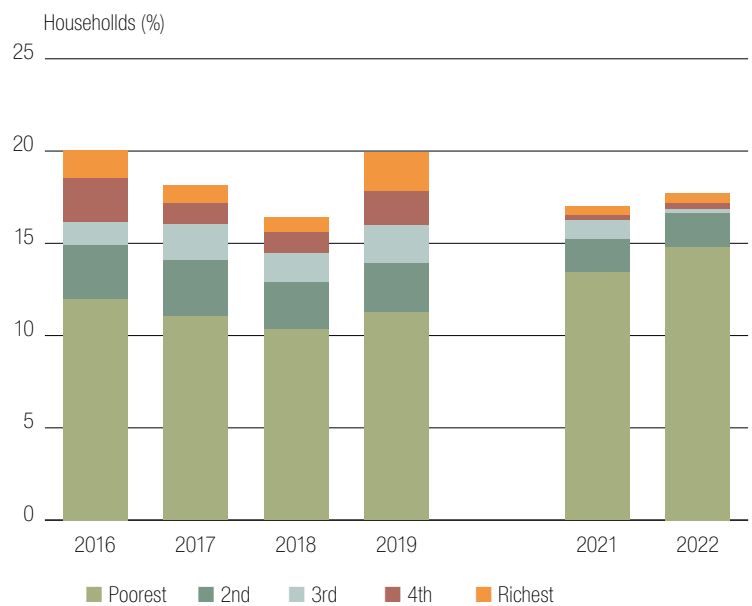
The challenges of reforming input-based health financing

Tajikistan's budgetary system for public spending on health continues to be based primarily on inputs, rather than results. A partial model of per capita financing for PHC has been operational nationally since 2019, but only works as a guiding minimum rate for providers without central pooling of funds.

Provincial oblast administrations receive a designated budget from the national government based on their population size and specific line-item inputs, such as number of beds and health workers. This perpetuates incentives for overcapacity and emphasizes structure over content and quality of care. There are also inequities because districts can top up

Fig.4

Poorer households face significantly higher levels of catastrophic health spending

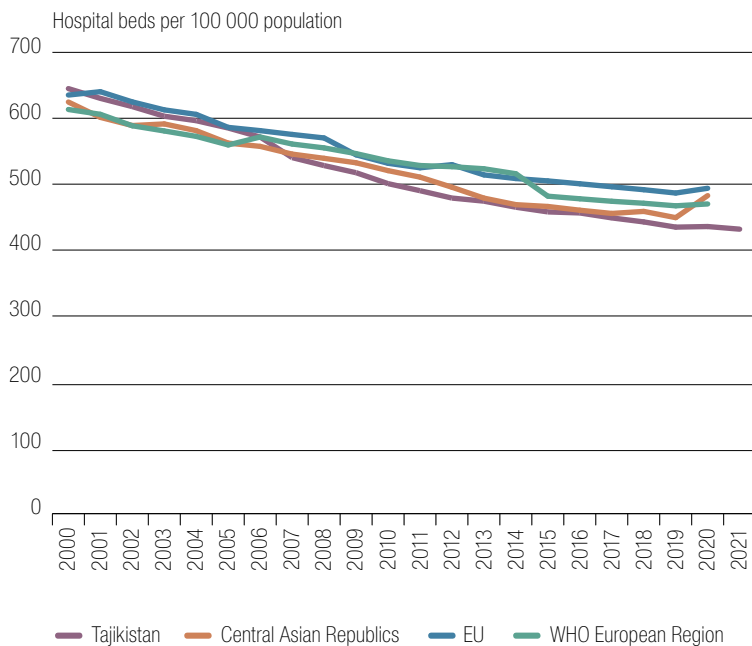


Source: WHO Regional Office for Europe, 2024a.

their nationally allocated health budget with local funds, but in practice only the wealthier ones are able to do so. Consequently, per capita health spending varies significantly across districts, with poorer districts spending less per capita: a difference that risks exacerbating inequalities and means that health spending is not related to social or health needs.

Reforms envisaged in the future are likely to focus on pooling funds at the oblast level, and improvements in per capita funding mechanisms for primary care facilities. The new National Health Strategy for the period 2021–2030 envisages the pooling of funds first at the regional level, and later at the national level. A project in the Sughd oblast, which began in 2019, is currently testing pooling of funds and the establishment of a single purchasing system, but it has not yet been expanded to other oblasts.

Fig.5
The ratio of hospital beds has decreased continuously



Source: WHO, 2024d.

Tajikistan has comparatively few health workers and pronounced regional imbalances

Tajikistan has one of the smallest ratios of health workers to population in the WHO European Region (Fig. 6). In 2021, there were only 213 medical doctors per 100 000 population. This was below the averages for both the WHO European Region (389 medical doctors per 100 000 population), and for the Central Asian Republics (265 per 100 000). There are also far fewer nurses than in most other European countries, with only 475 nurses per 100 000 population in 2020, compared to 803 per 100 000 in the WHO European Region average. The ratio of nurses is, however, nearly in line with the Central Asian average of 488 per 100 000.

Nearly all health workers are employed by the state as civil servants and salaries are set accordingly. Health worker salaries constitute the main expenditure item of the state health budget, amounting to 82% of public spending for health in 2018.

The shortage of health workers is more pronounced in some regions than others, and especially in rural areas. Health workers are primarily concentrated in the capital Dushanbe, and there is a lower density of almost all health workers in less affluent regions (WHO Regional Office for Europe & Ministry of Health and Social Protection, 2024). There are particularly high vacancy rates of family doctors. The government has adopted incentives to improve the distribution and motivation of the health workforce and to address regional imbalances (WHO Regional Office for Europe & Ministry of Health and Social Protection, 2024). In 2018, over half of all nurses were aged under 35, which may bode well for future workforce capacity if they are incentivized to remain in the profession (WHO, 2024a).

Fig.6
Tajikistan has fewer doctors and nurses per population than many other countries in Europe



Source: WHO, 2024a.

Note: Densities were multiplied by 10 to calculate the density per 100 000 population. Averages are based on latest available years.

The outmigration of health workers also contributes significantly to the shortage of qualified health care personnel. Like other countries in Central Asia, Tajikistan has struggled with health workforce migration, particularly of specialists (see Section 5).

Physical access to health services varies significantly

Access to health services varies significantly due to geographic and socioeconomic factors. Health services tend to be more limited in rural areas – despite nearly three-quarters of the population residing there – and specialists are concentrated in urban areas, limiting their accessibility for rural populations. In some rayons, the distance of the rural population from the central rayon or city hospital is considerable, and limitations around emergency services and transport exacerbate access issues, particularly in mountainous and remote locations. Most private health services are based in and around major urban areas such as Dushanbe. Due to the high prevalence of OOP payments, there are also major financial barriers to accessing services, especially for poorer groups of the population (see Section 2).

UHC is a national vision but not yet a reality

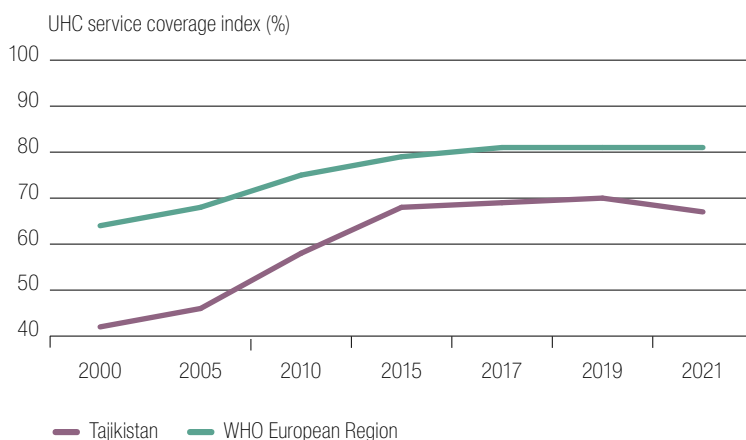
The UHC service coverage index is a global indicator that monitors progress towards Sustainable Development Goal 3 (SDG3), target 3.8.1 on coverage of essential health services. Between 2000 and 2019 this index increased in Tajikistan from 42% to 70%, representing a substantial improvement. However, between 2019 and 2021 there has been a slight decline to 67%, and the score is far below the WHO European Region average of 81% (Fig. 7). It is also lower than in neighbouring countries in Central Asia, which range from 69% (Kyrgyzstan) to 82% (Kazakhstan).

There is strong political commitment to the concept of UHC. However, in practice, access to and quality of care both remain major concerns. Issues undermining progress include a lack of modern technologies and equipment, gaps in health worker training, limited access to (affordable) pharmaceuticals, and inequalities in access. A cross-cutting challenge is the high level of private OOP payments faced by most of the population, which undermines financial protection and health equity.

The government has initiated various reforms over the last two decades intended to strengthen access to and quality of health services. These have focused on issues such as financing, governance and health worker training. The country also adopted regional development programmes as part of a strategic focus on improving access to quality health and social services. Under its current National Health Strategy, the government is committed to promoting UHC for the population by 2030 and has established strategic priorities for health system development in key areas such as governance, financing, workforce and health service quality.

Fig. 7

Access to services has recently experienced a slight decline



Source: WHO, 2024d.

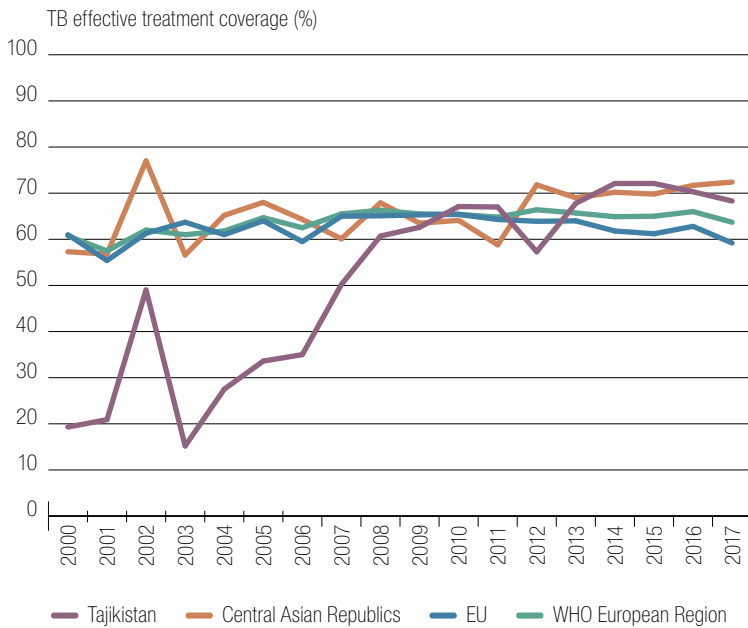
Note: UHC service coverage index, defined as the average estimated coverage of essential services based on tracer interventions that include reproductive, maternal, newborn and child health; infectious diseases; NCDs; and service capacity and access; among the general and the most disadvantaged populations.

Tajikistan has achieved major progress in addressing communicable diseases

Over the past two decades Tajikistan has seen significant improvements in communicable disease control, attributable to factors including strong government support, international partnerships and comprehensive vaccination programmes. Vaccination coverage rates are high for many vaccine-preventable diseases in Tajikistan. Childhood vaccination for the first dose of the measles vaccine achieved 98% coverage in 2022, and 97% for the second dose (2022). Perhaps unsurprisingly therefore, the incidence of measles in Tajikistan has tended to be reported as exceedingly low, although between 2019 and 2022 there was a huge jump in the incidence rate, from 0.1 to 4.6 cases per 100 000 population. While concerning for Tajikistan, this trend also reflects a worrying rise in measles prevalence across the WHO European Region, and highlights the need for ongoing vigilance around immunization rates.

Vaccination coverage for DTP3 could be maintained at 97% in 2019–2022, despite the COVID-19 pandemic, and a significant improvement from 83% in 2000. Tajikistan was verified by WHO as polio-free in 2002 and had eliminated rubella by 2016. The hepatitis B sero-prevalence target is <0.5%, and while this had not yet been achieved by the end of 2023, national immunization coverage of hepatitis B at birth was reported to be 99% (WHO & UNICEF, 2022).

Fig.8
Effective treatment coverage of TB has improved substantially since the early 2000s



Source: WHO, 2024d.

Note: Proportion of TB cases detected and successfully treated (estimate).

Rates for TB have also improved in recent years, although sustaining efforts will continue to be important. The TB incidence rate has steadily declined since 2009, from 96.8 cases per 100 000 population to 42.6 in 2021. The 2021 rate was slightly lower than the average that year for Central Asia (44.8), although more than double the average for the WHO European Region (17.9). Effective treatment coverage of TB has improved markedly, reaching 72.1% in 2015. In 2017, it was slightly lower, at 68.3%, although still higher than the average of the WHO European Region for that year (Fig. 8).

Tajikistan's experience with HIV is slightly more complex. The country's HIV incidence rate in 2019 was 14.1 per 100 000 population, in line with the average for Central Asia (14.2). However, challenges remain around the accuracy of reported figures due to limited access to testing and the enduring stigma associated with the condition. In terms of treatment, Tajikistan still lags far behind the UNAIDS targets for diagnosis and treatment, although UNAIDS estimates suggest a growing share of people with HIV/AIDS are receiving antiretroviral treatment (ART) (Fig. 9).

Factors undermining the treatment and management of communicable diseases often centre on pharmaceuticals, with issues including limited or irregular access, high cost and the circulation of counterfeit medication. Until 2015, pharmaceuticals for the treatment of TB, HIV/AIDS and malaria were provided free of charge via international development partners, but this is no longer the case. At the same time there have also been reports of overprescribing or unnecessary medications, since prescribing drugs is a source of income for primary care providers (Donadel et al., 2016).

Fig.9
Rates of HIV/AIDS diagnosis and treatment have improved but remain behind global targets



Source: UNAIDS, 2023.

4 IMPROVING THE HEALTH OF THE POPULATION

Life expectancy has improved but is still below the average for the WHO European Region

Since its independence, Tajikistan has seen progress in reducing mortality rates for some diseases. These include in particular reductions in infant and child mortality, maternal mortality and mortality from communicable diseases. Between 2000 and 2017 (the latest year with internationally available data), life expectancy at birth in Tajikistan increased by 2.0 years, rising from 72.5 to 74.5 years (Fig. 10). This was below the average of the WHO European Region (78.2), but above the average for Central Asia (72.5 years). As in most countries, when disaggregated by sex, life expectancy at birth for males in 2017 was lower (72.8 years) than for women (76.4 years). However, at 3.6 years, the gap between the sexes in Tajikistan is much lower than in many other countries, indicating some level of gender equity in health outcomes.

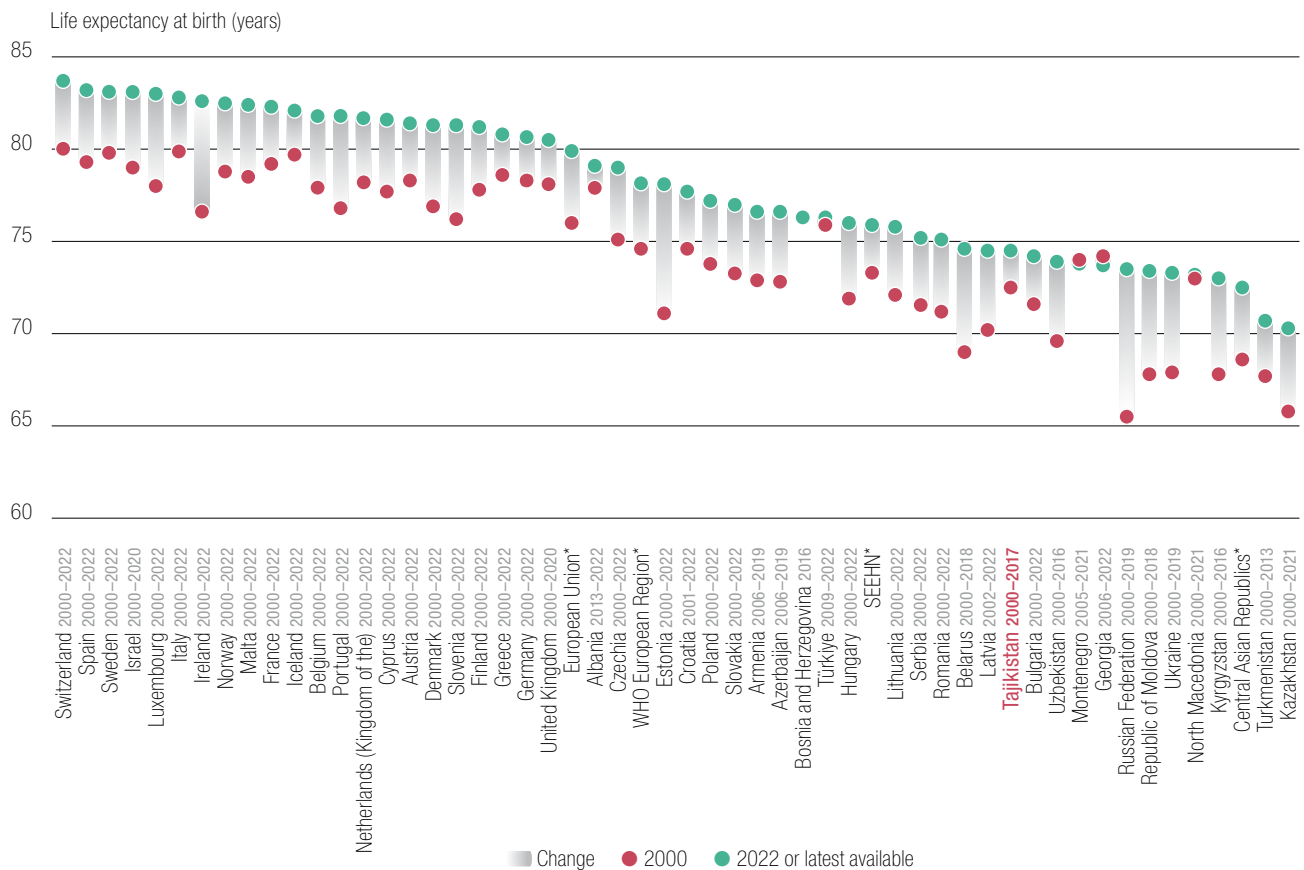
Despite these improvements, several factors continue to negatively impact life expectancy in Tajikistan. These include a degree of underreporting of infant and child deaths, which suggests that actual life expectancy may be lower than captured in official statistics. In 2017, only 96% of children under age 5 were reported to have been registered at birth (UNICEF, 2023). In addition, socioeconomic determinants such as poverty, limited access to health services and poor living conditions significantly affect health outcomes and there is scope to strengthen interventions against communicable diseases and NCDs and improve access to high-quality care.

Infant and maternal mortality rates are still high but improving

Infant and maternal mortality rates in Tajikistan remain relatively high, but have seen steady improvements over the past two decades. Factors undermining greater progress include poor quality of maternal and emergency obstetric care, and barriers created by high OOP costs.

In 2020, maternal mortality was estimated at 16.6 maternal deaths per 100 000 live births. This was higher than the average of the WHO European Region of 12.6 for that year, but lower than the Central Asian

Fig. 10
Life expectancy at birth is higher than in Central Asia overall



Sources: Eurostat, 2024, for EU/EEA countries, Albania, Montenegro, North Macedonia, Serbia, Armenia, Azerbaijan, Georgia and Türkiye; WHO Regional Office for Europe, 2024b, for all others.

Note: * Averages are based on years with data available.

average of 24.3. It also represents a major improvement from the 2000 rate of 67.5 deaths per 100 000 live births.

Infant mortality has also declined, but remains comparatively high. At 27.6 deaths per 1000 live births, Tajikistan had one of the highest estimated rates of infant mortality in the WHO European Region in 2021, second only to Turkmenistan (35.8 deaths). Tajikistan's rate was still more than four times the WHO European Regional average of 6.3 deaths per 1000 live births, and nearly double the average for Central Asian countries (15.5 deaths). Nonetheless it does represent a major improvement from Tajikistan's estimated rate of 67.6 deaths in 2000.

Cardiovascular diseases are the leading cause of mortality

Internationally reported data on mortality in Tajikistan are somewhat limited due to gaps in reporting. Consequently, detailed analysis of trends in causes of death is hard to produce. According to data reported for 2017, cardiovascular disease was responsible for 15 370 deaths that year (Fig. 11). Among cardiovascular diseases, ischaemic heart disease was the leading cause of death, with a rate of 138 deaths per 100 000 population in 2017, followed closely by cerebrovascular disease, at 133 deaths per 100 000 population.

After cardiovascular diseases, the second most often recorded category of cause of death in 2017 were “ill-

defined diseases”. Ill-defined diseases are conditions for which no diagnosis classifiable elsewhere is recorded. The category is often interpreted as an indicator for poor data quality (WHO, 2024b). Other major causes recorded in 2017 were cancers, diabetes and digestive diseases.

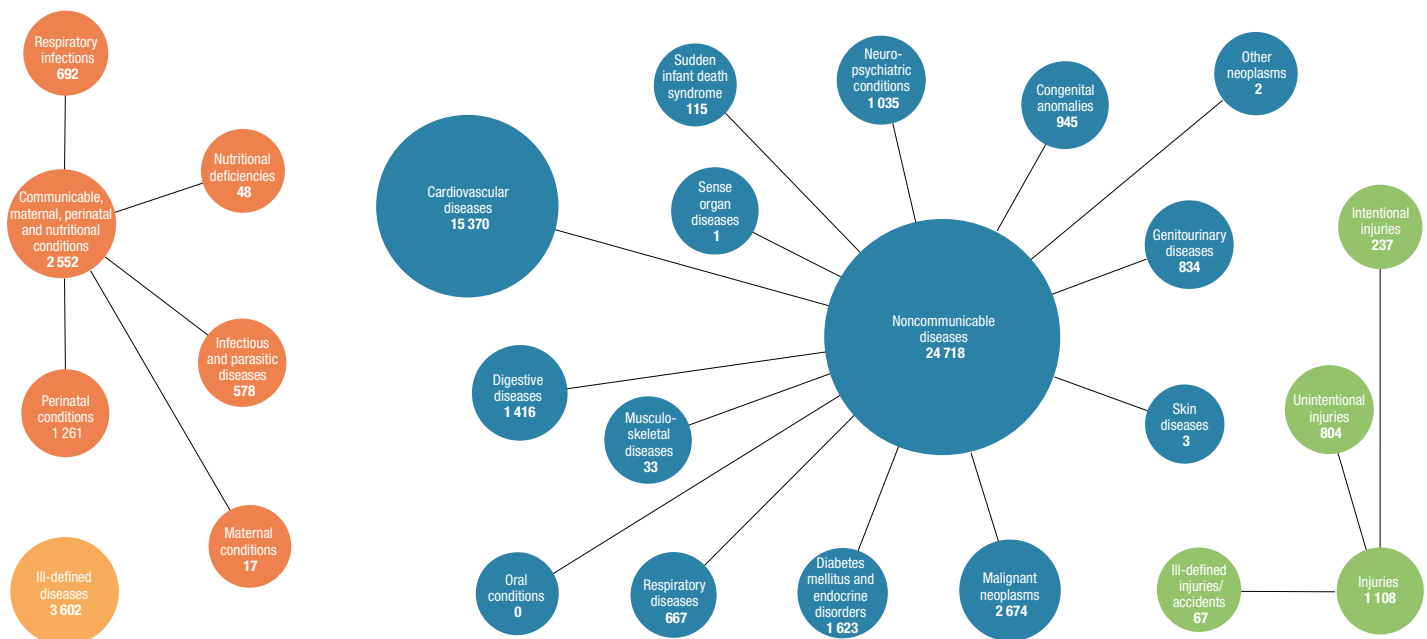
Tajikistan has made good progress in reducing mortality rates from communicable diseases, in part due to successful vaccination campaigns (see Section 3). There have also been indications of an encouraging reduction in the total number of deaths from diarrheal diseases (IHME, 2024). However, TB rates remain relatively high and there are ongoing challenges hindering treatment (see Box 2).

The COVID-19 pandemic is estimated to have affected overall mortality rates, but to a larger extent in 2020 than in 2021. According to official data, Tajikistan registered just 125 deaths directly due to COVID-19 during the pandemic, out of 17 786 confirmed cases of COVID-19 infections. Estimates of excess mortality associated with the pandemic offer a much higher figure of 112 deaths per 100 000 population. However, this was still below the average of the WHO European Region of 137 deaths per 100 000 population in 2020. In 2021, the rate in Tajikistan, at 73 deaths per 100 000 population, was less than half the regional average (207).

The comparatively small impact of COVID-19 on excess mortality in Tajikistan (Fig. 12) may partly be the result of the country's response to the pandemic, which saw increased investment of emergency funds in health services and a well coordinated response across

Fig.11

Cardiovascular diseases represent the biggest cause of mortality in Tajikistan



Source: WHO, 2024b.

Note: Overview of the distribution of causes of total deaths grouped by category. Data refer to 2017.

different sectors and entities. According to the national COVID-19 vaccination plan, all adults in Tajikistan (5.8 million people) were eligible for vaccination. By August 2022, 5.3 million people had been vaccinated with at least one dose, and 5.1 million people were fully vaccinated, with 15.4 million vaccine doses administered in total.

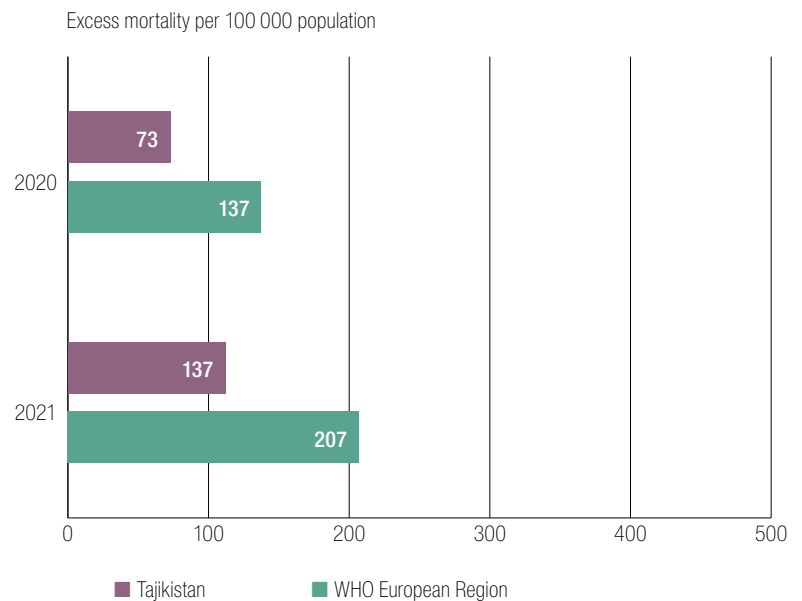
However, in addition to increased mortality, the COVID-19 pandemic also disrupted access to essential health services, creating risks of a longer-term negative health impact through reduced diagnosis or treatment of diseases. The pandemic also had major economic repercussions for the country, with a sharp increase in unemployment in 2020 and a reduction in remittances which was anticipated to disproportionately affect poorer households (World Bank, 2020). Against a backdrop of high OOP costs for health, this dip in financial security is likely to have had negative health effects which may contribute to higher mortality rates in the future.

NCDs are the dominant health challenge

Over the past two decades, the overall burden of NCDs has been steadily increasing. In 2019, 8 out of 10 deaths were due to NCDs. In 2017, Tajikistan's age-standardized rate of premature deaths from major NCDs was 521 per 100 000 population (Fig. 13). While being in line with other countries in Central Asia, this was substantially higher than the average of the WHO European Region (359). Like all countries in Europe, premature mortality from

Fig. 12

Excess mortality associated with COVID-19 was comparatively low in Tajikistan



Source: WHO, 2023b.

Note: Excess mortality from all causes of death, defined as the difference between the total number of deaths and the number that would have been expected in the absence of a crisis (for example, the COVID-19 pandemic). This difference is assumed to include deaths attributable directly to COVID-19 as well as deaths indirectly associated with COVID-19 through impacts on health systems and society.

Box 2

TB control remains a challenge

Like many of its Central Asian neighbours, Tajikistan continues to struggle with TB. In 2014 – the latest year for which there are internationally comparable prevalence data – the estimated prevalence rate was 128 cases per 100 000 population. This was a major reduction compared to the rate of 457 cases per 100 000 population in 2000 and was close to the average for Central Asian countries of 127.9 cases per 100 000 population in 2014. However, it is more than twice the rate of the WHO European Region as a whole (48 cases per 100 000 population in 2014) and makes Tajikistan one of 18 high TB priority countries in the WHO European Region.

Issues undermining successful treatment rates include drug supply management and surveillance. In 2022, TB treatment coverage was estimated to be only 55% of all cases. The country has been working to address these issues with support from international development partners, including WHO, the Global Fund and the US Agency for International Development. TB is now considered a government priority and there is a dedicated National TB Control Programme 2021–25. In 2021, the country's treatment success rate of new TB cases was estimated to be 92%,

indicating a good rate of coverage for reported cases.

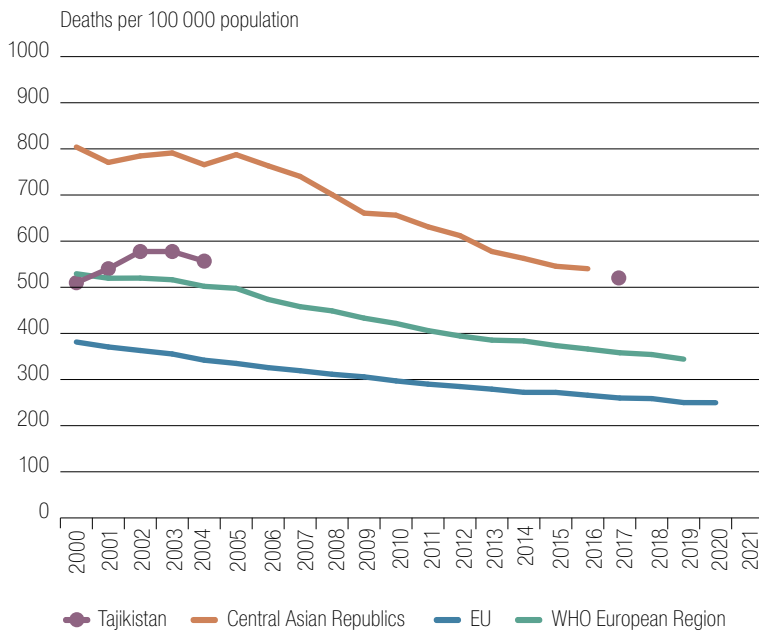
In addition to normal TB, Tajikistan is also among 27 countries worldwide with a high burden of multidrug-resistant TB (MDR-TB). There have been some indications of improvement: in 2020, 82% of reported MDR-TB cases were successfully treated compared to just 50% in 2014. The current National TB Programme includes access to new drug regimes for both MDR-TB and extensively drug-resistant TB (XDR-TB) patients.

As in many countries, the COVID-19 pandemic negatively impacted TB treatment in Tajikistan. There was reportedly a decline in TB and drug-resistant TB cases in 2020 compared to 2019, but this is likely to reflect reduced health system capacity or a lower number of patients seeking medical assistance, rather than an objective improvement in rates.

To improve TB control, potential actions include enhancing drug supply management, strengthening surveillance systems and ensuring comprehensive coverage of TB treatment. Continued international support and the implementation of innovative treatment regimens will be critical to addressing both TB and MDR-TB. Additionally, integrating TB services into PHC could help improve early detection and management of TB cases.

Fig.13

Premature mortality from NCDs is high, but there are substantial gaps in data



Source: WHO Regional Office for Europe, 2024b.

Note: Premature mortality (in people aged 30–69 years) from major NCDs (cardiovascular diseases, cancers, diabetes mellitus and chronic respiratory diseases).

major NCDs for men is higher than for women: in 2017, there were 601 premature male deaths per 100 000 population, compared to 445 for women.

Cancer is a significant cause of mortality, and cancer mortality rates appear to have been stagnating, with 67.9 deaths per 100 000 population in Tajikistan in 2017. This was below the average that year for the WHO European Region (146.8), but seemingly low rates may indicate issues with reporting, particularly as there are very few data available for trends in cancer over time. Stomach cancer, however, is recognized as having a high mortality rate, being nearly double the regional average: 18.3 deaths per 100 000 population in Tajikistan in 2017, compared to 9.1 deaths for the WHO European Region.

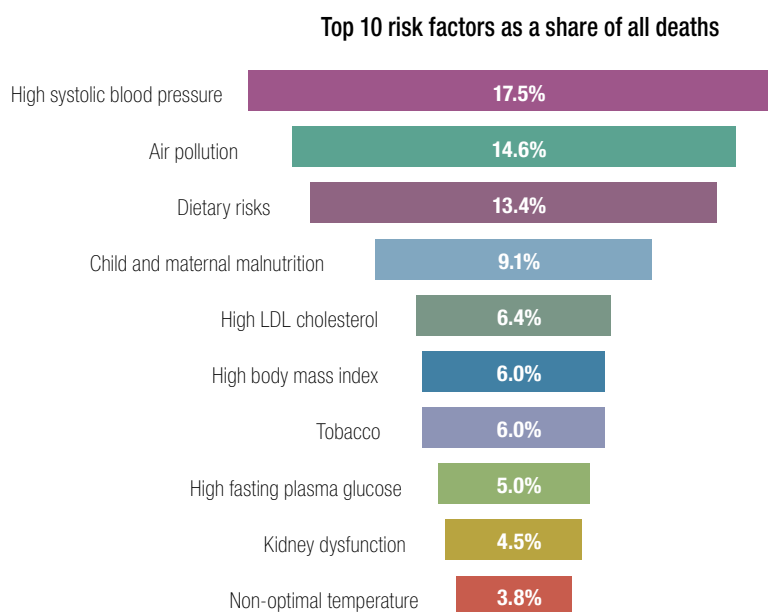
Diabetes is another major cause of mortality, and one that is estimated to have increased by 90.6% between 2009 and 2019 (IHME, 2021). Between 2005 and 2017 the age-standardized mortality rate from diabetes nearly doubled, from 23.3 deaths per 100 000 population in 2005 to 48.2 in 2017. This contrasts to a largely stagnating trend in the WHO European Region for the same period, with 14.6 deaths per 100 000 population in 2005 and 15 in 2017.

High blood pressure, air pollution and poor nutrition are leading risk factors

In 2021, high systolic blood pressure, air pollution and dietary risks were estimated to be the top three risk factors for mortality in Tajikistan (Fig. 14). These risk factors highlight significant challenges related to unbalanced diets rich in animal fats, household food

Fig.14

High blood pressure and air pollution are the two leading risk factors for mortality



Source: IHME, 2024.

Note: Percentage of all deaths attributable to risk factors for both sexes and all ages. Shares overlap and therefore add up to more than 100%. Data refer to 2021.

poverty, particularly in rural and mountainous areas, and limited access to prevention, early detection and treatment services. Child and maternal malnutrition is particularly concerning, with 9.1% of deaths attributable to this risk factor, compared to just 0.5% in the WHO European Region. Government initiatives to combat malnutrition include mandatory salt iodization since 2011 and wheat flour fortification.

Overweight and obesity are less prevalent in Tajikistan compared to other countries in the WHO European Region, although rates are slowly increasing. In 2016, age-standardized prevalence of overweight among adults (45.3%) was the lowest in the WHO European Region. It was substantially lower than the average in the WHO European Region (58.7%), and slightly lower than the average for Central Asian countries (49.5%). Prevalence was slightly higher in women (46.3%) than in men (44.2%). Ongoing monitoring of child obesity is recommended to prevent a double burden in the future and to support healthier lifestyles for children (WHO Regional Office for Europe, 2023b). In a 2019 survey, child overweight and obesity were both observed to be higher in urban than in rural areas (WHO Regional Office for Europe, 2023c).

Other major risk factors include air pollution and tobacco use. Air pollution is a major problem due to industrialization and the burning of solid fuels such as wood in homes. In 2019, average levels of PM 2.5 were estimated to be 53.7 µg/m³, over five times the WHO recommended maximum level at that time (10 µg/m³, lowered to 5 µg/m³ in 2021). To address data gaps on air quality and emission sources, the government has been working with the United Nations Economic Commission for Europe to build capacity for developing national emission

inventories. A survey in 2016 recorded that 6.3% of the adult population in Tajikistan smoked tobacco, which, if accurate, places the country in a relatively low bracket of tobacco prevalence. However, there are concerns about significant underreporting of tobacco use (see Box 3).

Many leading risk factors for mortality are connected to NCDs. The Ministry of Health and Social Protection has recognized that NCDs represent a major challenge for population health, and under the current national health strategy, reducing population exposure to NCD risk factors is a priority.

Neonatal disorders remain a leading cause of mortality and morbidity

A disability-adjusted life year (DALY) provides an indicator of the burden of disease in a population, as one DALY corresponds to the loss of one year in full health. Since 2000, the single greatest cause of disability-adjusted life years (DALYs) in Tajikistan has been neonatal disorders, but they were superseded in 2021 by COVID-19, estimated to result in nearly 4000 DALYs per 100 000 population. Neonatal conditions were still estimated to result in more than 3000 DALYs per 100 000 population, exceeding the burden of disease caused by lower respiratory infections, ischaemic heart disease (the leading cause of mortality) and stroke (Fig. 15). While the burden of disease associated with neonatal disorders remains high, it has decreased substantially in recent years, reflecting the efforts made to reduce infant mortality over the past two decades.

Other leading causes of DALYs include communicable diseases and NCDs, as well as injuries such as

Box 3

The hidden burden of tobacco in Tajikistan

Recent internationally available data on tobacco consumption in Tajikistan are limited and at risk of underreporting. In 2019, tobacco was estimated to be one of the top 5 risk factors affecting mortality in the country. This discrepancy highlights its importance as an issue despite the paucity of official data.

The 2016 Global Adult Tobacco Survey showed a modest smoking prevalence rate in Tajikistan of 6.3%. However, when disaggregated by sex, the data indicated a significant split between male and female smoking rates: among men, 14.7% were estimated to be current smokers, compared with just 0.3% among women. This also indicates potential underreporting by women, potentially due to sociocultural pressures and perceptions around tobacco use. Additionally, the survey indicated that over 11% of women were regularly exposed to the harmful effects of second-hand smoke at home. In addition to smoking, the country also struggles with the use of smokeless tobacco (nasway). In the 2016 survey, 12.5% of participants reported consuming smokeless tobacco (World Bank, 2019).

In policy terms, Tajikistan has taken steps to address the issue. In 2017, the country endorsed a comprehensive tobacco control law aligned with the WHO Framework Convention on Tobacco Control. Point-of-sale advertising is banned, and pictorial health warnings cover at least 75% of the surface on both sides of tobacco packs. Cigarette taxes and prices in Tajikistan are increasing, and at 59% of the total pack price in 2022, tobacco taxes were the highest in Central Asian countries. However, the relatively low cost of tobacco hinders efforts to reduce usage. In addition, enforcement of existing policies is incomplete, undermining their effectiveness. In 2022, despite all public places being officially smoke-free, no data were available on compliance (WHO, 2023a).

To strengthen tobacco control efforts, special policies aiming to discourage smokeless tobacco use are needed, and stronger surveillance data should be collected. These include consumption and economic data, such as tobacco product sales, prices and excise revenue. Additional efforts are also needed around the enforcement of existing smoke-free spaces and advertising restrictions.

road traffic injuries and falls. Some of these are major issues for both mortality and morbidity, exacerbating their burden as public health issues.

As with other data, there are occasionally challenges with underreporting. For example, liver cirrhosis is estimated to be a significant cause of disability and mortality, often linked to excessive alcohol consumption. Recorded alcohol consumption in Tajikistan is estimated to be one of the lowest in the WHO European Region, at just 0.8 litres per capita per year in 2019, compared to an average of 7.8 in the WHO European Region. However, unreported alcohol consumption has been estimated as nearly three times the recorded rate, and the consumption rate of drinkers was 15.8 litres per capita per year in 2016.

Key drivers of poor health are frequently rooted in poverty

As the least wealthy country in the WHO European Region (by GDP per capita), poverty is a major obstacle to health and wellbeing in Tajikistan. Poverty significantly impacts access to health services, healthy living conditions and overall wellbeing. There has been some progress in poverty reduction. Between 2000 and 2022 the poverty rate (according to the national poverty line) fell from 83% of the population to a projected 13.4%, while the economy grew at an average rate of 7% per year (World Bank, 2024). However, there was a period of decline in GDP

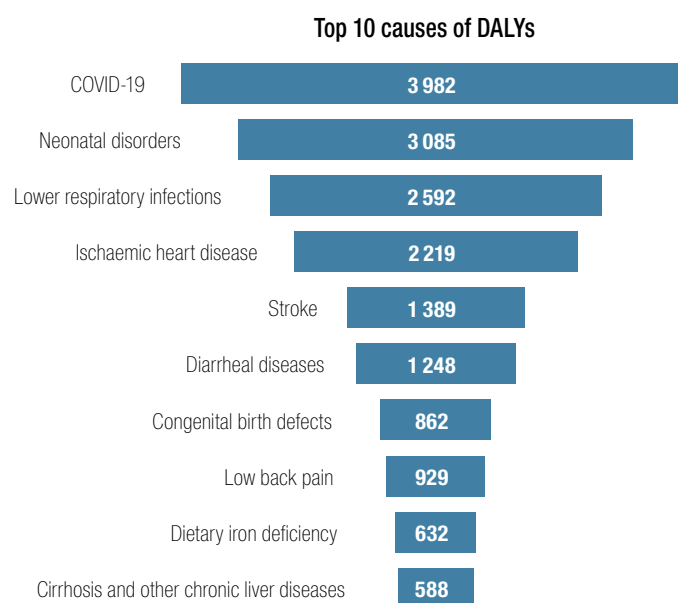
per capita between 2015 and 2020, and the rate of job creation has not kept pace with the growing population. Beyond direct financial barriers through OOP costs, both absolute and relative poverty continue to affect health through socioeconomic factors. These include poor housing, insufficient access to clean water and sanitation, use of polluting household fuels and low education levels.

Access to safe water varies considerably across Tajikistan owing to poor infrastructure. It undermines sanitation in urban and rural areas, although for different reasons. In urban areas, water systems are badly decayed and subject to frequent service outages. In rural regions, fewer than half of residents have access to improved water sources, meaning many take their water from ponds, canals, rivers and other unsafe sources.

Aside from physical and socioeconomic determinants of health, public awareness and knowledge on health topics also affects health-related behaviours and outcomes. Over the past decade, local communities in Tajikistan have become more involved in initiatives to raise public awareness on health topics such as maternal and child health, HIV/AIDS and TB. Despite this progress, in general the population still has insufficient access to information about health. This includes information about healthy behaviours and root causes of ill health, especially in relation to NCDs. Under the latest national health strategy, the government has committed to strengthening health promotion activities between now and 2030.

Fig.15

COVID-19 and neonatal disorders resulted in the greatest burden of disease in 2021



Source: WHO, 2024d.

Note: Top 10 causes of DALYs per 100 000 population for both sexes and all ages. Data refer to 2021.

5 SPOTLIGHT ON HEALTH WORKFORCE TRENDS

Tajikistan has increasing rates of health workers

Health care is one of the main sectors of employment in Tajikistan, and nearly all health workers are employed by the state. According to national data, in 2023 there were 21 592 physicians and 62 445 nurses in the country, along with midwives, support staff, managers and administrative staff (Ministry of Health and Social Protection, 2024).

When adjusted for population size, however, health workforce numbers are comparatively low. Between 2012 and 2021, the number of doctors per 100 000 population saw a slight increase from 171 in 2012 to 213 in 2021 (Fig. 16). National data reported the rate to have stabilized at 212 doctors per 100 000 population in 2023.

Data from the WHO national health workforce accounts database indicate that the number of nurses increased from 380 per 100 000 population in 2012 to 475 in 2020. According to national data, there were 615 nurses per 100 000 population in 2023.

Tajikistan struggles with an insufficient number of specialist health staff, such as family doctors (general physicians), paediatricians, psychiatrists and infectious disease specialists. Its relatively young population has implications for how some health workforce data should be interpreted. For example, national data show that the number of midwives (63 per 100 000 population) was higher than the average of the WHO European Region of 41 per 100 000 population. However, considering Tajikistan's young demographic structure and high fertility rate, this may still be low compared to relative need.

The distribution of health workers is uneven

There are shortages of health workers at the regional level and imbalances between rural and urban areas. Health workers are concentrated in the capital Dushanbe, with a lower density of almost all health workers in less affluent regions. In 2023, there were 644 doctors per 100 000 population in Dushanbe, but just 127 doctors per 100 000 population in the densely populated but poorer Khatlon oblast (WHO Regional Office for Europe & Ministry of Health and Social Protection, 2024).

Nurses are better distributed geographically, partly due to a staffing structure whereby health houses (PHC facilities in rural areas) are run by nurses rather than doctors. As a result, nurses currently lead 63.8% of PHC facilities, many of which are in rural areas. Specialists are unevenly distributed across regions and tend to be more available in urban areas or near larger district health centres; in some more remote areas, they are almost entirely absent (Japan International Cooperation Agency and Koei Research & Consulting Inc., 2021).

Part of the challenge with distribution is linked to health workforce planning practices. Health staff planning is typically aligned with bed capacity in hospitals, which has led to a shortage of PHC physicians, especially in rural areas. It has also led to imbalances between inpatient and outpatient care. There is generally an oversupply of health workers in hospitals, but shortages in outpatient clinics.

The Ministry of Health and Social Protection can offer incentives to increase health workers for specific skills, such as family doctors, or to limit them by capping training numbers. A recent Health Labour Analysis showed that as of 2023, regional imbalances were persisting (WHO Regional Office for Europe & Ministry of Health and Social Protection, 2024). The government is considering additional mechanisms to improve health workforce distribution and motivation.

Tajikistan has a comparatively young health workforce

The age distribution of a country's workforce is crucial for future workforce planning and managing retirement rates. Although recent data on the age composition of Tajikistan's health workforce are limited, in 2014 an estimated 17.1% of doctors were aged 55 years or over, which was lower than in most other European countries with more recent data. However, there is notable regional variation. In Gorno-Badakshan Autonomous Oblast the proportion of doctors aged 55 years and over has increased sharply over the last seven years, from 26% in 2014 to 34.8% in 2021, highlighting challenges in replacing retiring doctors (WHO Regional Office for Europe, 2024b; WHO Regional Office for Europe & Ministry of Health and Social Protection, 2024).

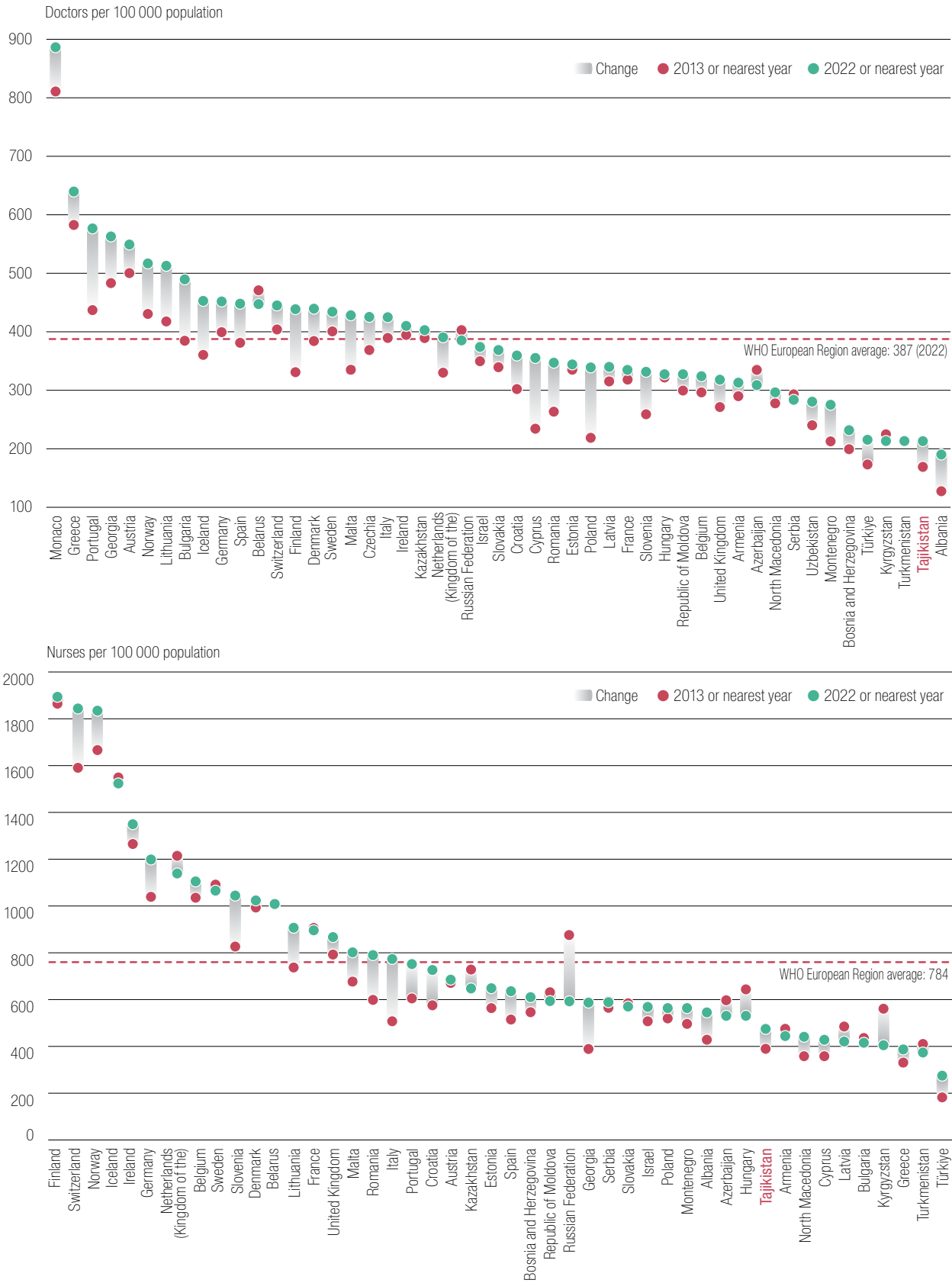
For nurses, age composition is less of a concern. In 2018, only 7% of nurses in Tajikistan were aged 55 years and over, placing Tajikistan among the countries with the lowest rates in the WHO European Region (Fig. 17). Most of the nursing workforce is female (84.0% in 2018), whereas doctors are more likely to be male (60.8% in 2014). Ageing rates in each category may be affected by the different retirement ages for men (63 years) and women (58 years) in Tajikistan.

Overall enrolment numbers of medical students remain capped by the government, partly to prioritize the quality of training and partly due to a longstanding fear of excessive physician capacity. To address disparities in the geographical distribution of physicians, students from regions with the greatest shortages are given priority when applying to study medicine. However, this policy has not yet managed to offset existing imbalances.

Tajikistan faces a severe shortage of family doctors

There is a pronounced lack of family doctors (general physicians) across the country, a situation that has worsened over the past seven years. There are high vacancy rates across regions, as well as an inequitable distribution of existing family doctors. In the rural but

Fig.16
The rates of doctors and nurses in Tajikistan are increasing

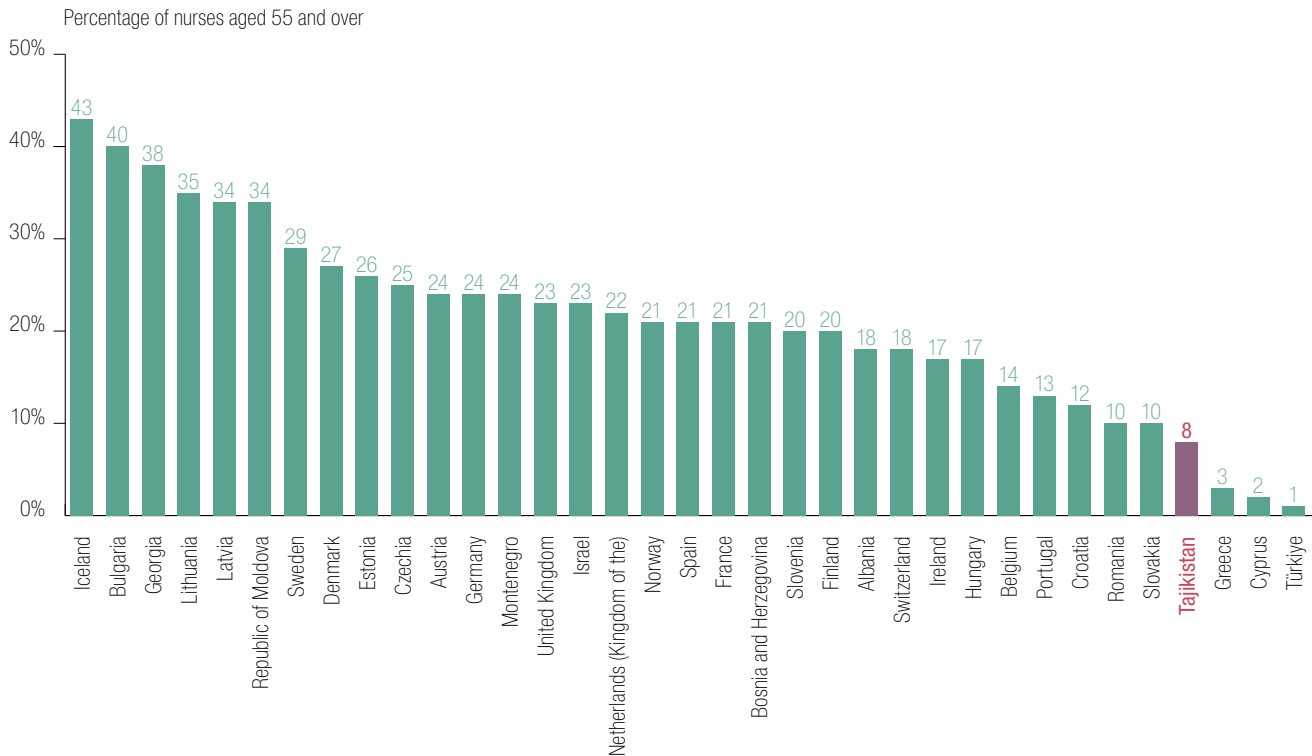


Source: WHO, 2024a.

Note: The number of nurses plotted for Austria has to be treated with caution, due to breaks in the time series and switching between "licensed to practise" and "practising" workforce numbers.

Fig.17

Tajikistan has a relatively low number of nurses aged 55 or over



Source: WHO, 2024a.

populous region of Khatlon, for example, 56% of family doctor positions were vacant in 2023, compared to a national average of 31% (WHO Regional Office for Europe & Ministry of Health and Social Protection, 2024). There is a lack of trend data on how the number of general medical practitioners compares to the total number of doctors.

A significant part of the challenge lies in the limited scope of practice that family doctors hold in Tajikistan. As a result, patients sometimes bypass family doctors as their first point of care and move directly to hospital or specialist care. Family medicine also continues to suffer from low prestige, which hinders recruitment and retention. In recent years, the country has invested heavily in the training of family doctors to address this issue, but it remains an ongoing concern, especially in some regions.

There is a high rate of health worker migration

The shortage of qualified health personnel in Tajikistan is compounded by outmigration of health workers. Similar to neighbouring Kyrgyzstan and Uzbekistan, Tajikistan has faced significant migration of health workers to other countries. The Russian Federation has traditionally been the primary migration destination, but since the onset of the Ukraine crisis in 2022, there has been growing interest in other countries such as Germany and South Korea. Over the last three years there has been

a particularly high rate of migration of medical doctors and specialists. In 2021, the number of medical doctors who migrated was equal to half of the total number of medical graduates that year. Internal and international migration also exacerbate inequalities between regions: a higher number of doctors migrate from remote or rural areas compared to urban areas (WHO Regional Office for Europe & Ministry of Health and Social Protection, 2024).

One of the primary factors affecting migration is the low level of pay received by health workers in Tajikistan. The average monthly salary in health care (US\$ 95) is 34% lower than the national average salary of Tajikistan (US\$ 143) (WHO Regional Office for Europe & Ministry of Health and Social Protection, 2024). The latest national health strategy commits to a gradual increase of health worker salaries, and outlines plans to establish financial incentives to address geographic imbalances.

In 2023, national statistics indicated that the rate of outmigration might be starting to decline. That year, 274 doctors officially migrated to other countries, but 232 doctors were registered as having returned to Tajikistan, creating a net loss of just 42 doctors (Ministry of Health and Social Protection, 2024). However, rates of unofficial migration are unclear and may show a different pattern. Overall, incentivizing qualified health workers to remain practising in Tajikistan remains an ongoing challenge.

6 EUROPEAN PROGRAMME OF WORK (EPW)

Moving towards universal health coverage

The government of Tajikistan has initiated a range of health reforms over the last decade designed to advance UHC and strengthen primary care. These include the revision of a state-guaranteed basic benefits package, per capita health financing, the piloting of a performance-based financing mechanism, case-based hospital payments and new legislation to establish a Mandatory Health Insurance Fund.

A pilot project on health financing reform in Sughd oblast has focused on strategic purchasing and implementation, supporting progress towards UHC. There is a desire to strengthen health information systems (HIS) infrastructure in order to improve data quality for decision-making.

Plans to enhance PHC focus on improving accessibility and quality, integrating it with other care levels, and expanding roles for community health workers and pharmacists. A “Centres of Excellence” project intends to showcase integrated care models and family medicine practices.

Capacity building for PHC providers includes continuous professional development. Preventive health measures, such as immunizations and screenings, are emphasized, particularly within the Sughd Pilot. Workforce planning aims to recruit, train and retain health professionals, especially in underserved areas, with tasks being shifted to optimize roles.

Governance reforms focus on improving transparency, accountability and stakeholder engagement, developing regulatory frameworks for quality and safety, and building leadership and management capacity.

Protecting against health emergencies

Public health emergency preparedness and response, along with strengthening International Health Regulations core capacities, is a priority in the national health agenda. Tajikistan is committed to ensuring robust mechanisms are in place to respond effectively to a range of public health emergencies. This includes improving early warning systems, conducting regular simulations and drills, and developing comprehensive emergency response plans at national and regional levels. Efforts are focused on developing hospital emergency preparedness and response plans, and enhancing the capabilities of the Public Health Emergency Operating Centre with support from WHO.

To bolster these efforts, Tajikistan is also working on improving its emergency response infrastructure and equipment, as well as training health care professionals in emergency care and establishing rapid response teams. Strengthening coordination among various stakeholders, including government agencies, international organizations and the private sector, is crucial for a unified and efficient emergency response. Public awareness campaigns and community engagement are also being prioritized to ensure the population is informed of, and prepared for, potential health emergencies.

Promoting health and wellbeing

Although there has been a reported decline in premature NCD deaths since the mid-2000s, NCDs remain the leading cause of mortality. Tajikistan has developed and implemented a national NCD strategy that also includes injury prevention. A 2023 WHO STEPwise survey (STEPS) on NCD risk factors has been completed, and the final report is being prepared. The government is expected to take action based on the results, targeting NCD risk factors and implementing new preventive measures.

In partnership with the German Agency for International Cooperation, WHO has provided Tajikistan with technical assistance to scale up and implement essential interventions for preventing cardiovascular diseases in primary care, including better diagnosis and management of hypertension.

Improving diets has also been a significant focus. WHO supports the implementation of the National Strategy and Action Plan on Diet and Physical Activity (2015–2024), emphasizing malnutrition. To protect priority target groups, a National Roadmap for the Promotion of Healthy Nutrition and the Prevention of Obesity in Women and Children has been developed and implemented. WHO assists in the analysis and interpretation of data on child nutrition via the WHO Childhood Obesity Surveillance Initiative (COSI). A WHO FeedCities survey has produced recommendations on reducing the use of salt, sugar and trans fats in diets, especially for women and children. WHO has also helped the Ministry of Health and Social Protection to update national hospital protocols for managing severe and moderate acute malnutrition in children under 5 years of age.

To further promote health and wellbeing, Tajikistan is increasing access to preventive health services, promoting healthy lifestyles and enhancing health education. Community-based interventions and public health campaigns aim to raise awareness about the importance of regular physical activity, balanced diets and avoiding risk factors such as tobacco and alcohol use. Strengthening PHC services to provide comprehensive care for NCD prevention and management is also a priority. This includes integrating mental health services into primary care to address the psychosocial aspects of health and wellbeing.

COUNTRY DATA SUMMARY

	Tajikistan	Central Asia	WHO European Region	European Union
Life expectancy at birth, both sexes combined (years)	74.5 ^a (2017)	72.5 ^a	78.2 ^a	79.9 ^a
Estimated maternal mortality per 100 000 live births (2020)	16.6	24.3	12.6	6.4
Estimated infant mortality per 1 000 live births (2021)	27.6	15.5	6.3	3.2
Population size, in millions (2022)	9.9	77.1	929.1	512.7
GDP per capita, PPP\$ (2021)	4 288	13 327	38 936	48 615
Poverty rate at national poverty lines, % of population	22.5 ^b (2022)	14.1 (2017)	14.9 (2018)	17.0 (2018)

Sources: WHO Regional Office for Europe, 2024b;

^a Eurostat, 2024, for EU/EEA countries, Albania, Montenegro, North Macedonia, Serbia, Armenia, Azerbaijan, Georgia and Türkiye; ^b World Bank, 2024.

Note: Life expectancy averages refer to latest available years.

References

Donadel M et al. (2016). Drug prescribing patterns at primary health care level and related out-of-pocket expenditures in Tajikistan. *BMC Health Services Research*, 16(1):556.

Eurostat (2024). Database, life expectancy at birth. Brussels: European Commission. Available at: https://ec.europa.eu/eurostat/databrowser/view/demo_mlexpec/default/table?lang=en (accessed 8 May 2024).

IHME (2024). Global Burden of Disease 2021: Findings from the GBD 2021 Study. Seattle, WA: Institute for Health Metrics and Evaluation. Available at: <https://www.healthdata.org/research-analysis/library/global-burden-disease-2021-findings-gbd-2021-study> (accessed 30 May 2024).

Japan International Cooperation Agency and Koei Research & Consulting Inc. (2021). Data Collection Survey on Primary Health Care in the Republic of Tajikistan – Survey Report August 2021.

Ministry of Health and Social Protection (2021). Strategy for protecting the health of the population of the Republic of Tajikistan for the period until 2030 (Decree No. 414 of the Government of Tajikistan). Dushanbe: Ministry of Health and Social Protection.

Ministry of Health and Social Protection (2024). Personnel Policy and Science. Department of Medical and Pharmaceutical Education.

Neelsen S, Egamov F, Dorgabekova H, Madeville K (2021). Review of Public Health Expenditure in the Republic of Tajikistan: Discussion paper. Washington DC: World Bank.

UNAIDS (2023). Joint United Nations Programme on HIV/AIDS. Available at: <https://www.unaids.org/en/regionscountries/countries> (accessed 1 August 2024).

UNICEF (2023). Birth registration data. Available at: <https://data.unicef.org/resources/dataset/percentage-children-age-5-whose-births-registered-sex-place-residence-household-wealth-quintile/> (accessed 27 August 2024).

WHO (2023a). WHO report on the global tobacco epidemic. Geneva: World Health Organization. Available at: https://cdn.who.int/media/docs/default-source/country-profiles/tobacco/gtcr-2023/tobacco-2023-blr.pdf?sfvrsn=f98fe67_3&download=true (accessed 16 May 2024).

WHO (2023b) Global excess deaths associated with COVID-19 (modelled estimates). Geneva: World Health Organization. Available at: <https://www.who.int/data/sets/global-excess-deaths-associated-with-covid-19-modelled-estimates> (accessed 10 April 2024).

WHO (2024a). National Health Workforce Accounts database. Geneva: World Health Organization. Available at: <https://apps.who.int/nhwportal/> (accessed 29 July 2024).

WHO (2024b). Mortality database. Geneva: World Health Organization. Available at: <https://platform.who.int/mortality/countries> (accessed 3 April 2024).

WHO (2024c). Global Health Expenditure database. Geneva: World Health Organization. Available at: <https://apps.who.int/nha/database/> (accessed 12 April 2024).

WHO (2024d). Global Health Observatory database. Geneva: World Health Organization. Available at: <https://www.who.int/data/gho/> (accessed 22 April 2024).

WHO, UNICEF (2022). WHO/UNICEF Estimates of National Immunization Coverage, 2022 Revision. Geneva: World Health Organization.

WHO Regional Office for Europe (2019). Can people afford to pay for health care? New evidence on financial protection in Europe. Copenhagen: WHO Regional Office for Europe. Available at: <http://www.euro.who.int/en/publications/abstracts/can-people-afford-to-pay-for-health-care-new-evidence-on-financial-protection-in-europe-2019> (accessed 6 September 2024).

WHO Regional Office for Europe (2023a). Can people afford to pay for health care? Evidence on financial protection in 40 countries in Europe. Summary. Copenhagen: WHO Regional Office for Europe. Available at: <https://iris.who.int/handle/10665/374504> (accessed 17 May 2024).

WHO Regional Office for Europe (2023b). Childhood Obesity Surveillance Initiative (COSI): Tajikistan. Copenhagen: WHO Regional Office for Europe.

WHO Regional Office for Europe (2023c). Childhood Obesity Surveillance Initiative (COSI): Tajikistan. Report on the fourth (2016/2017) and fifth (2019) rounds of data collection. Copenhagen: WHO Regional Office for Europe.

WHO Regional Office for Europe (2024a). Can people afford to pay for health care? New evidence on financial protection in Tajikistan: summary. Copenhagen: WHO Regional Office for Europe. Available at: <https://www.who.int/andorra/publications/m/item/can-people-afford-to-pay-for-health-care-new-evidence-on-financial-protection-in-tajikistan-summary> (accessed 27 August 2024).

WHO Regional Office for Europe (2024b). European Health for All database (HFA-DB). Copenhagen: WHO Regional Office for Europe. Available at: <https://iris.who.int/handle/10665/374504> (accessed 17 May 2024).

WHO Regional Office for Europe, Ministry of Health and Social Protection (2024). Report of the Health Labor Market Analysis in the Republic of Tajikistan. Copenhagen: WHO Regional Office for Europe.

Wilkins J, Goroshko A (2023). Budgetary space for health in the Republic of Tajikistan: options for more public resources. Copenhagen: WHO Regional Office for Europe. Available at: <https://iris.who.int/bitstream/handle/10665/367269/WHO-EURO-2023-6296-46061-66635-eng.pdf?sequence=1> (accessed 27 August 2024).

World Bank (2019). Tajikistan: Overview of Tobacco Use, Tobacco Control Legislation, and Taxation: A Country Brief. Washington DC: World Bank.

World Bank (2020). Economic and Social Impacts of COVID-19: Update from Listening to Tajikistan. Washington DC: World Bank.

World Bank (2024). World Bank Poverty and Inequality Platform. Washington DC: World Bank Group. Available at: <https://data.worldbank.org/indicator/SI.POV.NAHC?end=2023&start=2023&view=bar> (accessed 25 April 2024).

WHO Regional Office for Europe

WHO is the authority responsible for public health within the United Nations system. The WHO Regional Office for Europe (WHO/Europe) covers 53 countries, from the Atlantic to the Pacific oceans.

To support countries, WHO/Europe seeks to deliver a new vision for health, building a pan-European culture of health, where health and well-being goals guide public and private decision-making, and everyone can make healthy choices. WHO/Europe aims to inspire and support all its Member States to improve the health of their populations at all ages. WHO/Europe does this by providing a roadmap for the Region's future to better health; ensuring health security in the face of emergencies and other threats to health; empowering people and increasing health behaviour insights; supporting health transformation at all levels of health systems; and by leveraging strategic partnerships for better health.

European Programme of Work 'United Action for Better Health in Europe'

The European Programme of Work (EPW) sets out a vision of how the WHO Regional Office for Europe can better support countries in our region in meeting citizens' expectations about health.

The social, political, economic and health landscape in the WHO European Region is changing. United action for better health is the new vision that aims to support countries in these changing times. "United", because partnership is an ethical duty and essential for success, and "action" because countries have stressed their wish to see WHO move from the "what" to the "how", exchanging knowledge to solve real problems. The WHO European Region's solidarity is a precious asset to be nurtured and preserved and, through the EPW, WHO/Europe supports countries as they work together to serve their citizens, learning from their challenges and successes.

The European Observatory on Health Systems and Policies

The European Observatory on Health Systems and Policies supports and promotes evidence-based health policy-making so that countries can take more informed decisions to improve the health of their populations. It brings together a wide range of policy-makers, academics and practitioners, drawing on their knowledge and experience to offer comprehensive and rigorous analysis of health systems in Europe. The Observatory is a partnership hosted by WHO/Europe. Partners include the governments of Austria, Belgium, Finland, Ireland, Norway, Slovenia, Spain, Sweden, Switzerland, the United Kingdom, and the Veneto Region of Italy (with Agenas); the European Commission; the French National Union of Health Insurance Funds (UNCAM), the Health Foundation; the London School of Economics and Political Science (LSE) and the London School of Hygiene & Tropical Medicine (LSHTM). The Observatory is based in Brussels with hubs in London (at LSE and LSHTM) and at the Berlin University of Technology.