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Kyrgyzstan

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Health Systems in Action (HSiA) Insights

Kyrgyzstan

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Editorial Team

This edition of the Health Systems in Action Insight for Kyrgyzstan was written by Bernd Rechel, Saltanat Moldoisaeva and Amanda Shriwise.

The Health Systems in Action series

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.

The series is co-produced by the WHO Regional Office for Europe and the European Observatory on Health Systems and Policies. 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: KYRGYZSTAN

Key points

- Kyrgyzstan's health system provides a state-guaranteed package of services but there are gaps in population coverage and the scope of publicly funded care is limited.
- The COVID-19 pandemic disrupted access to essential health services and led to excess mortality, but less so than in many other European countries, and maternal mortality increased only marginally in the first year of the pandemic.
- Government spending on health as a share of total public spending has declined, with an increasing share of government spending going to other sectors.
- Most patients have to make co-payments for inpatient care and only 50% of the so-called basic price of a limited list of (some 70) outpatient medicines is covered.
- Private out-of-pocket (OOP) spending accounted for 40.7% of health spending in 2021. This reliance on OOP payments can lead to catastrophic and impoverishing health spending.
- Despite efforts to ensure access to health services, there are still marked disparities in provision between rural/mountainous areas and urban areas, and barriers linked to cost and gaps in mandatory health insurance coverage.
- Rates of routine childhood vaccinations used to be traditionally high but have been impacted by the COVID-19 pandemic.
- Access to diagnosis and treatment for HIV/AIDS and tuberculosis (TB) remain public health concerns.
- Kyrgyzstan faces high rates of premature mortality due to noncommunicable diseases (NCDs).
- The population is at risk from high blood pressure, dietary risks, air pollution and smoking, with men more likely to engage in behavioural risk factors (such as smoking and alcohol consumption).
- Rates of health workers per population have declined and the ageing and migration of the health workforce are major concerns.

1 ORGANIZING THE HEALTH SYSTEM

Kyrgyzstan's health system is centrally governed

The Kyrgyz health system is governed by the Ministry of Health, which is responsible for the development of national health policies and the regulation of health service provision. Most health care providers are public and most health workers are salaried employees. The Mandatory Health Insurance Fund (MHIF) used to pool public funds at the national level for the purchasing of a standardized package of services from health care providers. However, at present the role of the Ministry of Health in health financing is being strengthened and republican budget funds currently going to the MHIF will be redirected to the Ministry of Health. This threatens to undermine the role of the MHIF as the strategic purchaser of health services. The territorial units of the MHIF will be converted to regional branches of the Ministry of Health. The MHIF is anticipated to be responsible for health care quality and for signing contracts with health care providers.

Kyrgyzstan has undertaken far-reaching health reform programmes, including *Manas* (1996–2005), *Manas Taalimi* (2006–2011), *Den Sooluk* (2012–2018) and the current "Healthy Person – Prosperous Country" programme (2019–2030), with a particular focus on health system strengthening for universal health coverage (UHC) and improving health outcomes. Patient rights and the participation of the public in the governance of the health system are still at an early stage of development.

The scope of publicly covered services is limited and there are gaps in population coverage

The health insurance system is mainly (more than 70%) financed from the national health budget (rather than from health insurance contributions). The MHIF channels 80% of public spending through contractual relationships with health facilities at all levels of care, under which health services covered by the State Guaranteed Benefits Package (SGBP) and the Additional Drug Package (ADP) are purchased.

All Kyrgyz citizens who are registered with primary care providers are entitled to a basic set of services covered by the SGBP, including emergency care, primary care, outpatient specialist care, 12 basic diagnostic tests, and outpatient medicines and medical products for five conditions (epilepsy, asthma, schizophrenia, affective disorders and palliative care for stage IV cancer).

People who pay contributions (and those for whom the government pays contributions) are entitled to an extended set of services covered by the SGBP, including inpatient care, additional diagnostic tests, rehabilitation and physiotherapy. They are also entitled to a further set of outpatient medicines and medical products covered by the ADP, including 59 international non-proprietary name medicines and 3 medical devices (WHO Regional Office for Europe, 2023). However, the ADP covers only 50% of the so-called basic price of the specified list of medicines in primary care. The difference between 50% of the basic price and the retail price has to be paid out of pocket by patients. There is also a lack of clarity among patients and providers about what services are covered publicly. Around one third of the population cannot benefit from the extended set of services covered by the SGBP and the ADP (WHO Regional Office for Europe, 2024a).

The role of primary care is still underdeveloped, despite a series of reforms

Strengthening primary care and improving maternal and child health have been key goals of successive health reforms. Physicians in Family Group Practices (FGPs) are responsible for initial visits, check-ups and, if necessary, examination and treatment. If a consultation with a specialist is needed, the family doctor refers patients to secondary care, although in reality primary care is often bypassed and patients access specialists directly. Reasons for this include a lack of resources at primary care level and an underdeveloped gatekeeping system.

Feldsher-Midwife Points (FAPs) are in place in rural areas to improve access to primary care (including maternal and child health care), and each FAP is run by a feldsher (a nurse-midwife) and has a family doctor who visits regularly. However, primary care is not sufficiently addressing many diseases that are best managed at the primary care level, including NCDs, and it remains poorly oriented towards preventive activities. Efforts are under way to strengthen gatekeeping and improve the quality of primary care for the treatment of hypertension and diabetes through using digital tools (Laatikainen et al., 2022). In terms of its share of health spending, outpatient curative care (including general and specialized outpatient care) accounted for only 26.1% in 2019, which was lower than the share for inpatient curative care (31.9%) or pharmaceuticals (30.1%) (WHO, 2024a).

Specialized ambulatory care is provided by narrow specialists at some Family Medicine Centres (FMCs) and by private providers. Secondary and inpatient care are provided by hospitals at the district and regional level. Tertiary care is only available in the capital, Bishkek, making it more accessible to residents of Bishkek city and Chui region, and resulting in access barriers to people living in other parts of the country.

2 FINANCING AND ENSURING FINANCIAL PROTECTION

Health spending per capita in 2021 was the lowest in the WHO European Region

In 2021 health spending in Kyrgyzstan amounted to 5.4% of gross domestic product (GDP), an increase from 4.5% in 2019, but far below the 2012 level of 8.5%. Health spending per capita was the lowest in the WHO European Region in 2021, amounting to only US$ 302 PPP (purchasing power parity) **(Fig.1)**. The public share of health spending was US$ 161 PPP per capita, and OOP spending amounted to US$ 123 PPP per capita. While public spending per capita was higher than in previous years, it only just exceeded the level achieved in 2013 (US$ 160 PPP).

Public spending on health as a share of overall public spending increased in 2021

In the early 2000s, public spending on health as a share of total government expenditure increased substantially (from 7.1% in 2000 to 14.5% in 2006) as part of a sector-wide approach that external agencies had negotiated with the government. However, in subsequent years the emphasis on spending on health subsided and public spending declined to 6.9% of total government expenditure in 2020, although increasing again to 8.6% in 2021 (WHO, 2024a). Public spending on health increased from 2.4% of GDP in 2020 to 2.9% in 2021, most likely due to the COVID-19 pandemic **(Fig.2)**. This was above the average for Central Asia (2.3%), but far below the average for the WHO European Region (5.9%).

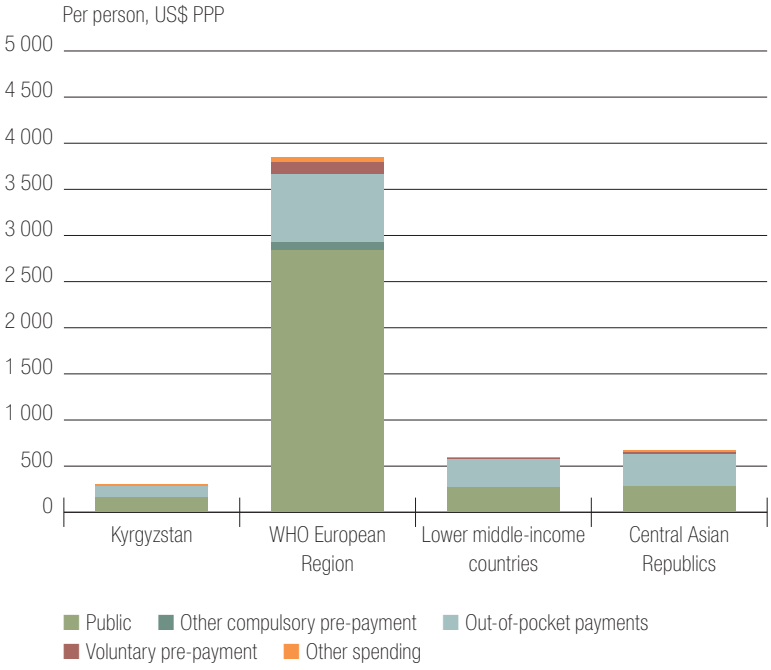
The share of OOP payments in overall health spending declined markedly in recent years, from 57.2% in 2016 to 40.7% in 2021 **(Fig.3)**. The share in Kyrgyzstan was far below the Central Asian average and the average of the lower middle-income countries (LMICs) in the WHO European Region.

OOP spending on health is likely to lead to impoverishment

While the share of OOP spending has declined in recent years, data on how this has affected financial protection are out of date. In 2014 (the latest year for which data are available), around 13% of households experienced catastrophic health spending. This was higher than in many countries in the WHO European Region but lower than expected given Kyrgyzstan's heavy reliance on OOP payments at the time. Catastrophic OOP payments were heavily concentrated among poorer households

Fig. 1

Health spending per capita is much lower than in comparator countries

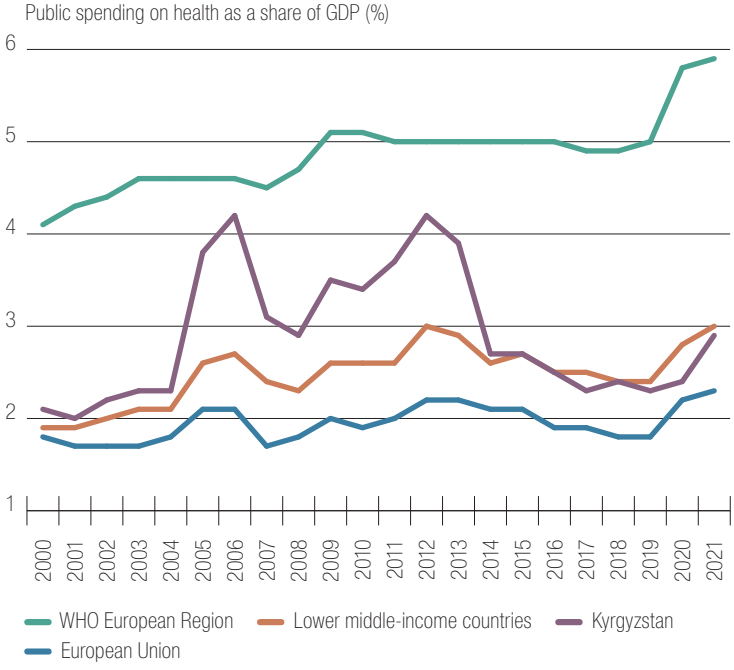


Source: WHO, 2024a.

Notes: 2021 data. Public refers to transfers from government budgets and social health insurance contributions. Other compulsory pre-payment refers to premiums for MHI schemes in Belgium, Finland, France, Germany, the Netherlands (Kingdom of the) and Switzerland. Other spending includes external funding and some other marginal spending. PPP: purchasing power parity.

Fig. 2

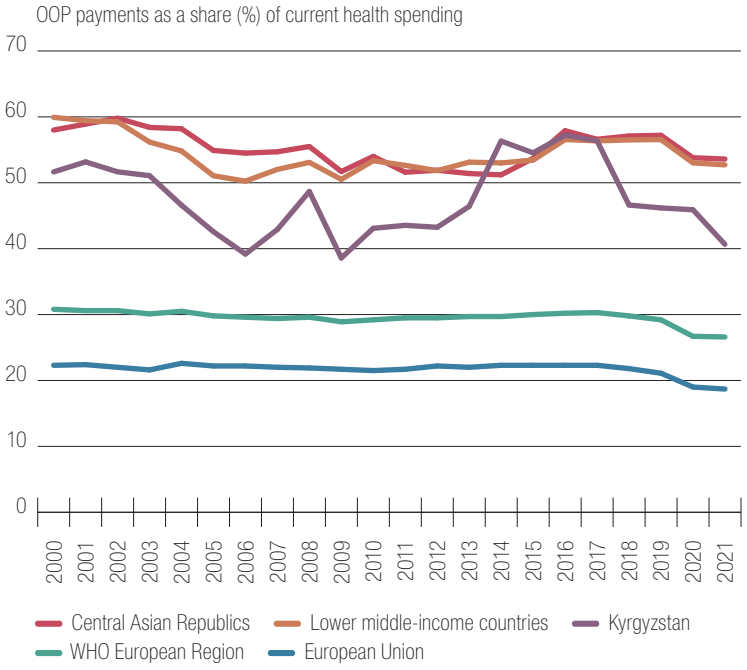
Public spending on health as a share of GDP increased in 2021 after years of decline



Source: WHO, 2024a.

Fig. 3

The share of OOP payments in overall health spending has decreased substantially in recent years



Source: WHO, 2024a.

and mainly driven by spending on outpatient medicines, outpatient care and inpatient care (Jakab, Akkazieva & Habicht, 2018). In addition to facing catastrophic spending, many people in need of medical care refrained from seeking it due to the costs involved.

3 GENERATING RESOURCES, PROVIDING SERVICES AND ENSURING ACCESS

The hospital infrastructure has seen dramatic downscaling

The number of hospitals was reduced from 450 in 1997 to 135 in 2020, with the aim of reducing costs and strengthening primary care and prevention. Specialized facilities were merged and general profile hospitals created, while inefficient small hospitals were transformed into subdivisions of regional hospitals or into primary care providers. This reduction in the number of hospitals was reinforced by a change in the way that hospitals are paid by the MHIF, with the introduction of case-based payments in 2001–2004.

The remaining hospitals are distributed across the country, with hospitals in all seven oblasts and 40 rayons and smaller-scale hospitals in remote villages. The number of hospital beds per 100 000 population has declined dramatically since the early 1990s, decreasing from 1206 hospital beds per 100 000 population in 1991 to 697 in 2000 and 422 in 2021 **(Fig. 4)**. While this is below regional averages, there is still felt to be overcapacity in terms of hospital infrastructure, given the country's income level and its predominantly young population.

Box 1

Efforts are being made to improve the efficiency of the health system

The allocation of scarce public resources is not always guided by where the greatest health improvements could be achieved and allocative efficiency is undermined by the large share of spending still going towards inpatient rather than primary care. The State Programme on Health Protection and the "Healthy Person – Prosperous Country" programme (2019–2030) aim to address these challenges and rationalize the health care infrastructure. Ongoing reforms in public finance management aim to improve the efficiency and effectiveness of public spending. Measures include:

- the introduction of programme-based budgeting (linking budgets with health outcomes), in line with the strategic priorities outlined in national programmes;
- the introduction of performance indicators for budgeted programmes and measures to reflect key State Programme aims;
- expanding hospital-substitution services, with an MHIF initiative aiming to increase the use of primary instead of hospital care; and
- reforming payments for the treatment of TB patients to incentivize outpatient care.

However, it is unclear how the current reforms of the health financing system and the diminished role of the MHIF will impact these initiatives.

Geographical barriers pose challenges in rural areas

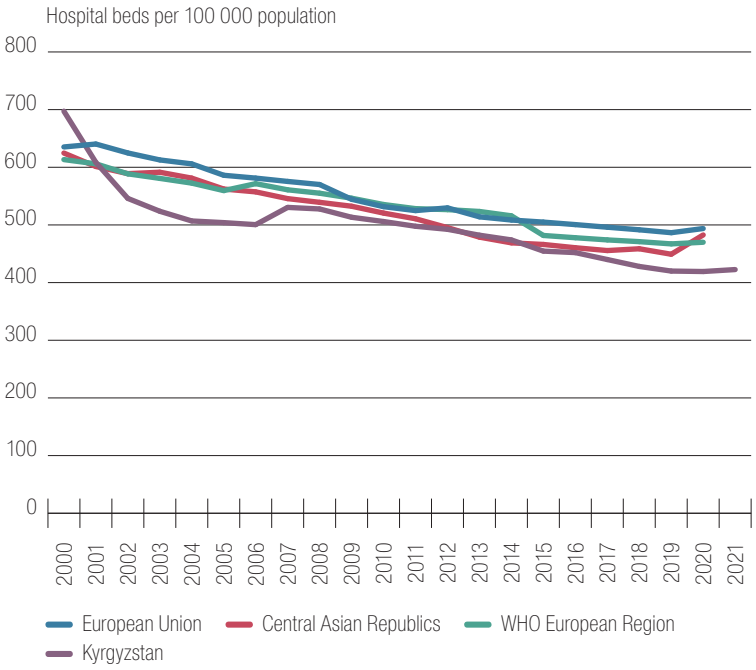
The distribution of health care facilities (FAPs, FGPs, FMCs and hospitals) means that most people are within physical reach of primary care, with mechanisms in place to refer them for more specialized care. There are, nonetheless, geographical barriers to access in some remote and mountainous areas, with limited access to health services, despite the use of FAPs. Moreover, approximately 3000 physician posts at primary care level are vacant.

Kyrgyzstan had 215 physicians per 100 000 population in 2021 and 407 nurses per 100 000 population in 2020, which were some of the lowest rates in the WHO European Region **(Fig.5)**. Health workers are unequally distributed across the country, with large differences between regions, and shortages of specialists and family doctors in rural areas (Moldoisaeva et al., 2022). In 2021, the rate of physicians was highest in Bishkek and Osh (225 and 246 per 100 000 population, respectively), while in some rural areas there were only about 70 physicians per 100 000 population (equivalent to one physician per 1429 people). The COVID-19 pandemic seems to have exacerbated geographical imbalances, with physicians leaving primary care posts in rural areas to take on better-paid posts in hospitals.

In contrast, the coverage by nurses is generally considered adequate, but in cities such as Bishkek and Osh there are shortages of nurses. Together with feldshers, nurses work in FAPs in larger rural settlements and provide basic health care activities, antenatal and postnatal care, immunization and health education.

Fig. 4

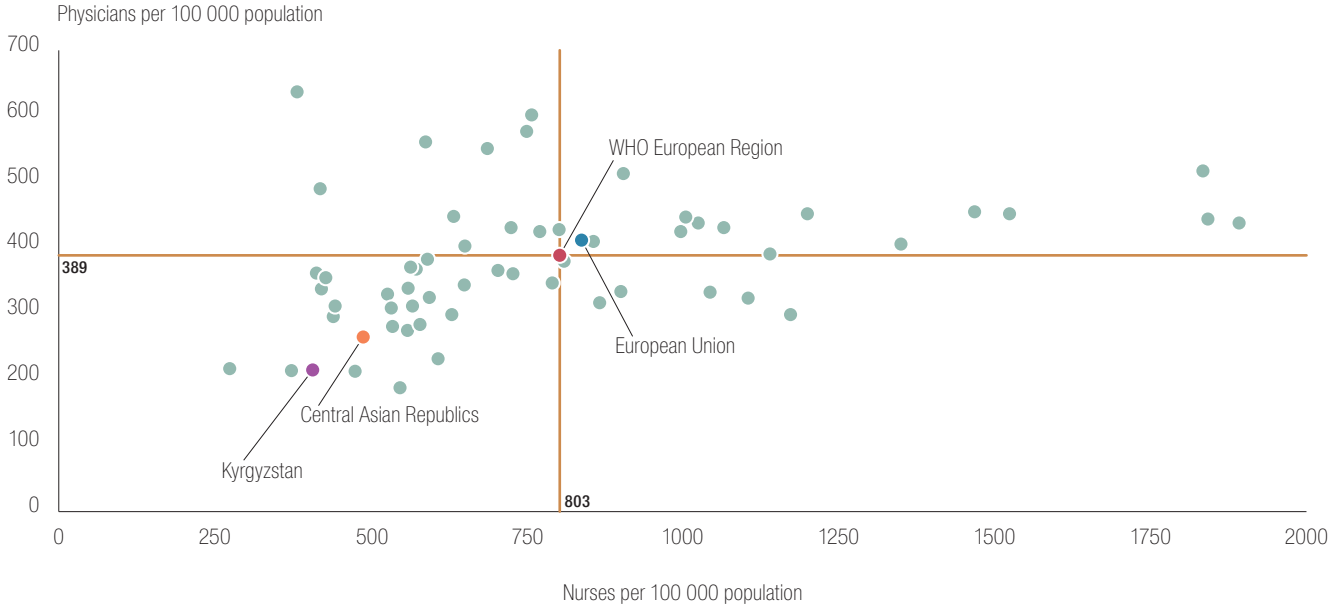
Kyrgyzstan has reduced the number of hospital beds



Source: WHO, 2024b.

Fig. 5

Kyrgyzstan has among the lowest rates of doctors and nurses in the WHO European Region



Source: WHO, 2024c.

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

Fig. 6

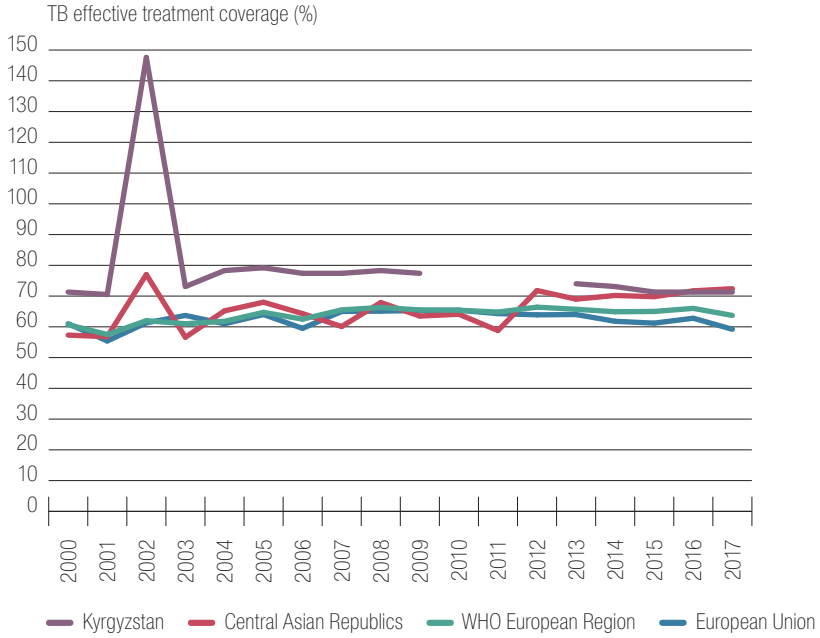
Kyrgyzstan falls below global targets for HIV diagnosis and treatment

Source: UNAIDS, 2023.

Note: The size of the boxes illustrates the number of people living with HIV who benefit from diagnosis and treatment.

Fig. 7

Effective treatment coverage of TB is comparatively high



Source: WHO, 2024b.

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

There are also gaps in coverage in urban areas

Urban provision is more accessible geographically, but there are gaps in enrolment in the mandatory health insurance scheme, which requires registration and basic identification documents. This, and the link between health insurance status and access to some health services, creates barriers for internal migrants from rural areas and small towns to urban centres. These internal migrants make up an estimated 18% of the population and do not always have the necessary paperwork to enrol.

Furthermore, SGBP entitlement does not translate into full access to health services, partly because OOP payments create financial barriers. In 2014, 46% of households reported that it was difficult or very difficult to pay for health services (up from 38% in 2009). Households are resorting to coping mechanisms such as drawing on savings, reducing consumption, seeking family support or selling assets to pay for health care. OOP payments are the main source of unmet need for medicines and also a key driver of financial hardship for households.

Mother and child health has been a priority

Kyrgyzstan has placed a particular focus on improving mother and child health, with a number of national strategies. Pregnant women, women giving birth, women with pregnancy-related or childbirth complications and children under 6 years are entitled to free hospital care. Since 2015, the MHIF has also provided insurance for pregnant women to ensure that those who are uninsured (the majority of whom are from vulnerable groups) have better access to subsidized medicines. However, according to the 2018 Multiple Indicator Cluster Survey (MICS), 77% of women were not aware of the policy and did not know how to register to receive the benefits (National Statistical Committee of the Kyrgyz Republic and UNICEF, 2019).

Childhood vaccination rates have declined during the COVID-19 pandemic

Kyrgyzstan has traditionally achieved high coverage rates for routine childhood vaccinations, with 96% of infants receiving the first dose against measles in 2019 (compared with 95% in the WHO European Region) and 98% of children receiving the second dose (compared with 91% in the WHO European Region). Routine childhood vaccinations are free of charge and provided at birth in maternity hospitals and subsequently by primary care providers under the coordination of the Republican Centre for Immunoprophylaxis. However, vaccinations at primary care level require doctors to be present, as nurses and feldshers are not allowed to vaccinate independently.

Furthermore, there has been some disruption of routine vaccinations due to the COVID-19 pandemic and the coverage rate for the first dose against measles fell to 92% in 2020 and 93% in 2021 and was still comparatively low in 2022, when it stood at 94%. Coverage with the second dose against measles declined to 93% in 2020, increased to 97% in 2021, but fell to 95% in 2022. There has also been a decline in the coverage rate for the diphtheria-tetanus-pertussis vaccine (DTP3), from 95% in 2019 to 87% in 2020 and 89% in 2021; the rate was still comparatively low in 2022, when it stood at 90%.

Access to HIV/AIDS and TB diagnosis and treatment remains challenging

Concerted efforts have been undertaken to improve service provision for HIV/AIDS, TB and mental health, with pilots being implemented to improve the integration of services. Increased provision of HIV services for patients at the primary care and community levels have improved the proportion of people living with HIV who are diagnosed, treated and have a suppressed viral load, but the COVID-19 pandemic has disrupted access to testing and treatment. Other barriers to accessing services are lack of staff motivation and continued stigmatization of patients. Kyrgyzstan still falls below the 95:95:95 target set out by UNAIDS for 2025 (UNAIDS, 2023) **(Fig.6)**.

Kyrgyzstan remains one of the 30 countries in the world with the highest rates of multidrug-resistant TB (MDR-TB) and is among the 18 high-priority countries for TB in the WHO European Region. In recent years, the role of primary care has been promoted as the key to early detection, diagnosis and treatment of TB, including drug-resistant TB. Primary care has also taken on a role in managing interactions with other services (such as for TB and public health). A cadre of staff, known as public assistants, based in primary care (FMCs and FGPs) provide support to TB patients and interact with medical personnel, with their role having expanded recently to link different services. However, major obstacles to improved TB care remain **(Fig.7)** and the estimated proportion of TB cases that are detected and successfully treated in Kyrgyzstan has declined from 78.3% in 2008 to 71.3% in 2017. The rate of treatment success was higher for drug-susceptible TB cases (81% in 2018, compared with a WHO European Region average of 75%) and lower for MDR-TB cases (55%; lower than the WHO European Region average of 59%). There is a large proportion of MDR-TB cases, which are more difficult to treat. Poor treatment adherence is another challenge and is often associated with labour migration. Kyrgyzstan plans to achieve national and regional targets through the introduction of fully oral treatment regimens for TB and MDR-TB and digital adherence solutions, such as video-supported treatment.

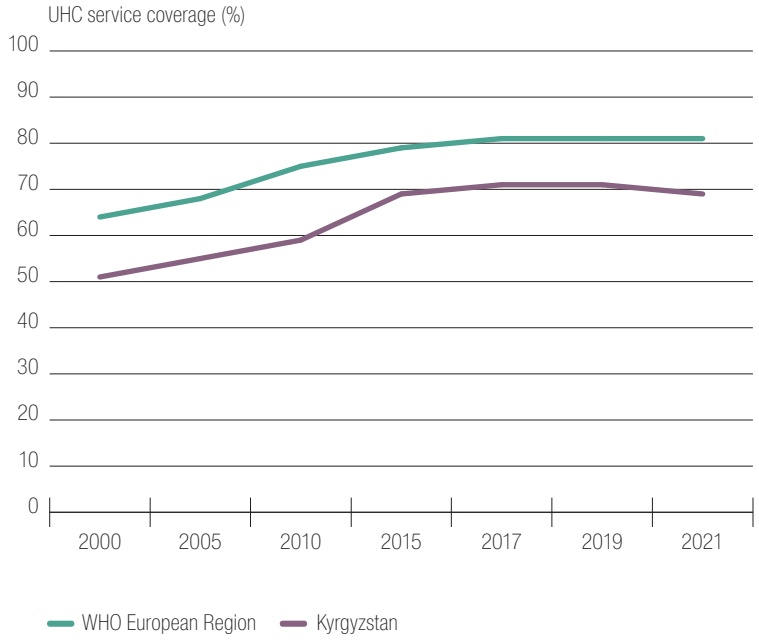
In terms of services for patients in need of outpatient mental health care, there has been a recognition of the need for expanded primary care services, but these steps are still at an early stage of development.

Access to essential services has stagnated in recent years

The UHC service coverage index – a global indicator that monitors progress towards Sustainable Development Goal (SDG) 3, target 3.8.1 on coverage of essential health services – increased from 48 (out of 100) in 2000 to 70 in 2017, but has since declined slightly to 69 in 2021 **(Fig.8)**. This was well below the average for the WHO European Region of 81 in 2021. Furthermore, improvements in access to essential services may mask persisting challenges in improving quality of care. For example, mortality from acute myocardial infarction in inpatient settings increased from 10.5% in 2011 to 14.8% in 2016. This might indicate problems in the quality of care, but further investigations are needed to confirm this (WHO Regional Office for Europe, 2018). The 2019 WHO assessment of sexual, reproductive, maternal, newborn, child and adolescent health in the context of UHC in Kyrgyzstan found that, despite mother and child health being a high priority for the country, there are significant deficits, such as lack of provision of adolescent-friendly sexual and reproductive health services, problems with efficient neonatal transport and suboptimal quality of care in the treatment of common childhood conditions and antenatal care, particularly overtreatment and overhospitalization (WHO Regional Office for Europe, 2019).

Fig. 8

Progress in access to essential health services has stalled in recent years



Source: WHO, 2024b.

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.

The COVID-19 pandemic has disrupted health service provision

Kyrgyzstan has tried to maintain access to essential services throughout the pandemic, including through mobile health applications, but there has been some disruption, particularly to mother and child health services (Stakeeva & Mamatalieva, 2021). Routine vaccination services were temporarily suspended in March 2020, although the Ministry of Health has since used mobile immunization teams and mobile clinics to deliver catch-up immunizations. Lockdown also decreased the availability of services such as contraception counselling, violence prevention and response, and termination of unwanted pregnancies, and diagnosis and treatment of sexually transmitted diseases. According to the MICS 2020 follow-up assessment of the impact of COVID-19 on children (National Statistical Committee of the Kyrgyz Republic and UNICEF, 2021), antenatal care services were not affected, but there were challenges in postnatal care. Only 11% of neonates were visited for a postpartum observation in the first two days and 47% in the first six days. Safe abortion services in government facilities decreased by 25–28%, although those in private facilities increased by 68–85%. Essential services for the population more broadly have also been affected, but it is still too early to assess the impact.

4 IMPROVING THE HEALTH OF THE POPULATION

Life expectancy in Kyrgyzstan has increased, but recent data are lacking

The latest data on life expectancy at birth in Kyrgyzstan that are internationally available relate to 2016, when it stood at 73.0 years (69.4 years for males and 76.5 years for females), an increase from 67.8 years in 2000 **(Fig.9)**. This was slightly above the Central Asian average (72.5 years), but well below the averages for the WHO European Region (78.2 years) and the European Union (EU) (79.9 years).

Between 2000 and 2016 male life expectancy in Kyrgyzstan increased by 5.5 years, while female life expectancy increased by 4.3 years. In males, most of the gains were due to reductions in mortality from respiratory conditions (1.4 years), external causes (1.1 years), infectious diseases and stroke (0.9 year each), particularly in males under 75 years. In females, improvements in reductions in mortality from stroke (1.6 years) and respiratory conditions (1.4 years) dominated.

These gains point to some improvement in the availability, accessibility and quality of care, as deaths from stroke, respiratory conditions and infectious diseases are largely amenable to health care interventions. However, lack of progress on ischaemic heart disease shows that there is still a lot of room for improvement in curative and preventive interventions, including through addressing smoking, alcohol consumption and poor diet, which need a stronger public health and intersectoral approach.

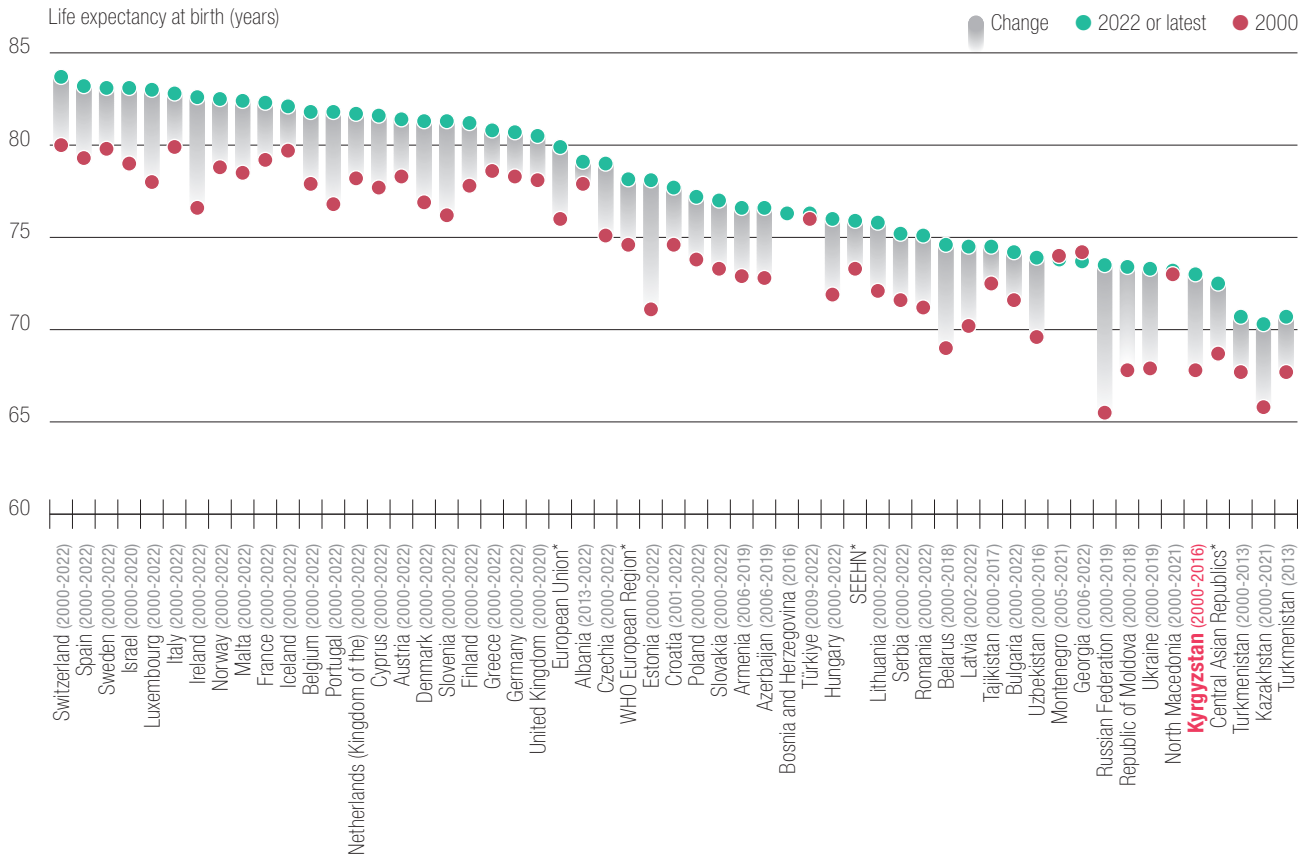
Maternal and child health are slowly improving

Major gains have been made in reducing maternal mortality in Kyrgyzstan, but it still remains high when compared with other countries in the WHO European Region (Rechel & Moldoisaeva, 2021). Maternal mortality is estimated to have declined from 86.9 per 100 000 live births in 2000 to 50.4 in 2020. While this was a substantial decline, it far exceeded the Central Asian average of 24.3 and the average in the WHO European Region of 12.6 **(see Country data summary)**. COVID-19 has resulted in service disruptions, but maternal mortality increased only slightly from the level it was at in 2019 (47.4 per 100 000 live births).

Over the past 20 years, Kyrgyzstan has also achieved major reductions in infant mortality rates, which are estimated to have declined from 42.5 deaths per 1000 live births in 2000 to 15.6 in 2021. This was only slightly above the Central Asian average of 15.5 per 1000 live births, but still far higher than the rate of 6.3 in the WHO European Region overall.

Fig. 9

Life expectancy in Kyrgyzstan improved between 2000 and 2016



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.

Notes: * averages are based on years with data available. The South-Eastern Europe Health Network (SEEHN) includes Albania, Bosnia and Herzegovina, Bulgaria, Israel, Montenegro, North Macedonia, the Republic of Moldova, Romania and Serbia.

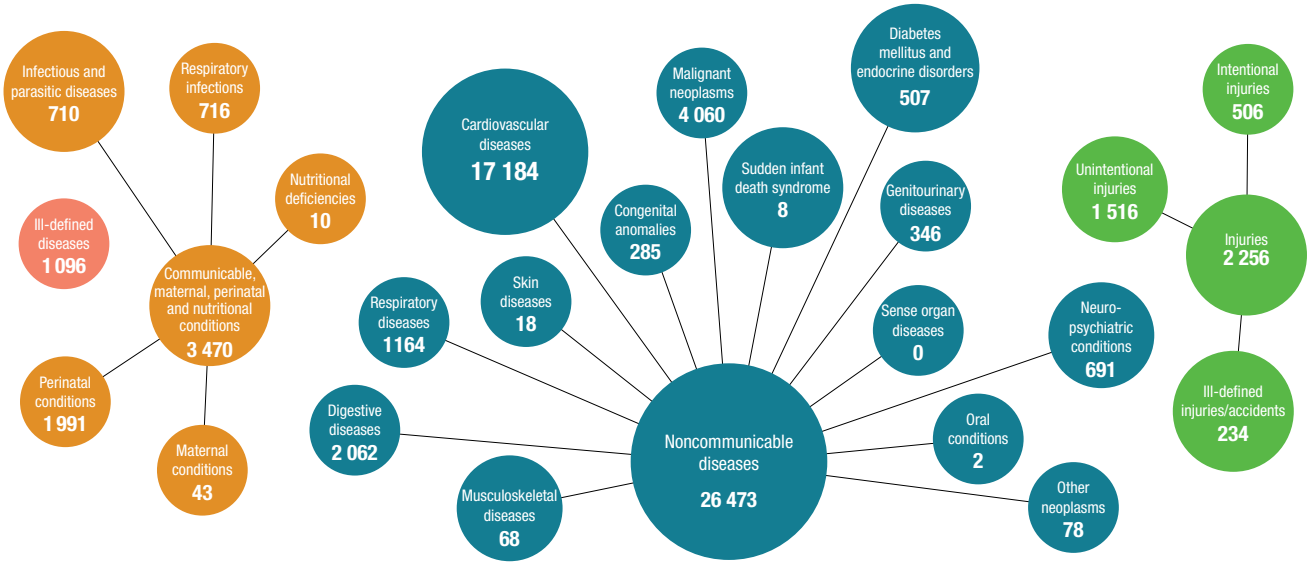
NCDs cause the most deaths

Kyrgyzstan faces a high mortality burden from NCDs. Cardiovascular diseases accounted for more than half of overall mortality in 2019, with ischaemic heart disease and stroke being the two leading causes of death (with an age-standardized death rate of 390 deaths per 100 000 population from ischaemic heart disease in 2016, compared with 226 in Central Asia in 2016 and 120 in the WHO European Region in 2019). Other important causes of death in Kyrgyzstan in 2019 included cancer, communicable diseases and injuries **(Fig. 10)**.

Premature mortality (in people aged 30–69 years) from four major NCDs (cardiovascular diseases, cancer, diabetes mellitus and chronic respiratory diseases) is also high in Kyrgyzstan (in particular among males), but showed a declining trend, at least up to 2016. This suggests that improvements in living conditions, lifestyles and health care were having an impact. However, rates in Kyrgyzstan still far exceeded averages in the EU and the WHO European Region **(Fig. 11)**.

Fig. 10

Cardiovascular diseases and cancers account for the greatest numbers of deaths

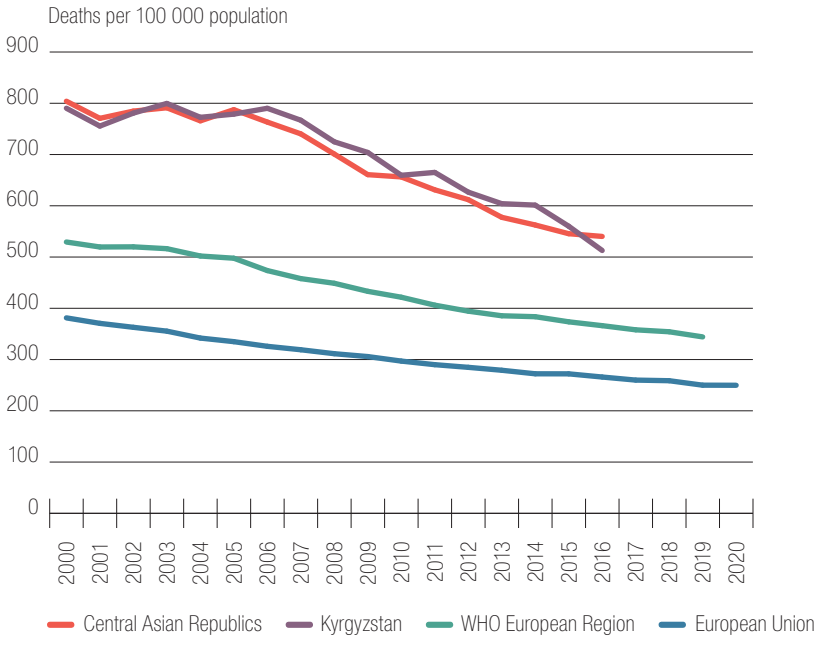


Source: WHO, 2024d.

Note: Overview of the distribution of causes of total deaths grouped by category. Data refer to 2019.

Fig. 11

Premature mortality from NCDs declined rapidly until 2016, but newer data are missing



Source: WHO Regional Office for Europe, 2024b.

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

Kyrgyzstan faced a lower excess mortality than many other countries in Europe

According to official data, Kyrgyzstan recorded a comparatively low number of COVID-19-related deaths. However, as in most other countries in Europe, the pandemic is expected to have affected overall mortality rates in 2021–2022, with estimates of excess mortality associated with the pandemic suggesting a death rate of 114 per 100 000 population in 2020 and 105 in 2021, rates that were far lower than in the WHO European Region overall, in particular in 2021 **(Fig.12)**.

Ischaemic heart disease and neonatal conditions cause a major burden of disease

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. In Kyrgyzstan in 2021, ischaemic heart disease was estimated to result in the largest number of DALYs, but this was followed closely by neonatal conditions, illustrating the scale of loss of healthy life resulting from neonatal mortality and

Fig. 12

Excess mortality associated with the COVID-19 pandemic was lower than in the WHO European Region overall

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

morbidity and the gains that could be made through improved access to quality neonatal care **(Fig.13)**.

Major risk factors include high blood pressure, dietary risks and air pollution

Major risk factors contributing to mortality include unhealthy diets (including over- and undernutrition) and lack of physical activity. The age-standardized prevalence of overweight has increased from 38.3% of the adult population in 2000 to 48.3% in 2016, mirroring an increase in Central Asia overall from 40.0% to 49.5%. The prevalence of obesity (defined as a body mass index of 30 kg/m^2 and over) increased in the same time period from 9.6% to 16.6% of adults. While a disconcerting trend, this prevalence was still lower than the Central Asian average of 17.6% in 2016 and the average of 23.3% in the WHO European Region.

A high share of mortality attributable to high blood pressure and high LDL cholesterol indicates substantial scope for health system and intersectoral interventions, including improved prevention, diagnosis and management of chronic conditions at the primary care level. Men, those living in rural areas and people with lower levels of education are less likely to be measured for biological risk factors (WHO Regional Office for Europe, 2020).

Among the major behavioural risk factors, smoking stands out, in particular for males, with male smoking prevalence estimated to exceed 50% throughout the period 2000–2023 (compared with 25.7% in Central Asia overall in 2020); smoking is estimated to account for 13.7% of all deaths in 2021 **(Fig.14)**. This highlights that tobacco control policies are still very much underdeveloped **(Box 2)**.

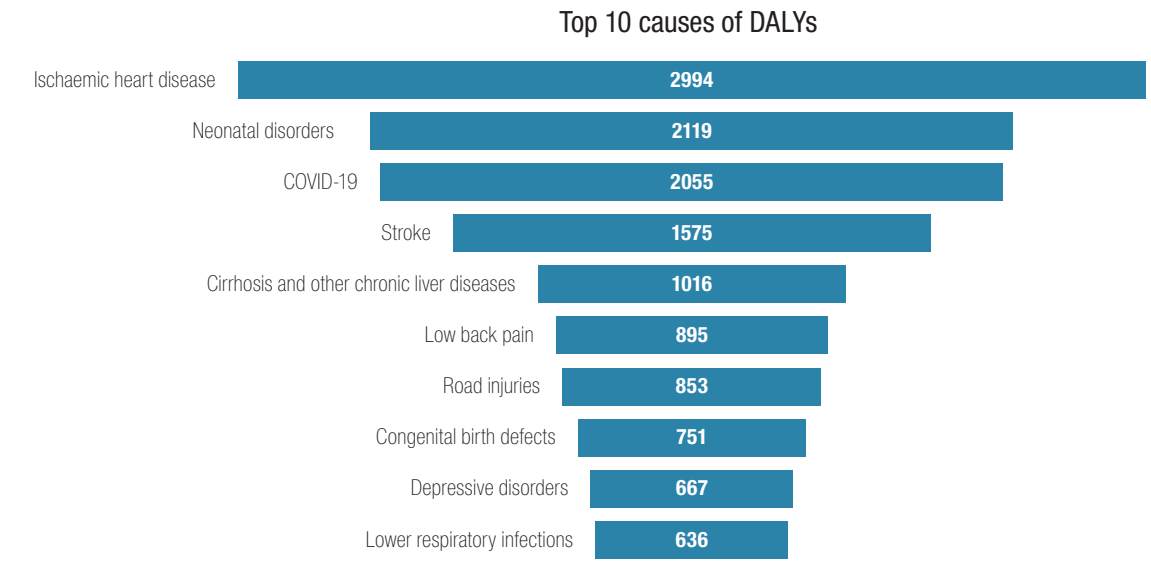
Alcohol consumption is a lesser risk factor. Although consumption is about half of the WHO European Region average (4 litres per capita and year in 2019, compared with 7.8 in the WHO European Region) it is significantly higher than the average for Central Asia of 2.8 litres.

Poverty levels remain high and many are still lacking access to safe water and sanitation

Poverty levels in Kyrgyzstan are high, with 33.3% of the population living below the national poverty line in 2021 **(see Country data summary)**, compared to 14.9% in the WHO European Region overall in 2018. Poverty

Fig. 13

Neonatal conditions result in a large number of DALYs

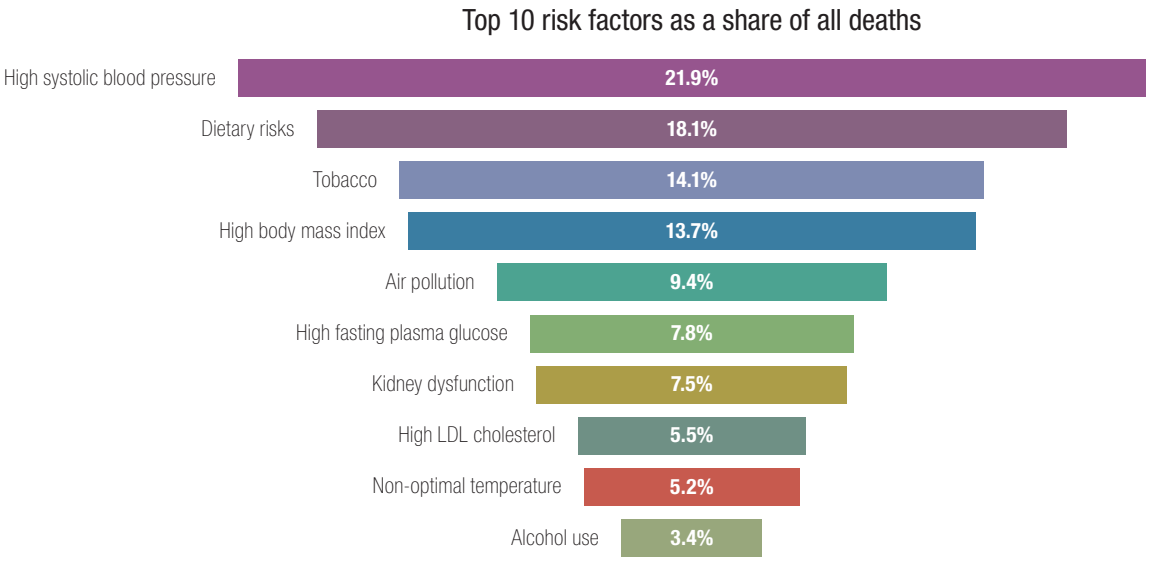


Source: IHME, 2024.

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

Fig. 14

High blood pressure, dietary risks and tobacco are the main immediate risk factors as a share of all deaths



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.

Box 2

Public health action is underdeveloped, in particular with regard to tobacco control

Public health services in Kyrgyzstan retain a traditional focus on the prevention and control of communicable diseases, especially TB, HIV/AIDS and diarrhoeal infections. They are still much less involved in addressing NCDs through measures such as addressing smoking, alcohol consumption, obesity and nutrition. Preventive activities in primary care are also still underdeveloped.

Kyrgyzstan is a signatory of the WHO Framework Convention on Tobacco Control, but has not implemented many of the tax and non-tax measures it has committed to. There is a lack of designated smoke-free public areas and tobacco tax in the country is among the lowest in the WHO European Region. Nicotine-replacement therapy has to be paid out of pocket and is not covered by the state. Consequently, smoking prevalence remains very high, in particular among males. Youth smoking prevalence is also a concern. In the 2019 Global Youth Tobacco Survey of schoolchildren aged 13–15 years, a worryingly high rate of 25.5% of boys and 8.9% of girls indicated that they had smoked tobacco at least once.

is associated with many of the immediate risk factors (such as dietary risks, smoking and access to health services) discussed above, but also with exposure to low temperatures and indoor air pollution. Air pollution, including both outdoor and household air pollution, was estimated to account for 9.4% of all deaths in 2021.

Access to safe water and sanitation is another challenge, although much progress has been achieved. Only 76.5% of the population had access to safely managed drinking-water services in 2022 (67.3% in rural areas vs. 90.8% in urban areas), an increase from 46.3% in 2000 (World Bank, 2024a). Poor access to safe water and sanitation was estimated to be the 17th leading risk factor for deaths in 2019, a slight improvement from 2000 when it was the 14th leading risk factor.

5 SPOTLIGHT ON HEALTH WORKFORCE TRENDS

Rates of health workers per population are declining

In contrast to an increasing trend in many other countries in Europe, the rate of health workers in Kyrgyzstan has decreased in the last decade. The rate of doctors decreased from 226 per 100 000 population in 2013 to 215 in 2021, while the rate of nurses decreased from 558 per 100 000 population in 2013 to 407 in 2020 **(Fig. 15)**. These rates were far below the averages of the WHO European Region **(see Section 3)**. Of the young doctors who are being trained, only 30% of graduates join Kyrgyzstan's state health system, and reports of adverse working conditions and punitive measures being taken against health workers may also negatively impact retention rates (Kyrgyzstan's e-Health Centre, unpublished data, 2024). In 2019, 64.9% of doctors were female, illustrating the need for gender considerations in the retention of health workers.

Ageing of doctors is a major concern in primary care and in rural areas

Data on other key aspects of the health workforce in Kyrgyzstan, such as its age composition, the share of generalist medical practitioners among all doctors, or the share of health workers migrating into or out of the country, are unavailable in international databases. However, national data suggest that the ageing of the health workforce is a major concern, particularly in rural and mountainous areas and in primary care. Over 50% of family doctors are at retirement age, with rates of family doctors at retirement age reaching as high as 75% in areas such as Naryn (73%) and Issyk-Kul (75%).

The share of generalist medical practitioners is declining

Kyrgyzstan was the first country in Central Asia to introduce family medicine in the late 1990s by transforming polyclinics into FGPs and retraining narrow-profile specialists into family doctors. However, the state medical education system was not revised to train family doctors, instead focusing on the training of specialists, and a declining share of the population is covered by family doctors. According to national data, family doctors accounted for 12% of the total number of doctors in the country in 2021, with the remaining 88% being narrow-profile specialists (Moldoisaeva et al., 2022).

Many health workers are migrating abroad

Migration has been a major feature of Kyrgyzstan's development in recent decades, with internal migration from rural regions and small towns to urban centres

Fig. 15

Already low rates of doctors and nurses per population in Kyrgyzstan have declined further

Source: WHO, 2024b.

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.

and international migration to other countries, mostly the Russian Federation. The ratio of remittances to GDP, at 25–30%, has been one of the highest in the world. Health workers are no exception and many doctors and nurses are seeking better opportunities abroad, but data on the scale of the issue are scarce.

6 EUROPEAN PROGRAMME OF WORK (EPW)

Moving towards universal health coverage

The government has taken steps towards ensuring universal access to quality care without financial hardship and WHO, together with other development partners, has supported these efforts. In 2020, for the first time, Kyrgyzstan committed to regulating prices for a list of selected medicines (the ADP) that are part of universal benefits provided by the government. WHO has supported this pilot project with technical assistance, policy dialogues and collaboration among development partners. Kyrgyzstan is also a focus country for WHO's Global Initiative for Childhood Cancer.

Protecting against health emergencies

WHO has been Kyrgyzstan's main international partner in ensuring the country's preparedness for disease outbreaks and other public health emergencies. Immediately after the WHO Director-General declared the COVID-19 outbreak as a public health emergency of international concern, WHO led a rapid needs assessment in Kyrgyzstan to identify gaps that should be addressed by the country's public health system in the context of COVID-19. This initiative was eventually used as a basis in developing Kyrgyzstan's country preparedness and response plan (CPRP). Following the rapid needs assessment, WHO also supported the CPRP development process, a blueprint that has guided the country's response to COVID-19 at national and subnational levels, as well as calls for assistance from international partners.

Promoting health and wellbeing

Kyrgyzstan is aiming to strengthen health promotion and disease prevention and the WHO Country Office in Kyrgyzstan is supporting these efforts, including through the promotion of multisectoral actions to address the risk factors for NCDs, the promotion of healthy settings and Health in All Policies, and by helping to address the social determinants of health.

From 2019 to 2022, WHO provided technical support in piloting the Health Promoting Schools (HPS) approach under the framework of the Regional Schools for Health in Europe Initiative. The initiative was jointly coordinated by the Ministry of Education and Science and the Ministry of Health. The government aims to scale up the approach nationally.

The country has improved its monitoring and surveillance of NCD risk factors. In collaboration with WHO, a STEPwise Approach to NCD Risk Factor Surveillance (STEPS) survey on NCD risk factors was undertaken, together with a gender analysis of survey data. Kyrgyzstan has joined the WHO European Childhood Obesity Surveillance Initiative to measure trends in overweight and obesity among primary school-aged children.

COUNTRY DATA SUMMARY

	Kyrgyzstan	Central Asian Republics	WHO European Region	European Union
Life expectancy at birth, both sexes combined (years)	73 (2016)	72.5 [a]	78.2 [a]	79.9 [a]
Estimated maternal mortality per 100 000 live births (2020)	50.4	24.3	12.6	6.4
Estimated infant mortality per 1 000 live births (2021)	15.6	15.5	6.3	3.2
Population size, in millions (2022)	6.9	77.1	929.1	512.7
GDP per capita, PPP$ (2021)	5 287	13 327	38 936	48 615
Poverty rate at national poverty lines (% of population)	33.3 [b] (2021)	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, 2024b.

Note: Life expectancy averages refer to latest available years.

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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.

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