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This edition of the Health Systems in Action Insight for Uzbekistan was written by Susannah Robinson.

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’s European Programme of Work is set
- flag key concerns, progress and challenges health system by health system
- 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 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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This edition of the Health Systems in Action Insight for Uzbekistan was written by Susannah Robinson.
HEALTH SYSTEMS IN ACTION: UZBEKISTAN

Key points

- Uzbekistan’s health system provides a publicly financed package of services, but many services (and medicines) fall outside the scope of this package for most of the population; a comprehensive package of primary care services and medicines is being piloted in one region.

- Between 2017 and 2019 government spending on health increased quite significantly, but so did out-of-pocket (OOP) expenditure. OOP expenditure now accounts for over half of total health spending, with consequences for financial protection and access to services.

- Life expectancy had improved before the COVID-19 pandemic and was the second highest among Central Asian countries.

- Rates of routine childhood vaccinations are high, but some communicable diseases such as HIV/AIDS and multidrug-resistant tuberculosis remain a concern.

- Noncommunicable diseases are the main cause of mortality and morbidity in Uzbekistan, with female mortality rates from noncommunicable diseases the highest in the WHO European Region.

- The population is at risk from poor diet, high blood pressure, smoking and air pollution, with men more likely to engage in behavioural risk factors such as smoking.

- There have been major reductions in infant and maternal mortality, reflecting government priorities in recent years, but rates remain high.

- The COVID-19 pandemic is expected to have affected overall mortality rates in 2020–2022, although estimates of excess mortality indicate lower rates than in the WHO European Region overall.

- During the COVID-19 pandemic, Uzbekistan focused on improving surveillance capabilities and expanding hospital capacity. There is limited information on the extent to which the pandemic has affected the rest of the health system.

- Uzbekistan has started to address antimicrobial resistance (AMR), but stronger stewardship and monitoring efforts are needed.

This report looks at the action Uzbekistan is taking to strengthen its health system; to achieve the Sustainable Development Goals; to address the priorities of the European Programme of Work; and to ensure that no one is left behind.
ORGANIZING THE HEALTH SYSTEM

Health care provision in Uzbekistan is primarily public

Health services in Uzbekistan are overwhelmingly public. The Ministry of Health is the lead agency in organizing, planning and managing the health system, and regulation is almost exclusively managed by the government. The system has three levels: national, regional, and district or city level. Having been an extremely centralized system under the former Soviet Union, Uzbekistan has gradually been introducing elements of decentralization to regional and district levels, especially on administrative issues. State health services are funded through national taxation, and health workers in the public sector are salaried employees.

Comprehensive health service delivery reforms are currently under way following the “Concept on health development of the Republic of Uzbekistan 2019–2025” adopted in 2018. This concept is being operationalized through a pilot project in Syrdarya oblast (region) (as set out in the Presidential Resolution 4890 of 2021). A priority is to bring health services closer to the population. However, patient-centric models of health services are still at an early stage of development and so far there has been little involvement of nongovernmental organizations, professional associations or patients in health policy or regulation.

A universal benefits package is provided but there are major gaps in coverage for specific conditions and populations

A basic benefits package is paid for and provided by the state and officially free of charge to all citizens, in line with the 1996 Law on Health Protection. The package includes primary care, emergency care and specialized care for groups of the population classified by the government as vulnerable. It also includes care for certain “socially significant and hazardous conditions”, including diseases such as poliomyelitis, tuberculosis (TB), leprosy, HIV/AIDS and syphilis, and certain noncommunicable diseases (NCDs) such as cancer. The de facto package largely excludes secondary and tertiary care, as well as outpatient pharmaceuticals, for significant parts of the population. This can create incentives for patients to visit emergency care, which is provided free of charge. There are plans to revise the package of services and medicines, which are currently being piloted in Syrdarya oblast, as part of the recent Presidential Resolution 4890, establishing a strategic purchaser of health services. This will be scaled up to another six regions from 2023.

Inpatient public facilities are permitted to charge fees for services provided outside the state-funded
package. As voluntary health insurance is not common, shortfalls for health needs not met by state-funded services are usually paid for fully out of pocket by individuals, which creates financial barriers to access and may lead to financial hardship (see Section 2).

Private sector involvement is small but growing

Health services continue to be delivered in large part by the government. National-level institutions are managed directly by the Ministry of Health, whereas subnational institutions tend to be managed by regional or municipal-level authorities. All of these have a similar organizational structure, with the exception of the health department for the capital city of Tashkent, which is larger and more complex.

The role of the private sector is small, but it has expanded in recent years, with the number of private providers growing from about 3500 in 2017 to over 6000 in 2020 (World Bank, 2021a). The range of services where the private sector is allowed to operate has expanded from 50 services in 2017 to 177 in 2020. However, limitations remain and certain services are still legally required to be provided by the public sector, such as those for HIV/AIDS and TB.

The emergency care system is generally considered to be better provided with equipment, medical aids and devices, and medications than other publicly run health facilities. The Ministry of Health and local health authorities have some regulatory powers over the quality of care in the private sector.

2 FINANCING AND ENSURING FINANCIAL PROTECTION

Public spending on health is comparatively low, but increased in 2019

The main source of public revenue for the health system is taxation. In 2019 public spending on health amounted to 2.3% of gross domestic product (GDP), which exceeded the Central Asian average of 1.9%, but was far below the average of the WHO European Region (5%) (Fig. 1).

Per capita spending on health in Uzbekistan amounted to US$ 418 in 2019 (adjusted for purchasing power), which was below the Central Asian average of US$ 552 and well below the average for upper-middle-income countries in the WHO European Region of US$ 1338 (Fig. 2). The low per capita spending in US$ is a particular concern when considering the high cost of critical inputs such as medicines, devices and equipment, and the relative shortage of these essential items.

In 2019, public expenditure accounted for just over 41% of current health expenditure. This was lower than for most other countries in the WHO European Region, but slightly higher than the Central Asian average.

Very high levels of out-of-pocket spending can be catastrophic and pose a barrier to accessing services

Out-of-pocket (OOP) payments for health care create financial barriers to access and financial hardship for people using health services, especially for poorer households and people with health conditions not covered by the state benefits package. For many people in Uzbekistan, eligibility criteria for the national benefits package are not directly linked to income levels. Although the government has introduced some measures to address this, financial protection for vulnerable households remains a challenge.

In 2019, OOP payments accounted for 57.7% of health spending in Uzbekistan. This was only slightly higher than the Central Asian average of 57.1% but double the WHO European regional average of 28.7%. The high share of OOP spending results in a significant risk of catastrophic health spending to poorer households. Nearly one fifth of households in 2018 reported that they had experienced catastrophic health spending (Fig. 3).

Recent survey results appear to show ongoing financial barriers, although these may also reflect the impact of COVID-19 on health service accessibility and affordability. In 2020, 18% of households reported that at least one household member had not sought medical treatment due to cost (World Bank, 2021b). Overall, high shares of people noted that they were unable to afford basic needs and more than half of participants in a separate study reported that they did not have any savings (World Bank, 2020b).

Informal payments for health services have also been reported, which can further limit access to care, especially for lower income groups. Since the early 2000s, the government has introduced a number of reforms to reduce informal payments, such as formal co-payments for a number of hospital services. However, it is unclear whether these policies have been successful in reducing informal payments. International experience suggests that the introduction of formal co-payments is not effective in reducing informal payments (Kutzin, Cashin & Jakab, 2010).

Most health spending goes to pharmaceuticals and inpatient care

According to the WHO Global Health Expenditure database, in 2019 most health spending (35.7%) went on medical goods (mostly essential medicines) and outpatient curative care (28.3%). Inpatient curative care accounted for 22.6%, and 2.6% of health spending went to preventive care (WHO, 2022a).
Infrastructure investment is centralized but some areas remain underfunded

The national government is responsible for investment in state-owned facilities. Most investments are made in accordance with national priority plans, but local governments provide some capital investments in areas such as construction and equipment. Major infrastructure investments have tended to focus on primary care facilities and central hospitals, although there have also been investments in some tertiary specialty centres and facilities for cancer and TB (Ahmedov et al., 2014).

In a major departure from the current financing structure, one of the core pillars of this new strategy is the proposed introduction of a new single-payer state health insurance organization: the State Health Insurance Fund. In November 2020 Presidential Resolution 4890 formally established this new organization as a national purchasing agency financed through the central government budget to purchase health services defined in a new state-guaranteed benefits package, which will be available to the whole population. The pilot project began on 1 July 2021 in Syrdarya oblast, and will be scaled up to six additional regions in 2023.

Box 1
Improving payment and provider efficiency

Uzbekistan’s concept for the development of the health sector to 2025 – approved by Presidential Decree 5590 in 2018 – aims to transform its health system into a modern and high-performing model, and to improve the health of all people by making progress towards universal health coverage. It focuses on three areas: improving life expectancy (with a particular emphasis on reducing premature mortality), health system and financing reform, and capacity building.
Hospital capacity used to be lower than in other Central Asian countries. Between 2000 and 2014 Uzbekistan saw a further decline in the number of beds per 100,000 population, but the ratio has slightly increased since then (Fig. 4). In 2019, before the COVID-19 pandemic, there were 457 beds per 100,000 population. The private sector contributes an increasing share of capacity, amounting to 23.4% of all hospital beds in 2018.

In terms of investment in information technology in government-owned health institutions, this has been mostly confined to basic electronic data collection and entry. The national health information system is still largely paper-based. However, there is national and regional interest in accelerating the adoption of telemedicine services and major investments are being made to develop a comprehensive electronic health information system. In 2020 Uzbekistan commissioned the first telemedicine clinic to support remote examinations of children and adolescents in Muynak oblast. There are also ongoing efforts to digitalize primary and secondary services, focused in 2021 on the Syrdarya pilot region, and a new electronic referral system for tertiary services for vulnerable populations has been established nationwide.

The number of physicians has increased in recent years, but is below the WHO European Region average

Medical education in Uzbekistan is mainly provided by public institutions and partially financed by the state. Each of the four major professional groups (physicians, nurses, dentists and pharmacists) follows a separate training pathway. The number of physicians per 100,000 population has generally declined since 1990, partly due to a perceived surplus of physicians in the early years of independence, which led to cutbacks in enrolments for medical schools. In 2014 there were 245 physicians per 100,000 population, compared with a European regional average of 283. However, by 2019 this number had risen to 276 physicians per 100,000 population (State Committee on Statistics, 2020) and a new private medical university — Akfa Medline — has begun operating in Tashkent, which is expected to expand in the future. Anecdotally, there are still challenges with physician emigration to regional neighbours such as the Russian Federation and Kazakhstan, mainly due to better earning opportunities.

In contrast, there has been only a small reduction in the ratio of nurses since 1990. In 2019 there were 1,100 nurses per 100,000 population (State Committee on Statistics, 2020) — above the averages for the WHO European Region and Central Asia (Fig. 5).

As in many other countries, there are some disparities in the regional distribution of health professionals, with a concentration in urban areas and shortages in rural areas. Given that about half of Uzbekistan’s population is living in rural areas, this disparity affects a sizeable share of the country’s population.

The health system performs well with regard to childhood immunizations, but less well with regard to other communicable diseases

Coverage for basic immunization services in Uzbekistan is good. In 2020, 99% of infants received their first dose of the measles vaccine, and 99% of those infants received their second dose. Both of these rates are higher than the WHO European Region average of 95.5% for the first dose (2018) and 91.4% (2019) for the second dose. However, they are in line with rates in neighbouring countries. The vaccination coverage rate against diphtheria, tetanus and polio is also high, at 95% of all infants in 2020, although this does represent a decrease from past rates.

Overall access to effective TB treatment stood at 64.1% in 2017: fractionally higher than the WHO European regional average of 63.7%. However, there were fluctuations over the past decade (Fig. 6) and the rate in 2017 was actually lower than in 2005. Rising rates of multidrug-resistant TB make progress more difficult (Box 2).
Work on HIV prevention and response in Uzbekistan remains challenging, and levels of HIV-related stigma and discrimination are high. The government does provide antiretroviral treatment with support from a grant from the Global Fund, but adherence is a challenge.

Uzbekistan has improved access to services, but some challenges remain

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 — suggests considerable improvement in Uzbekistan over the past two decades, increasing from 56 (out of 100) in 2000 to 71 in 2019 (Fig. 7). These figures are below the averages for the WHO European Region, but slightly higher than the average for Central Asia.

Although this is a positive development, user charges (both formal and informal) can limit access to necessary care, and services for conditions excluded from the basic benefits package may be unaffordable for some. In addition, there are long waiting times in public facilities for certain services, and no formal system of waiting lists. In the Syrdarya pilot, new digital tools are being implemented for consultation bookings and queue management.

Box 2
The growing challenge of MDR-TB

The share of disability-adjusted life years due to multidrug-resistant and rifampicin-resistant TB (MDR/RR-TB) has decreased only slightly and still presents a serious challenge.

In 2020 Uzbekistan was one of 30 high-burden MDR-TB countries in the world and the resurgence of MDR-TB is considered by the Ministry of Health as a priority public health issue. Treating MDR-TB is difficult and expensive. Treatment is lengthy, and the drugs required are much more expensive than those used in standard treatment regimens and can have severe side-effects. In 2019, the national MDR-TB treatment success rate was 61% for MDR/RR-TB cases started on second-line treatment in 2017.

The National Strategy Concept of Healthcare Improvement for 2019–2025 sets out targets for reducing the incidence and prevalence of TB. Uzbekistan is committed to eliminating TB by 2050. However, MDR-TB prevention and reduction efforts will need to be stepped up to achieve this goal. Implementing fully oral short treatment regimens for MDR/RR-TB cases and increasing access to new drugs could be important next steps for the country.
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The government has aimed to ensure equal geographical access to rural primary care units based on location and population. However, the use of aggregate proxies for health needs – such as geography and population numbers – can lead to insufficient resource allocation for certain population groups or health needs, such as older residents living in rural areas, or people with rare or complex health needs. Other barriers also exist, such as unreliable electricity and water supply to some rural health facilities (Ahmedov et al., 2014).

In a national self-assessment of water and sanitation services in 2020, only 57% of primary health care facilities reported having basic water services, and only 26% had basic sanitation services.

With the current health reform programme (the National Strategy Concept of Healthcare Improvement for 2019–2025) the government is pursuing a reform agenda centred around improving universal health coverage, with an emphasis on elements such as chronic diseases, early detection and long-term care. It is hoped that this will improve access to quality services and financial protection.

In the context of the COVID-19 pandemic, the provision of essential health services, particularly for vulnerable groups of the population, has been highlighted as a key challenge. The pandemic has caused a temporary increase in unemployment which affects financial resilience and increases the risk of catastrophic health spending.

4 IMPROVING THE HEALTH OF THE POPULATION

Life expectancy in Uzbekistan before the COVID-19 pandemic was higher than in most other Central Asian countries

Life expectancy in Uzbekistan has shown steady improvements, increasing from 67.2 years in 2000 to 73.9 years in 2016 (Fig. 8). Female life expectancy stood at 76.3 years in 2016, compared with a male life expectancy of 71.6 years. This gender gap of 4.7 years is lower than the average in the WHO European Region (6.3 years).

Infant and maternal mortality rates have declined but remain areas of concern

With historically high infant and maternal mortality rates, maternal and child health has been one of the main government priorities in the health sector. Several high-profile government programmes have

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**Fig. 6**

Effective treatment of new, non-drug-resistant TB cases has fluctuated in recent years

<table>
<thead>
<tr>
<th>Year</th>
<th>Uzbekistan</th>
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<tr>
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</tr>
<tr>
<td>2017</td>
<td>115%</td>
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**Note:** Proportion of TB cases detected and successfully treated (estimate).
**Source:** WHO, 2022e.

**Fig. 7**

Uzbekistan has made major improvements in UHC

<table>
<thead>
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<th>Year</th>
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<tr>
<td>2000</td>
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<td>2019</td>
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**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; noncommunicable diseases; and service capacity and access; among the general and the most disadvantaged population.
**Source:** WHO, 2022e.
been developed with the aim of decreasing infant and maternal mortality. Maternal mortality is estimated to have declined from 41 deaths per 100,000 live births in 2000 to 29 per 100,000 live births in 2017. However, it is more than twice the average of the WHO European Region (13 maternal deaths per 100,000 live births) and is also higher than the rates in Tajikistan and Kyrgyzstan.

Infant mortality is estimated to have declined from 51.8 deaths per 1,000 live births in 2000 to 15.6 per 1,000 live births in 2019, which was below the Central Asian average of 17.6 in the same year. However, infant mortality remains high compared with the European regional average. In general, high maternal and infant mortality rates may be indicative of quality issues with antenatal care and hospital services, because major causes of death such as preterm birth complications, bleeding, hypertension and sepsis should not result in death in well-performing hospitals. Although overall deaths from neonatal disorders have been declining, specific issues such as neonatal sepsis and encephalitis have increased in recent years, suggesting a need to further improve the quality of neonatal care.

Noncommunicable diseases are the leading cause of mortality

Noncommunicable diseases are the leading cause of mortality and morbidity in Uzbekistan, as in other countries in the WHO European Region. NCDs were estimated to be responsible for 84% of all deaths in Uzbekistan in 2018, higher than the global average of 71% (WHO, 2018b). Of the top 10 leading causes of deaths recorded in 2019, six were due to NCDs. An economic burden analysis estimated that economic losses from NCDs (including direct and indirect costs) make up 9.3 trillion Som, equivalent to 4.7% of GDP in 2016 (WHO 2018a).

In 2016, NCDs accounted for 559 deaths per 100,000 population, a decline from previous years, but still nearly 50% greater than the average of the WHO European Region of 378 deaths per 100,000 population. Uzbekistan ranks among the countries with the highest NCD mortality rates in the WHO European Region. Female deaths from NCDs are lower (445 per 100,000 population) than among males (686) but are nearly 75% higher than...
the average of the WHO European Region. They were the highest reported rate of NCD deaths in the WHO European Region in 2016 (WHO, 2022b). Ischaemic heart disease is the leading cause of NCD deaths (Fig. 9).

Premature mortality (in people aged 30–69 years) from the major NCDs (cardiovascular diseases, cancer, diabetes mellitus and chronic respiratory diseases) is also high in Uzbekistan (in particular among men), although some improvement has been achieved since 2000 (Fig. 10).

Mental, neurological and substance use conditions, including depression, anxiety disorders, psychosis, epilepsy, dementia and alcohol-use disorders, also pose a challenge. Between 1991 and 2017 there was an increase of 15% in the incidence of people registered with mental disorders. Real rates of disorders such as anxiety and depression may be even higher, given the low uptake of treatment and the stigma surrounding mental health conditions.

To strengthen primary care in response to the national NCD burden, the Ministry of Health has updated the WHO Package of Essential Noncommunicable Disease protocols and begun implementing the package as a pilot in the Syrdarya region. In addition, national specialists are involved in implementation research on brief interventions on NCD risk factors at the primary care level and on nutrition policies in schools.

The COVID-19 pandemic has resulted in excess mortality

According to official data, Uzbekistan did not see a large number of COVID-19-related deaths during the pandemic. However, as in most other countries in Europe, the pandemic is expected to have affected overall mortality rates since 2020. Estimates of excess mortality in indicate peaks in the summers of 2020 and 2021 (Fig. 11).

In the early stages of the pandemic the country focused on rapidly expanding capacity for diagnostics and care (Rechel, 2021). A 3 139-bed stationary COVID-19 hospital was constructed in Tashkent, following the example of the Chinese emergency specialty hospitals. Modular infectious disease hospitals and triage and treatment centres were established in all regions of the country. Surveillance and laboratory capacity were also ramped up substantially (Shadmanov et al., 2021).

It is not yet fully understood what the impact of the pandemic has been on health workers or health financing. However, the provision of essential health services, particularly for vulnerable groups of the population, has been highlighted as a key challenge.

Major mortality risk factors include drivers of noncommunicable diseases

In terms of risk factors as a share of all deaths, high systolic blood pressure and dietary risks are the biggest drivers of mortality, and are estimated to be involved in 30.7% and 28.2% of all deaths, respectively (Fig. 12).
**Fig. 11**
Excess mortality remained below the WHO European Region average

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 (e.g., 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.

Source: WHO, 2022d.

**Fig. 12**
High systolic blood pressure and dietary risks are leading risk factors contributing to deaths in Uzbekistan

Note: Shares overlap and, therefore, add up to more than 100%.

Smoking prevalence among those aged 15 years and over, at 10.6% in 2020, is one of the lowest in the WHO European Region, declining from 16% in 2000. This compares to a prevalence rate of 25% in the WHO European Region and 14.9% in Central Asia in 2020. The smoking prevalence rate is much lower among women, amounting to only 0.9% in 2020. Male smoking prevalence is much higher, with only 30.6% in 2000 to 20.3% in 2020. Alcohol consumption, at 2.5 litres per capita among those aged 15 and over in 2019, is low, compared with an average in the WHO European Region of 7.8 and a Central Asian average of 2.8.

Obesity levels among adults (16.6% in 2016) are lower than the average of the WHO European Region (23.3%) but have nearly doubled since 2000, with women more likely than men to be obese. Levels of low physical activity (19.1% in 2016) are below the average of the WHO European Region (29.3%), and rates of inactivity are much higher for women than for men.

Poverty levels remain high, and access to safe water and sanitation can be a challenge

Uzbekistan’s water services and sanitation infrastructure, constructed mostly during the Soviet period, is considered in need of extensive rehabilitation and renewal. It has not kept pace with the needs of a growing population, resulting in stagnation and decline in the quality of water services in many areas (World Bank, 2020a). This results in poor access to safe water and sanitation and preventable ill-health.

Air pollution is also a significant risk factor to health. Around two thirds of air pollutants are caused by land vehicles. There is no indication of a national air quality policy and environmental issues in general are not a high priority. In cities such as Tashkent, Ferghana and Olmaliq, nitrogen dioxide and particulates exceed WHO recommended levels, while in rural areas heavy use of agricultural chemicals has led to degrading air quality. There is some air quality legislation – such as the Law on the Protection of Atmospheric Air – but local enforcement capacity is limited (United Nations Environment Programme, 2015).

In 2013 Uzbekistan’s poverty headcount ratio at national poverty lines was recorded as 14.1% of the population, slightly below the WHO European Regional average that year of 15.4%. In 2018 this figure had reportedly declined to 11.4% of the population, below the WHO European Region average of 14.9% (WHO, 2022b). The World Bank is working with the government of Uzbekistan on major revisions to poverty estimates.

Poverty is known to affect exposure to risk factors for NCDs, such as poor diet. Child and maternal malnutrition

**Box 3**

**Cross-sectoral collaboration helps to improve health and well-being**

Despite limited formal mechanisms for multisectoral collaboration, the government has begun using an intersectoral approach to tackle specific health issues. In response to the COVID-19 pandemic the Ministry of Health has engaged with a wide variety of sectors, including employment, transport and tourism. Before the pandemic, an area of intersectoral collaboration that had seen some gains was risk factors for NCDs.

In 2018 an intersectoral programme on healthy lifestyles and NCD prevention and control was developed. This was followed in November 2020 by a Presidential Decree on healthy nutrition, physical activity and sport, preventive health and health promotion. There is some collaboration between government departments responsible for health, taxation and trade: for example, the sale of alcohol without excise labels is prohibited and excise duties are increased annually (although they are still at the lower end of the range for countries in the WHO European Region). There is scope to expand this work across other areas in the future. In nutrition, the Ministry of Preschool Education has collaborated with the Ministry of Health and WHO to develop a healthy cookbook for preschool facilities in Uzbekistan, to support reductions in the consumption of salt, sugar and fats (and eliminate trans fats).

In 2022 WHO launched a new 3-year project on improving the prevention and control of NCDs in primary health care in Uzbekistan, co-funded by the World Diabetes Federation and initially piloted in the region of Syrdarya.

In tobacco control, intersectoral collaboration could strengthen the enforcement of existing policies. Uzbekistan already has a smoke-free law on public transport, introduced in 2015, but a 2017 WHO assessment scored compliance as 2/10 (scores below 5 are low compliance). To improve compliance, involving the Minister of Internal Affairs in tobacco control enforcement was flagged as a priority by stakeholders (WHO, 2018a). A comprehensive draft law on tobacco and alcohol regulation has also recently passed the first readings in the Parliament, which proposes a comprehensive definition of tobacco products, including novel products, and a series of restrictions to support a tobacco-free environment, sales and administrative code changes. The new law passed through the Lower House of Parliament, and is currently being considered by the Senate.
is a persistent challenge, with 20% of non-pregnant women aged between 15 and 49 years estimated to suffer from anaemia in 2017 (UNICEF, 2019). To tackle dietary challenges, the government has introduced a number of measures, including flour fortification and vitamin supplements for children and women of reproductive age. Uzbekistan announced a plan to introduce front-of-package food labelling and national recommendations on this were approved by the Ministry of Health and the Sanitary and Epidemiological Welfare and Public Health Service in 2022. The labelling will initially be done on a voluntary basis, but will become mandatory from 2025.

5 SPOTLIGHT ON ANTIMICROBIAL RESISTANCE

Uzbekistan has a higher consumption rate of ‘Watch’ antibiotics

Uzbekistan has implemented national surveillance for antimicrobial medicines consumption and monitors this using import records provided by the drug agency. Uzbekistan’s overall rate of antibiotics consumption is in the middle range compared with other countries in the WHO European Region. However, there is a high share of antibiotics that should only be used for a specific, limited number of indications, classified as the “Watch” group under the WHO AWARe traffic light system for antimicrobials.

Fig. 13
Consumption of antibiotics in Uzbekistan in 2018 was in the middle range of the WHO European Region, but with a higher proportion of ‘Watch’ antibiotics

Notes: DDD: daily defined dose; EEA: European Economic Area; EU: European Union. Access, Watch and Reserve (AWaRe) classification of antibiotics (WHO, 2019) as follows: Access: First- and second-choice antibiotics that should be widely available in all countries; Watch: Antibiotics that only should be used for a specific, limited number of indications; Reserve: Last-resort antibiotics for cases where other antibiotics have failed or for infections of multi-resistant bacteria; Unclassified: Antibiotics that are not yet classified. aCountries for which hospital sector data were not included.

Source: European Centre for Disease Prevention and Control, WHO Regional Office for Europe.
As a result, Uzbekistan was a considerable way off meeting the WHO national monitoring target of at least 60% of total antibiotic consumption being from the “Access” category in 2018 (Fig. 13). This indicates that stronger antimicrobial stewardship efforts are needed.

Data are limited on rates of antimicrobial resistance in Uzbekistan

Uzbekistan is still in the process of establishing routine monitoring for antimicrobial resistance (AMR). Uzbekistan participates in relevant networks set up by the WHO Regional Office for Europe (the Antimicrobial Medicines Consumption Network and the Central Asian and European Surveillance of AMR, or CAESAR, Network). Uzbekistan’s national reference laboratory, the AMR Centre, joined the CAESAR network in 2017 and focuses on building and maintaining national surveillance capacity. To provide insight into the current levels of AMR WHO supported the AMR Centre to participate in the Proof-of-Principle AMR routine diagnostics surveillance project (PoP project) in selected hospitals between 2018 and 2022. The data are being analysed and a project report is expected in November 2022.

The country reports to CAESAR on overall AMR coordination, but it does not contribute data to the AMR surveillance database. This is a notable gap and hinders analysis of performance compared with regional peers.

Uzbekistan has undertaken some steps to combat AMR, but efforts could be strengthened

Based on the most recent TrACSS survey (2020–2021), human and animal health authorities are involved in activities to counteract AMR and the government has formed a multi-sectoral working group on AMR. The country also has regulations around the prescription and sale of antimicrobials for human use, but implementation and control mechanisms are not yet in place. However, there are no regulations on their prescription or use for animals, or on the use of antimicrobials for growth promotion.

Some training on AMR is available for health workers, including in their pre-service training and through continuing professional development. Ad-hoc courses are reported to be available for professionals in veterinary health.

Uzbekistan has reported that a national AMR action plan has been developed and is pending approval. Guidelines for appropriate use of antimicrobials are available, but practices to ensure appropriate antimicrobial use are not being implemented. In order for rates of resistance to decline, and to ensure prudent use of antibiotics, there is a need for effective high-impact policies and measures including infection prevention and control programmes, prescription-only antibiotics, strengthening laboratory capacity in human and animal health, training health professionals on the rational use of antibiotics, controlling antibiotic use in veterinary work, and mass media campaigns to improve public awareness.

6 EUROPEAN PROGRAMME OF WORK (EPW)

Moving towards universal health coverage

Uzbekistan is striving to move towards universal health coverage and WHO supports these efforts. A range of initiatives is ongoing or planned for the near future, including strengthening the health system and especially primary care and health financing reform; promoting evidence-based health sector policies; introducing a health management information system; improving supply chain management; revising service delivery models including multi-profile facilities; improving health workforce training to comply with international standards; and ensuring access to the state-guaranteed benefits package, which will be available to the whole population.

WHO supports the development of mechanisms for the protection of the rights of health workers to improve professional development and decent working conditions; provides technical assistance on case management of hepatitis, HIV and TB (with a focus on drug-resistant TB); supports the implementation of an enhanced and sustainable system for vaccine-preventable diseases; supports an intersectoral programme on AMR; and helps to strengthen laboratory services. In addition, WHO supports strengthening national capacity to diagnose and treat NCDs, with training for clinical staff and the development of postgraduate training.

An important step towards more proactive population health management at primary care level is the Presidential Decree on risk stratification which established four risk groups based on diagnoses and NCD-related behavioural risk factors. Information on risk stratification can be used to produce community health profiles, which can form the basis for discussing health priorities at community level and designing population-level interventions.

Protecting against health emergencies

In light of the COVID-19 pandemic, and to reinforce protection against future health emergencies, WHO supports the implementation of the Joint External Evaluation of International Health Regulations, led by the Ministry of Health. WHO also continues to support the health system response to COVID-19 through technical assistance to strengthen the health system, the training of health workers, procurement of...
essential equipment, enhanced surveillance systems, and building of infectious disease laboratories.

**Promoting health and well-being**

WHO works with the government of Uzbekistan to promote opportunities for healthy choices for all socioeconomic groups, including through the introduction of new approaches such as healthy settings and “Health For All” policies. These approaches will support policies that promote healthy lifestyles, including nutrition and health literacy for all age groups, with a particular focus on vulnerable groups. Incorporating behavioural and cultural insights in future programmes will be crucial to the promotion of healthy choices, particularly for nutrition. WHO also provides technical support for efficient and sustainable service delivery systems in reproductive, sexual, women, newborn, child and adolescent health at all levels of care and in school settings. These areas of cooperation include engagement with the WHO European Programme of Work regional flagship initiatives on digital health, mental health, immunization and promoting healthier behaviours.

### Country Data Summary

<table>
<thead>
<tr>
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<th>Uzbekistan</th>
<th>Central Asia</th>
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<td>Estimated infant mortality</td>
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<td>Population size, in millions</td>
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<td>Poverty rate at national</td>
<td>14.1</td>
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</tbody>
</table>

**Notes:** EU: the 28 EU Member States until 2020; GDP: gross domestic product; PPP: purchasing-power parity.

**Source:** WHO, 2022b.
References


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.