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Health Systems in Action (HSiA) Insights

Armenia

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World Health Organization
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Editorial Team

This edition of the Health Systems in Action Insight for Armenia was written by Saro Tsaturyan and Giada Scarpetti.

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: ARMENIA

Key points

- Armenia's basic benefits package (BBP) provides coverage of primary health care (PHC) services and certain vertical health programmes for the entire population. However, its overall coverage of inpatient services and outpatient medicines (as essential PHC services) remains limited, leaving around half of the population to rely predominantly on out-of-pocket (OOP) spending.
- Public spending on health as a share of GDP is one of the lowest in the WHO European Region. This results in high levels of OOP payments, which has repercussions for financial protection and accessibility, especially for low-income groups.
- Since 2019, there has been a steady expansion of BBP coverage due to an increase in the health budget, which nearly doubled (in absolute terms) by 2022 compared to 2018. However, the share of the health budget in total government spending has remained nearly the same, indicating that health-sector financing is still a low priority for the government.
- Armenia continues to make efforts towards achieving universal health coverage (UHC). The emphasis of the work is on expanding BBP coverage by increasing public spending for health, improving quality of care and, with support from WHO, enhancing the standard and breadth of primary health care.
- Armenia faces a shortage of health workers, especially nurses, with their numbers per 100 000 population below the WHO European Region's average. A disproportionately large share of the health workforce is concentrated in the capital city Yerevan. The Ministry of Health is implementing policies to address the shortage of staff in regional health facilities.
- The implementation and rollout of electronic referrals and e-prescription modules in the electronic health information system (ARMED) contributes to improving accountability, access and patient empowerment. The government is currently focusing on expanding the use of telemedicine to remote PHC facilities to further improve access to quality care.
- More than 83% of all deaths in Armenia in 2022 were due to noncommunicable diseases (NCDs). The main risk factors contributing to mortality are high blood pressure, tobacco smoking and unhealthy diets. Public health policies implemented by the Ministry of Health are aimed at addressing the rising burden of NCDs, especially through screening and tobacco control programmes.
- Routine childhood vaccination rates remain high, and infant and maternal mortality rates have been declining. Despite the overall reduction in the incidence of infectious diseases, Armenia faces challenges in containing tuberculosis (TB), especially due to the rise of multi-drug resistant TB cases.

1 ORGANIZING THE HEALTH SYSTEM

Armenia has a decentralized health system, with the Ministry of Health acting as the single payer for budget-funded health services

Since the mid-1990s, Armenia has implemented significant health reforms, including decentralizing health service provision to regional and local governments, partial privatization and establishing the State Health Agency (SHA) in 1997. The SHA was intended to lay the foundations for the introduction of a national social health insurance system, but at present public funding for health continues to be based on taxation. The Ministry of Health oversees the development and implementation of national health policies and regulations, including licensing of health care providers. Through the SHA, the Ministry of Health acts as the single payer for medical services covered under the BBP.

The Government of Armenia is currently considering policy options to enhance financial protection and quality of care. It approved the Health Sector Strategy and Action Plan for 2023–26 and the Concept Note for Introduction of Universal Health Insurance (UHI) in February 2023, which are aimed at mobilizing additional public resources by introducing payroll-based insurance premiums for the formally employed, alongside a significant increase in budget allocations to expand benefits coverage. Under these reforms, the SHA will transition into an independent UHI fund, serving as the strategic purchaser of services within the BBP. Furthermore, the government plans to strengthen service delivery by establishing a quality unit in the Ministry of Health, improving service monitoring and making additional investments in primary care infrastructure.

The BBP does not provide adequate coverage for inpatient care and certain key elements of PHC, including outpatient medicines and essential diagnostic tests

The BBP is based on targeted state health programmes, drafted by the Ministry of Health and endorsed annually by the National Assembly within the government's budget proposal. Government decrees specify BBP details and provider payment mechanisms. The entitlement of the population to publicly funded health services is based on legal residence. Residents and refugees are entitled to publicly paid outpatient care (including primary care and some specialist visits but excluding dental care) and some inpatient care. Special categories (around 50% of the population), including children under 18 years, asylum-seekers, military staff, civil servants and other social package beneficiaries, patients with cancer and tuberculosis, and those requiring intensive care, are also entitled to publicly paid inpatient care, diagnostic tests and a limited scope of dental care, and are exempt from co-payments. Under these arrangements the other half of the population (not included in special categories) have to pay out of pocket to access inpatient services.

While some specialized BBP services receive sufficient public funding, mirroring the actual cost of service delivery, various other programmes are underfunded. This leads to high OOP payments, as well as informal payments, to cover the gap. Coverage of outpatient medicines is limited to socially vulnerable categories of patients or those with certain chronic diseases or conditions (for example, diabetes). A gatekeeping function in primary care exists but is limited to referral for hospital care within the BBP.

Publicly covered services are provided by a mix of public and private facilities that have entered contracts with the Ministry of Health. Patients visiting a private clinic not contracted by the Ministry of Health, or a different primary care facility from the one they are registered with, are responsible for covering the full costs of their care. User charges apply to outpatient medicines, diagnostic tests, dental care and inpatient care, with annual coverage limits on some tests such as CT scans and MRI.

While patients can freely choose their health care providers, the people-centredness of the health system remains underdeveloped. Ongoing initiatives, such as expanding the use of the patient portal in the ARMED eHealth online system for managing medical appointments, and the recent implementation of electronic referrals and e-prescription components in ARMED, aim to enhance the role of patients and improve access.

2 FINANCING AND ENSURING FINANCIAL PROTECTION

Public spending on health as a share of GDP remains low, despite a substantial increase in budget allocations over the last years

Armenia's health spending per capita (adjusted for purchasing power) was US$ 1924 in 2021, higher than the average of upper middle-income countries (UMICs) in the WHO European Region (US$ 1646), but much lower than the US$ 3841 average in the WHO European Region **(Fig. 1)**. The share of public sources in overall health spending was only 17.8% in 2021; voluntary health insurance (VHI) schemes accounted for 1.9%, with the rest of health spending coming from private sources and external funding.

Health spending only accounts for a small share of government spending

The total government budget has experienced notable growth in recent years, bolstered by a robustly growing economy, which has resulted in increased allocations to the health sector in absolute terms (from AMD 79.6 billion in 2018 to AMD 140.6 billion in 2022).[1] However, the share of the government's budget allocated to health remains very low: after peaking at 7.9% in 2021 in view of the response to the COVID-19 pandemic, it decreased again to 6.3% in 2022, aligning with the average over the last ten years. This was the third lowest share in the WHO European Region, indicating a low priority given to health.

Overall health spending is high, but it is heavily dominated by OOP expenditures. In 2021, health spending as a share of GDP (12.3%) was higher than in most countries of the WHO European Region. However, public spending as a share of GDP, standing at 2.2%, remains notably low, far below the average of 4.2% for upper middle-income countries and the average of the WHO European Region (5.9%) **(Fig. 2)**.

OOP spending amounts to the vast majority of health spending

OOP spending as a share of health spending decreased to 78.7% in 2021 from 84.8% in 2019, but still remains the highest in the WHO European Region, far above the regional average of 26.6% and the average of upper middle-income countries (39.8%) **(Fig. 3)**. This results in low financial protection for patients and continues to have negative effects on the quality and affordability of health care, especially for poor and socially vulnerable groups. The majority of OOP spending was allocated to outpatient medicines and medical devices (40%), with the remainder covering formal co-payments for services under the BBP, direct payments for services not covered by the BBP, and informal payments including gratuities (NIH, 2023b).

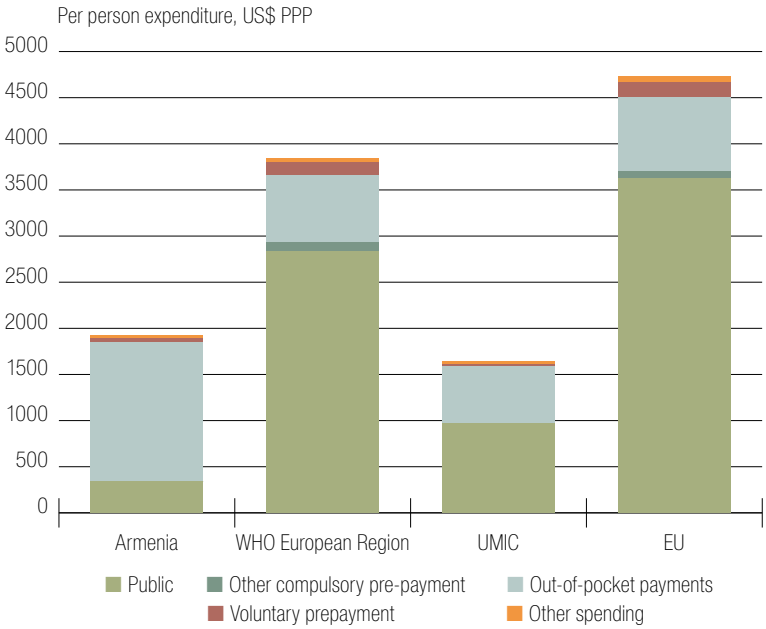
The balance of resource allocation is skewed towards hospital care

In 2022, 43.7% of overall health spending was for hospital care, 16.8% for outpatient services and 1.8% for rehabilitative care. Medicines and medical goods accounted for 23.5%, ancillary medical services for 8.1%, preventive care for 2% and other health expenditures for 4.1% (WHO Regional Office for Europe, 2024c). This pattern reflects the historical trend over the last 20 years, where more than half of public resources for health have been allocated to hospital care **(see Box 1)**, while household spending on health mainly comprises OOP payments for inpatient care and medicines. Despite the resulting challenges in ensuring access to basic health services for the population, there are currently no clearly defined policies aimed at shifting the balance of resource allocation towards preventive and primary care.

1 The economy's growth rate was 12.6% in 2022 and 8.7% in 2023. Source: ARMSTAT, 2024.

Fig.1

Public spending per capita is low in international comparison

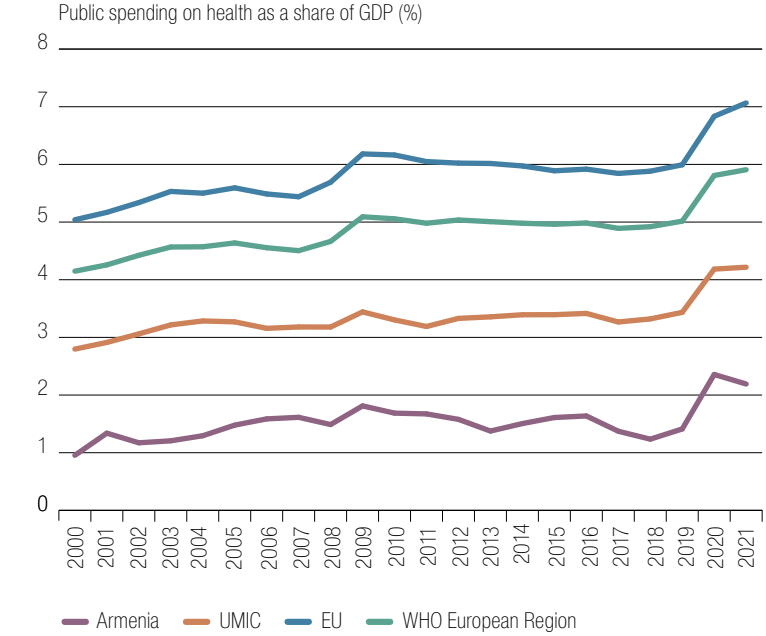


Source: WHO, 2024a.

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

Fig.2

Public spending on health as a share of GDP is among the lowest in the region

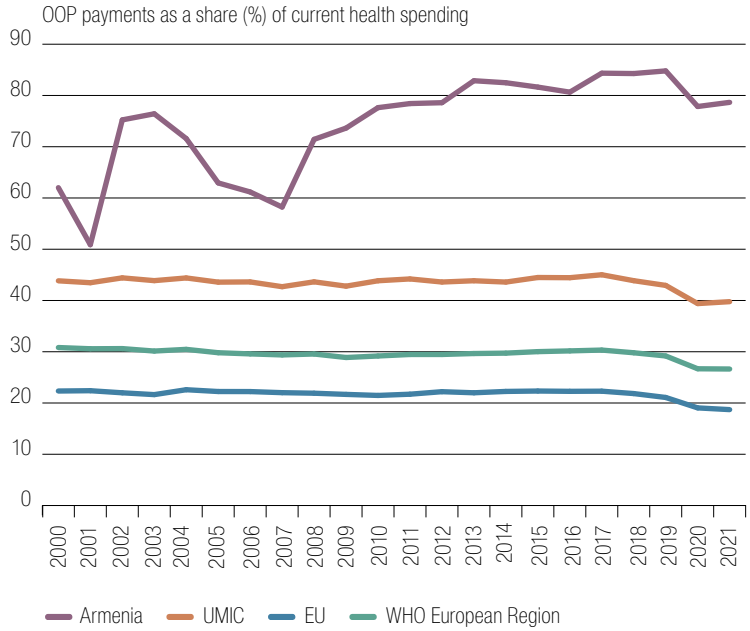


Source: WHO, 2024a.

Notes: UMIC: upper-middle-income countries in the WHO European Region.

Fig.3

OOP payments as a share of current health spending are the highest in the WHO European Region



Source: WHO, 2024a.

Financial protection is weak due to the high share of OOP spending

With the highest share of OOP payments in health spending in the WHO European Region, Armenia faces major challenges in providing financial protection against catastrophic health spending **(see Fig. 4)**. In 2021, 17.1% of households faced catastrophic health spending. This led to the impoverishment of 2.8% of households and further impoverishment of 5.0%, while 3.8% of households faced the risk of impoverishment. Catastrophic health spending in Armenia is mainly driven by outpatient medicines, followed by outpatient care (WHO Regional Office for Europe, 2023).

The main gaps in public coverage that contribute to the high level of OOP payments and subsequent catastrophic health spending are due to the fact that around half of the population (including residents and refugees not listed in any beneficiary categories) has very limited access to publicly financed outpatient medicines, medical products, diagnostic tests, dental care and inpatient care. Additional factors contributing to this situation are the lack of a comprehensive UHC policy framework, the hospital-centric care delivery pattern and a largely unregulated pharmaceutical market. While no data are available on unmet needs for health care due to cost, it can be assumed that this is a major challenge for the country.

Box 1

The efficiency of public resource allocation could be improved by setting clear priorities and spending more on primary care and public health programmes

The allocation of public resources for health is defined by the structure of the BBP. However, the lack of clear inclusion or exclusion criteria for health services (such as based on health technology assessment (HTA)) results in BBP-related decisions that are often influenced by the political agenda. Although public health programmes and primary health care are recognized as governmental priorities in the health sector, their cumulative share within the health budget has only been around 25% over the last years. Public health programmes (excluding the additional funding for the COVID-19 response in 2020–2022) account for less than 5% of the health budget, while primary health care receives on average 20% of public funding. In contrast, hospital care represents the largest share of the health budget (55–60%), with the remaining public funding allocated for other programmes and activities (such as capital costs for health infrastructure or provision of medicines).

3 GENERATING RESOURCES, PROVIDING SERVICES AND ENSURING ACCESS

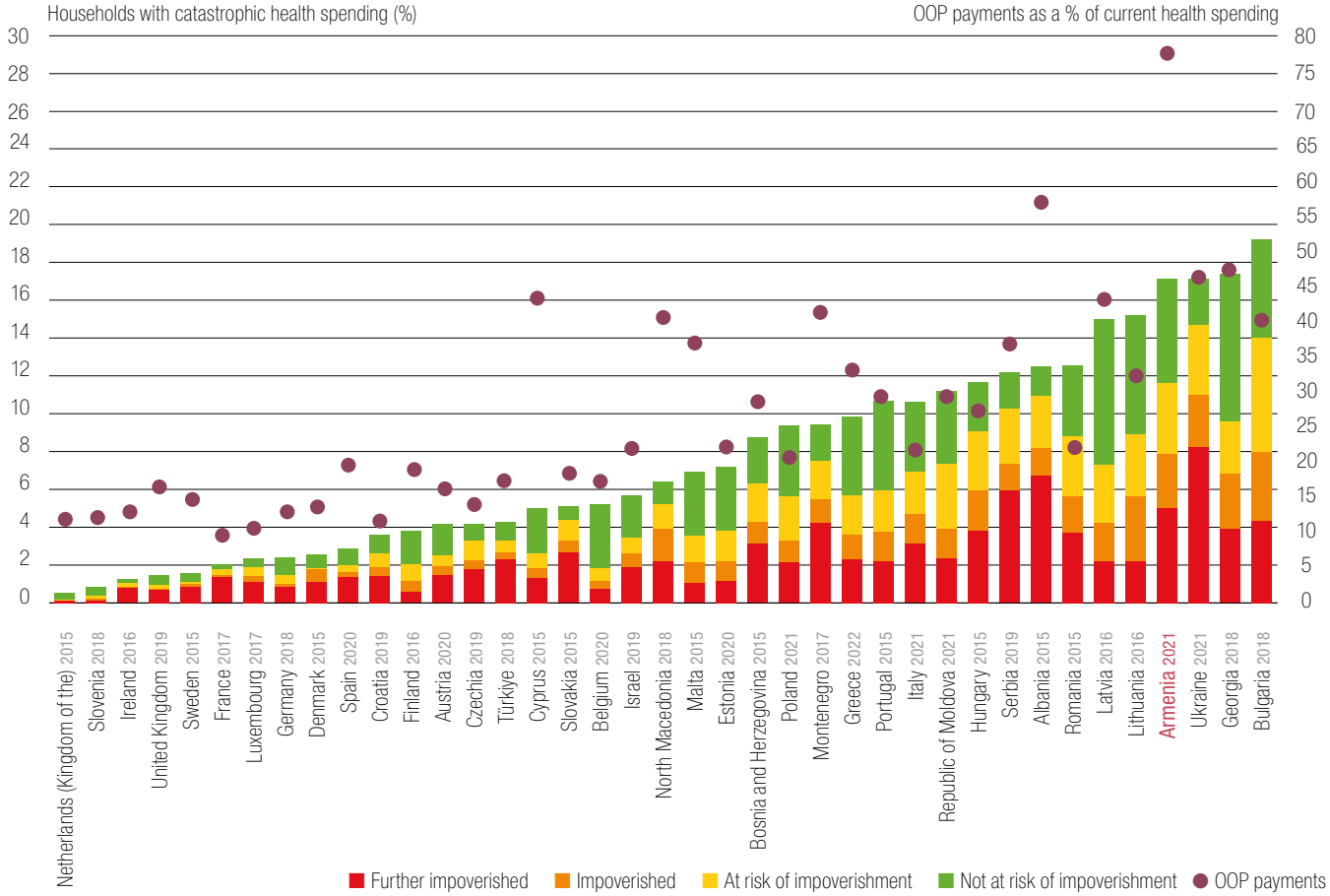
The health infrastructure needs further improvement

Between 1990 and 2022, Armenia significantly reorganized its health infrastructure, reducing the total number of hospital beds by 60% (from 30 500 to 12 100) and the number of hospitals by 32% (from 180 to 122). The ratio of hospital beds to population has remained fairly constant in the last decade, with a slight increase in 2020 due to the COVID-19 pandemic **(Fig. 5)**. All rural hospitals inherited from the Soviet system were closed, with some repurposed as health centres with a small number of day-care beds. Most general profile secondary level hospitals in the ten regions were reorganized into medical centres by merging them with local maternity hospitals and outpatient polyclinics. Health financing reforms, in particular the shift from input-based to case-based funding for inpatient care, supported the rationalization of the hospital infrastructure by removing the incentive to maintain a large number of hospital beds.

The privatization of public facilities in the health sector was implemented on a limited scale up to 2008 and mainly involved Yerevan-based hospitals. In recent years the private health sector has continued to

Fig.4

Armenian households face inadequate protection against catastrophic health spending



Source: WHO Regional Office for Europe, 2024c.

Notes: The data on OOP payments are for the same year as the data on catastrophic health spending (except for Greece, where data on OOP spending are from 2021). A household is impoverished if its total spending falls below the poverty line after OOP payments; further impoverished if its total spending is below the poverty line before OOP payments; and at risk of impoverishment if its total spending after OOP payments comes within 120% of the poverty line. The poverty line used here is a relative line reflecting basic needs (food, housing, utilities).

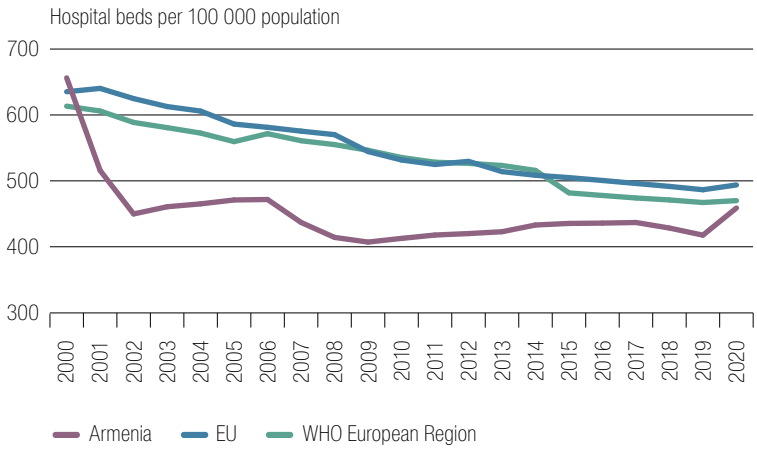
expand through the establishment of new facilities by private investment. Currently, the hospital sector of the country is still dominated by the public sector, which accounted for around two thirds of inpatient facilities and hospital beds, and 54% of hospitalized patients in 2022. The capital city Yerevan, with 37% of the total population of Armenia, hosts 48% of the hospitals and 65% of the hospital beds in the country. The regional imbalance between the capital city and the regions has remained unchanged in recent years.

Concentration of health workers in the capital is disproportionately high

The number of professionally active health workers per 100 000 population in Armenia is comparatively low. According to the WHO National Health Workforce Accounts database, there were 312 practising physicians and 443 practising nurses per 100 000 population in 2019. This compared to an average density in the WHO European Region of 389 physicians and 803 nurses

Fig.5

The ratio of hospital beds to population has stagnated in the last decade



Source: WHO, 2024b.

per 100 000 population (Fig. 6). More recent national data for 2022 indicate higher rates of 506 doctors and 548 nurses per 100 000 population (NIH, 2023a).

The overconcentration of doctors in the capital city Yerevan and their subsequent shortage in the regions remains the single most significant challenge in terms of the availability of health care resources in Armenia. With around 37% of the total population, Yerevan had over 74% of all medical doctors in 2022, which results in a ratio of physicians per population around 5 times higher in the capital city compared to the rest of the country (NIH, 2023a). While this can partially be explained by the concentration of most tertiary-level, specialized hospital services in Yerevan, the main reasons for this imbalance are lower pay in the regions and poorer living and social conditions compared to the capital city. The problem has been recognized by the authorities and the Ministry of Health is implementing policies to fill the gaps in regional health facilities. These include providing a limited number of publicly subsidized postgraduate medical education opportunities for health professionals who are willing to work in the regions for some time after graduation. While some progress has been made in recent years, the problem still persists. According to Ministry of Health data, in 2023 there was a total of 317 vacant positions for medical doctors in regional health facilities. The main medical specialties in high demand in the regions are primary care doctors (including family physicians, therapists and paediatricians) and anaesthesiologists. The distribution of nurses between the capital city and the regions shows similar discrepancies, but the situation is less critical. In 2022, 53% of all nurses were employed by Yerevan-based health facilities, and the ratio of nurses per population in the capital was 2.1 times higher than in the regions.

The private sector plays an important role in the delivery of specialized hospital care

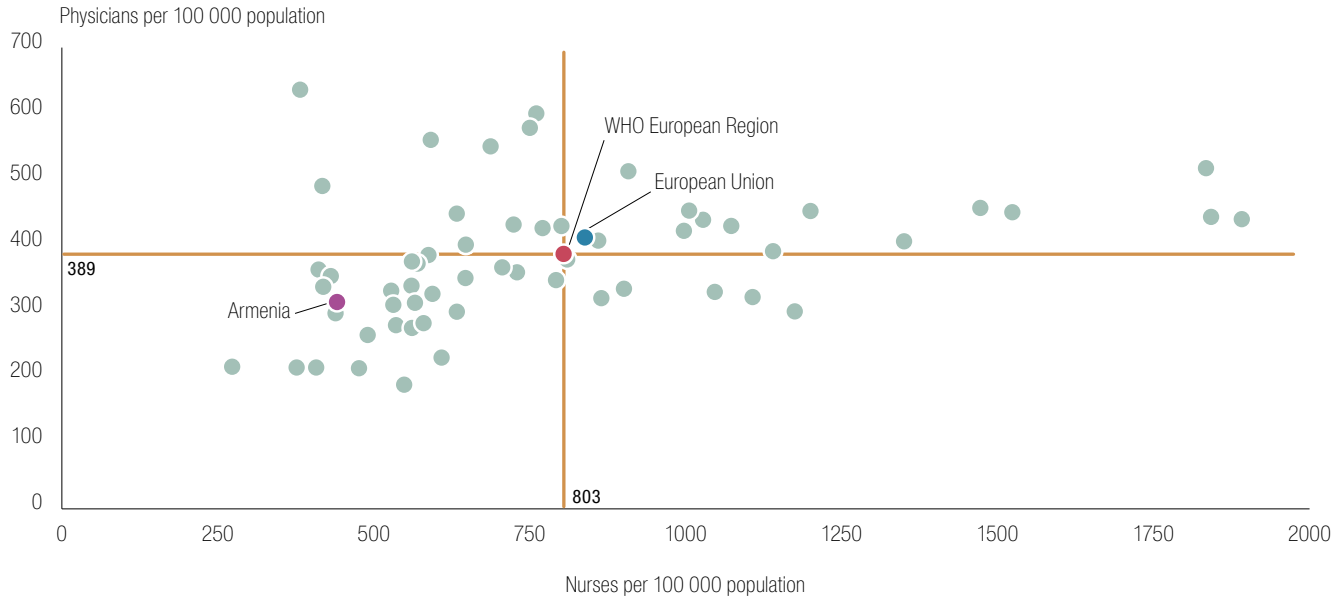
Currently, around two thirds of the health system infrastructure and human resources are in the public sector, including most of the regional health infrastructure. The private sector includes several multi-profile and specialized hospitals in the capital city Yerevan, and almost all the dental clinics and pharmacies in the country. Private health centres play a key role in providing tertiary and technology-based specialized care. The Ministry of Health directly manages only a small number of health care facilities delivering specialized care, while regional and local health authorities manage most public facilities, including the regional hospitals, urban polyclinics and rural primary care centres.

Access to health services has improved, but financial barriers remain a major issue

Armenia experienced a drastic decline in health service utilization in the 1990s due to health system underfunding, the costs for patients and poor quality of care. Utilization started to improve in the mid-2000s thanks to economic growth and increased health sector financing. Outpatient contacts per person per year declined from 6.9 in 1990 to 1.8 in 2001, then increased to 4.1 in 2019 before falling again to 3.5 in 2020 (due to the COVID-19 pandemic) and then stabilizing at 3.7 for 2020–2021. Inpatient discharges per 100 population in 2020 were 13.3 (WHO Regional Office for Europe,

Fig.6

Armenia has fewer health workers per population than many other countries in Europe



Source: WHO, 2024c.

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

2024a) and 15.9 in 2022 (NIH, 2023a), compared to 13.9 in 1990 and 5.8 in 2001. Both indicators are below the 2014 averages for the WHO European Region (7.6 outpatient contacts per person per year and 17.9 inpatient discharges per 100 population) and the European Union (7.0 and 17.4, respectively).

Data from the annual Integrated Living Conditions Survey indicate that there is adequate physical access to primary health care services, but that financial accessibility remains a significant concern. Financial barriers include not only informal payments for health services, but also OOP payments for outpatient medicines. In 2022, 20% of surveyed respondents categorized as "extremely poor" indicated "lack of finance" as the main reason for not seeking primary care (down from 32.6% in 2020), compared to 21.5% of the "poor" and 11.8% of the "non-poor", a slight increase compared to 19.6% and 7.9% in 2020, respectively (ARMSTAT, 2023).

Tertiary specialized hospital care (such as open-heart surgery) and provision of certain technology-based diagnostic procedures (such as tomography or magnetic resonance imaging) are still mainly concentrated in the capital city Yerevan, although there have been some improvements in their regional distribution in recent years. Due to limited public resources, capital investment in regional health infrastructure was until recently funded mainly from external sources. Since 1999, more than 170 primary care facilities and around 20 regional hospitals have been built (or renovated) and equipped with support from the World Bank and other donor-funded projects. The government programme for 2021–2026 plans to further improve the health infrastructure in the regions by renovating 50 health centres and providing them with equipment, mainly through budgetary funding.

The development of electronic health information systems in the country is also aimed at improving access to, and quality of, services through the implementation of telemedicine, e-referral and e-prescription tools, as well as mobile applications that proved to be especially useful during the COVID-19 pandemic.

Despite improvements in HIV and TB detection and treatment, serious challenges persist

There were 15.1 new HIV infections per 100 000 population in 2019, which was above the EU average of 5 but slightly below the average of the WHO European Region of 15.4. The treatment of HIV/AIDS is covered under the BBP. In 2022, the percentage of people living with HIV who knew their status was estimated at 63% (down from 67% in 2020), of whom 85% were on antiretroviral treatment, and 70% of those on antiretroviral treatment had achieved viral suppression, compared to 72% and 83% in 2020, respectively (UNAIDS, 2023). As such, Armenia has still some way to go to achieve the UNAIDS targets of 95:95:95 **(Fig. 7)**. Early diagnosis and timely initiation of treatment remain the main challenges.

Tuberculosis (TB) incidence has declined more than three-fold since 2009 (from 48.1 per 100 000 population in 2009 to 13.4 in 2021) as a result of targeted policies to improve access to services. This incidence rate was below the average for the WHO European Region (17.9 per 100 000 population), but higher than the EU average (7.2). Armenia is among the 18 high-priority countries for TB prevention and care in the WHO European Region, and the increase in the share of multi-drug resistant TB cases among newly detected

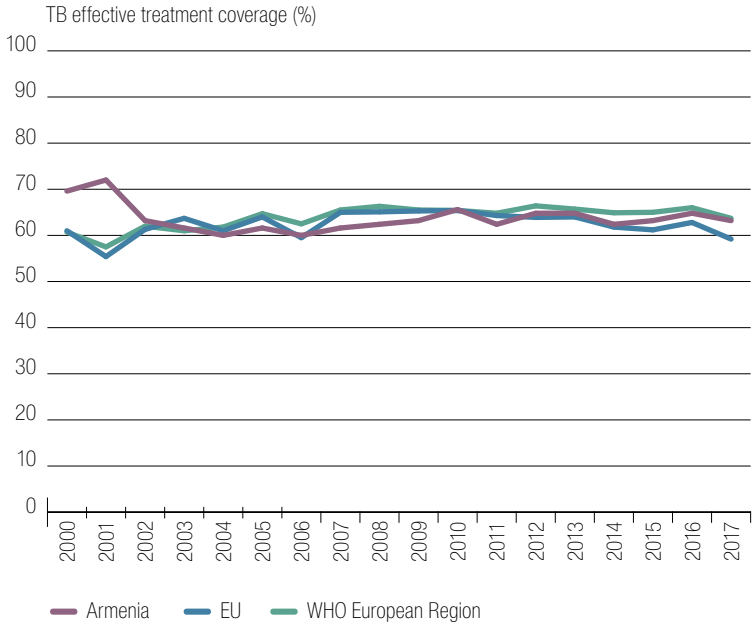
Fig.7

Armenia falls behind UNAIDS targets for the HIV treatment cascade

Source: UNAIDS, 2023.

Fig.8

Effective TB treatment coverage is higher than in the EU

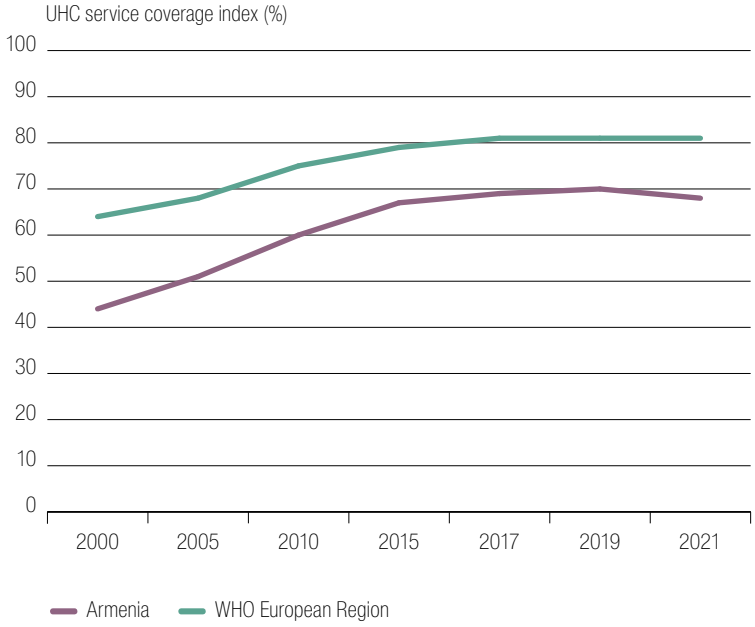


Source: WHO, 2024b.

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

Fig.9

Improvement in access to essential health services has stagnated 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; noncommunicable diseases; and service capacity and access; among the general and the most disadvantaged populations.

TB cases in recent years (from 15% in 2015 to 18% in 2022) is of particular concern (WHO, 2024d). The estimated effective treatment coverage rate has been relatively stable during the last decade **(Fig. 8)**. Timely diagnosis, also through systematic screening and prevention of TB among vulnerable populations, such as labour immigrants and internally displaced people, remains a significant challenge to address.

Coverage rates for routine childhood vaccinations remain high

Since the country's independence in 1991, Armenia has been heavily dependent on external donors (mainly UNICEF and GAVI) for the procurement of vaccines. The government has steadily increased budgetary allocations for vaccine procurement, from AMD 190 million in 2010 (0.3% of the health budget) to AMD 4.4 billion (2.6% of the health budget) in 2024. Currently, the country is fully funding its National Immunization Programme from domestic resources. Immunization coverage rates for routine childhood vaccinations remain high, with 95% of infants receiving the first dose of the vaccine against measles, mumps and rubella (MMR) in 2022, and 94% receiving the second (compared to 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.

The UHC service coverage index, measuring access to essential services, increased from 44 (out of 100) in 2000 to 68 in 2021, although this was still below the average of 81 for the WHO European Region **(Fig. 9)**. The increase in the UHC service coverage index is the result of advancements in reproductive, maternal and child care, as well as the decreasing incidence of infectious diseases over the last two decades. Nevertheless, addressing the burden of NCDs **(see also Section 4)** and providing better access to care for socially vulnerable groups of the population remain major challenges.

4 IMPROVING THE HEALTH OF THE POPULATION

Following a decline in 2020–2021, life expectancy in Armenia partially recovered

Life expectancy at birth in Armenia has improved by 3.7 years between 2006 and 2019, increasing from 72.9 to 76.6 years **(Fig. 10)**. However, this was still below the averages for the EU (79.9 years) and the WHO European Region (78.2 years). Female life expectancy at birth in Armenia in 2019 was 79.9 years, compared to a life expectancy of 73.3 years for males. This gender gap of 6.6 years is slightly higher than the average in the WHO European Region (6.3 years, 2017) and in the EU (5.5 years, 2019).

Nationally available data on life expectancy at birth indicate an improvement from 72.9 years in 2000 to 75.1 in 2022 (NIH, 2023a). According to national data, life expectancy declined to 73.5 years in 2020 and further to 72.4 years in 2021 after peaking at 76.5 years in 2019. This decline is due to a combination of factors, particularly the COVID-19 pandemic and the armed conflict in Nagorno-Karabakh (September–November 2020). According to nationally available data, female life expectancy in 2022 stood at 78.3 years, while male life expectancy was 71.4 years, a gender gap of 6.9 years (up from 6.6 years in 2019).

There is scope to improve infant and maternal mortality further

Maternal and child health remains one of the main government priorities in the health sector. The implementation of several national strategies aimed at decreasing infant and maternal mortality resulted in significant improvements over the last two decades. According to WHO estimates, the infant mortality rate per 1000 live births in Armenia has fallen by almost 65% between 2000 and 2021, from 27 to 9.5. The most recent national data on infant mortality suggest that in 2022 it was 6.7 (NIH, 2023a). While both sources indicate dramatic improvements, infant survival rates remain above the average for the WHO European Region (6.3 in 2021).

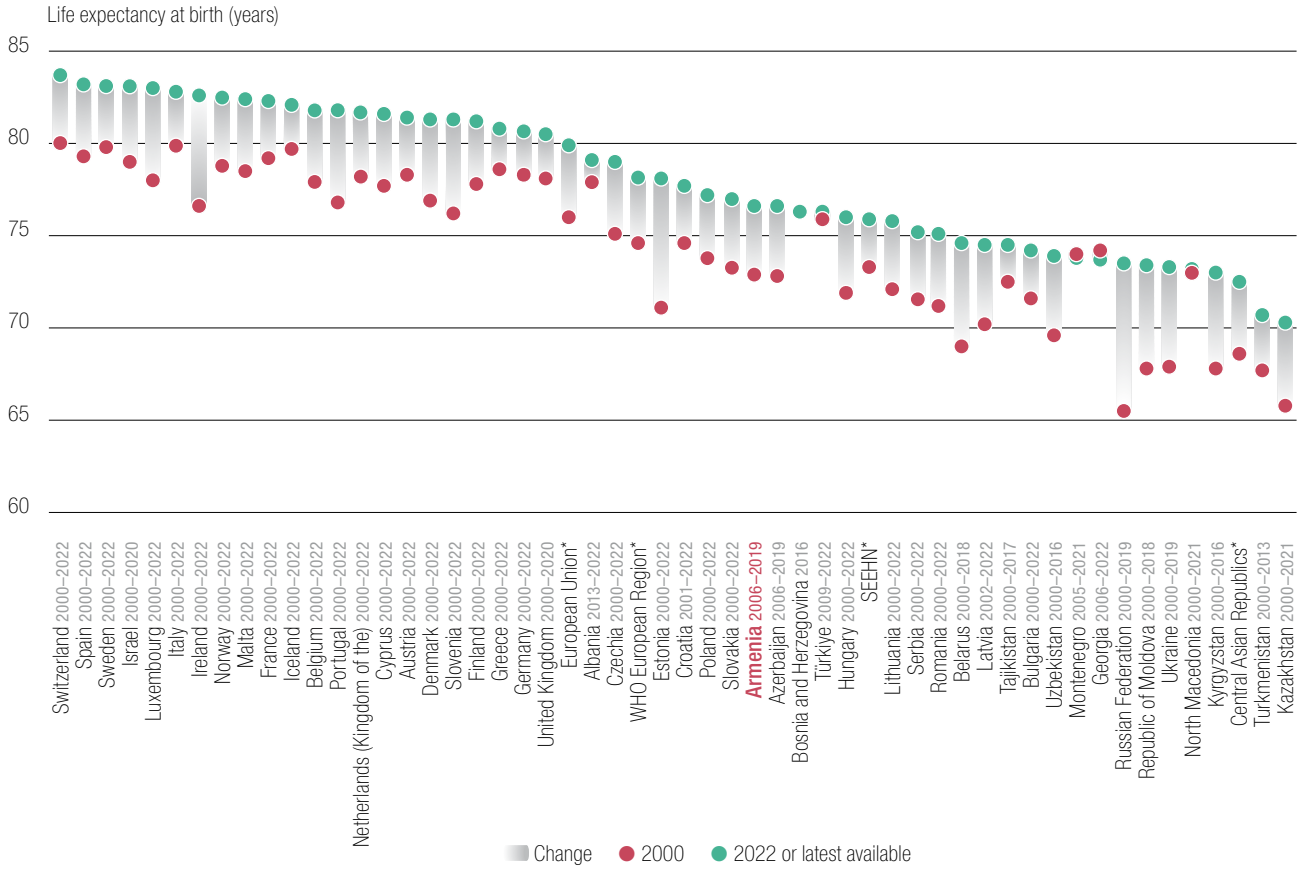
According to UN estimates, maternal mortality has fallen from 50.2 per 100 000 live births in 2000 to 27.2 in 2020 (up from 25.1 in 2018 and 24.9 in 2019), which was still more than twice the average of the WHO European Region (12.6 in 2020). Due to low absolute numbers of births and maternal deaths in Armenia, national data on maternal mortality show major fluctuations from year to year, but the Ministry of Health triannual moving average of 29.2 for 2020–2022 is comparable to UN estimates.

NCDs are the leading causes of death in Armenia

NCDs accounted for 83.4% of all deaths in Armenia in 2022, while communicable diseases accounted for 11.8% of all deaths, and injuries for 4.8% **(Fig. 11)**. The share of NCDs in overall mortality in Armenia was higher than the global average of 71% (WHO, 2018).

Fig.10

Life expectancy in Armenia improved between 2006 and 2019

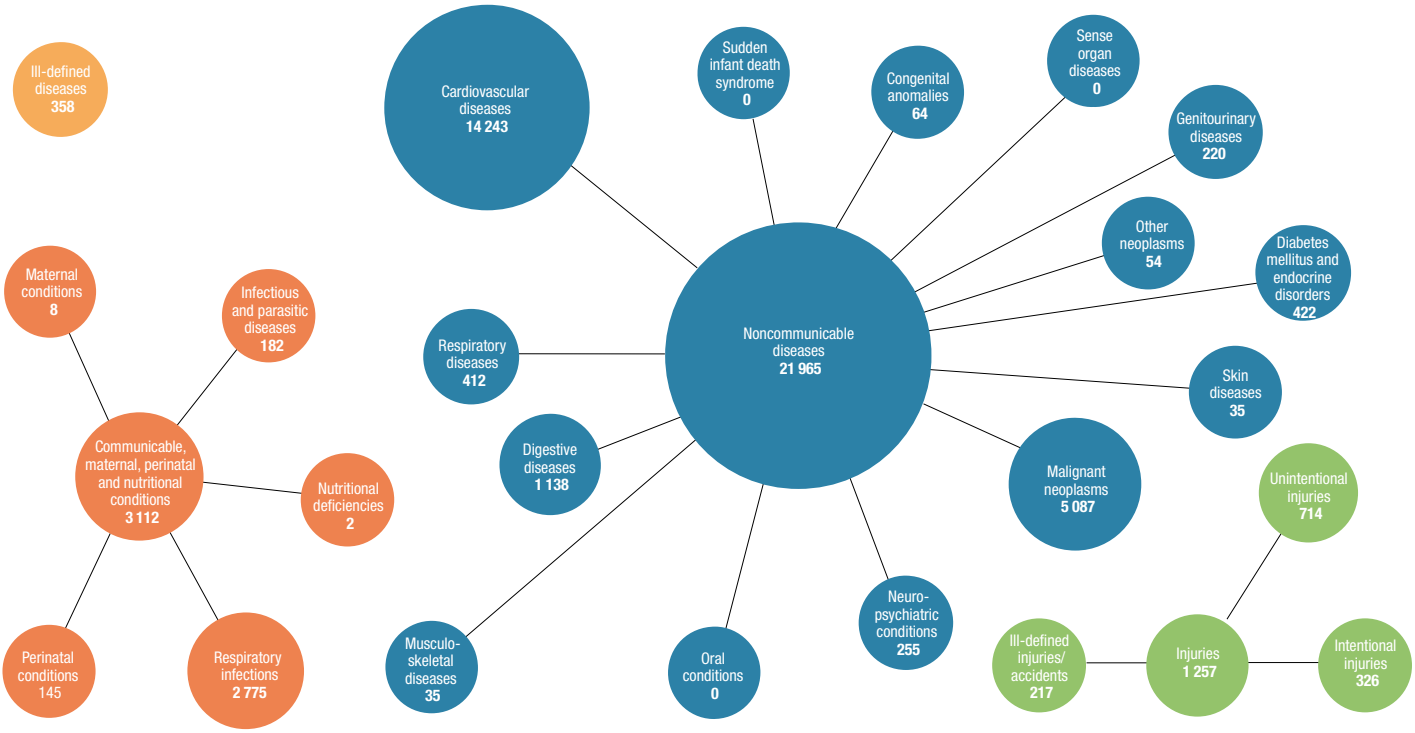


Source: Eurostat, 2024, for EU/EEA countries, Albania, Montenegro, North Macedonia, Serbia, Armenia, Azerbaijan, Georgia and Türkiye; WHO Regional Office for Europe, 2024a, for all others.

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.

Fig.11

NCDs resulted in the highest number of deaths in Armenia in 2022

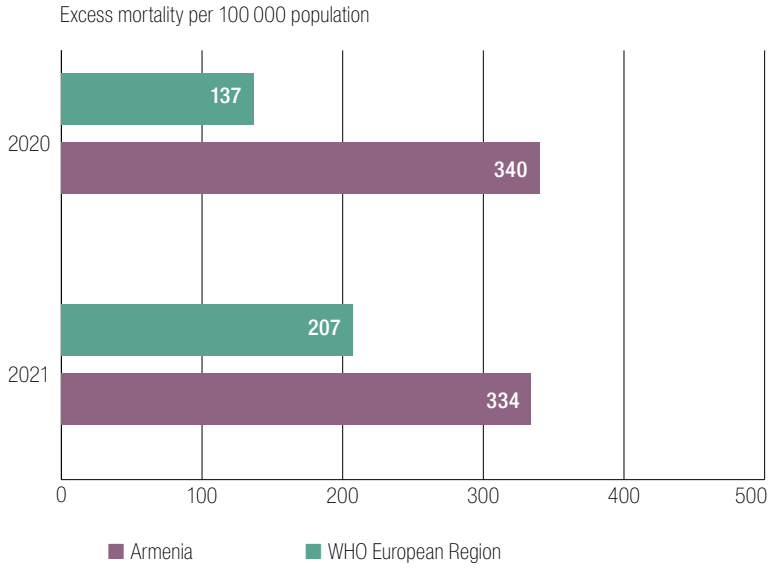


Source: WHO, 2024e.

Note: Overview of the distribution of causes of total deaths grouped by category. Data refer to 2022.

Fig.12

Excess mortality associated with the COVID-19 pandemic was very high



Source: WHO, 2023.

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. Estimates of excess mortality may include excess deaths associated with other crises, such as the armed conflict in Nagorno-Karabakh.

Diseases of the circulatory system accounted for 412 deaths per 100 000 population in 2019, or almost 53% of the total, compared to 287 in the WHO European Region (2017) and 175 in the EU (2018). While mortality rates from respiratory disease and cancer increased in Armenia by 34% and 31% over the period 2000–2019, they declined by 25% and 17% respectively in the WHO European Region between 2000 and 2017. At the same time, mortality from diabetes mellitus fell by more than 60% in Armenia, while it increased in the WHO European Region by 6%. A 2018 WHO report estimated that economic losses from NCDs (including direct and indirect costs) amounted to AMD 363 billion in 2017, equivalent to 6.5% of GDP (WHO, 2018)

During 2020–2021 excess mortality associated with the COVID-19 pandemic in Armenia was significantly higher (by 2.5 times in 2020 and 1.6 times in 2021) than the average for the WHO European Region (Fig. 12). As of 24 May 2024, Armenia had 296 cumulative COVID-19 deaths per 100 000 population according to the WHO COVID-19 dashboard, ranking 27th among all countries worldwide.

Premature mortality from NCDs in Armenia has decreased but remains high

Premature mortality (in ages 30–69) from four major noncommunicable diseases (cardiovascular disease, cancer, diabetes mellitus and chronic respiratory diseases) has decreased from 549 per 100 000 population in 2009 to 431 in 2019 **(Fig. 13)**. This was the lowest rate among CIS countries but remained above the averages of 344 for the WHO European Region (2019) and 250 for the EU (2020).

The latest figures, from 2016, show that people in Armenia have a 22% chance of dying prematurely (between 30 and 69 years of age) from one of the four main NCDs (cardiovascular diseases, diabetes, chronic respiratory diseases and cancers), with a significantly higher probability for men (31%) than women (15%).

The burden of disease is dominated by NCDs

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. Ischaemic heart disease was the leading cause of DALYs in Armenia in 2021, followed by COVID-19 and stroke. Out of the ten leading causes of DALYs, seven were noncommunicable diseases **(Fig. 14)**. This situation has not changed significantly over the last ten years.

Fig.13

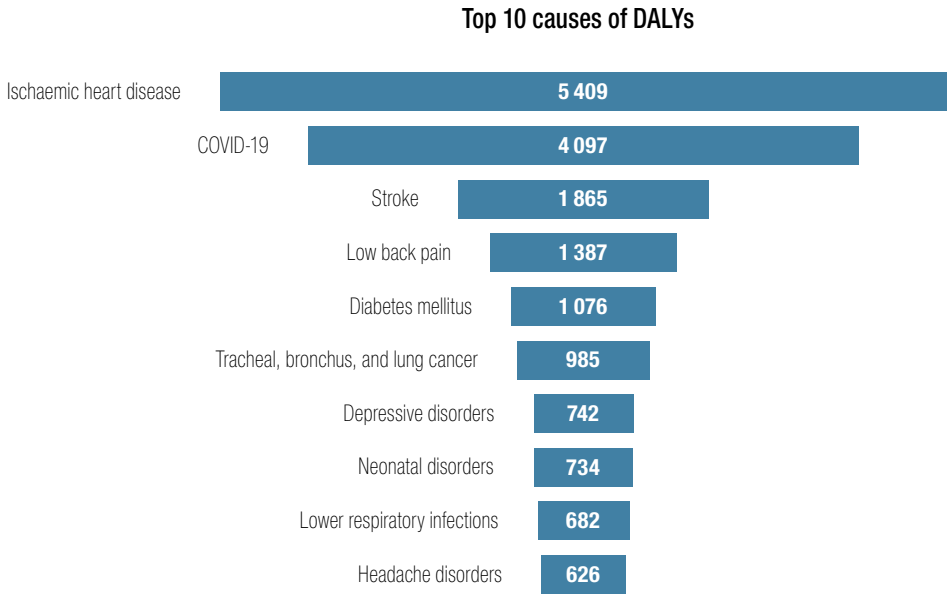
Premature mortality from noncommunicable diseases per 100 000 population in Armenia remains comparatively high

Source: WHO Regional Office for Europe, 2024a.

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

Fig.14

Ischaemic heart disease results in the greatest burden of disease in Armenia



Source: IHME, 2024.

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

Poor diets, smoking and obesity are major behavioural risk factors

Unhealthy lifestyles are major risk factors contributing to mortality in Armenia, including dietary risks (high consumption of sugar, salt and fat) and smoking **(Fig. 15)**. More than half of the adult population (54.4%) was overweight (including obesity) in 2016, and 20.2% was obese. Both overweight and obesity levels among adults are lower than the averages of the WHO European Region (58.7% and 23.3%, respectively), but have shown increasing trends since 2000, with women more likely than men to be obese. Among 7-year-old children, 27.5% were overweight (including obesity) and 12.6% were obese. The prevalence of obesity in this age group was higher among boys, at 29.9%, compared to 24.7% among girls (WHO Regional Office for Europe, 2022). Levels of physical activity (22.6% in 2016) were below the average of the WHO European Region (29.3%), but higher than the CIS average of 18.6%.

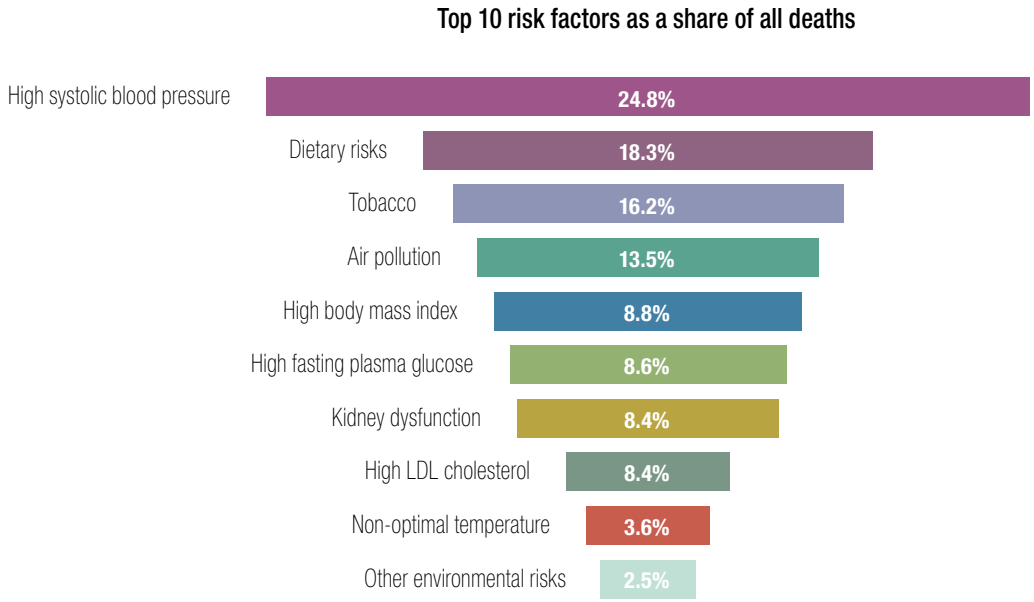
Smoking is a major risk factor, especially for males. Total smoking prevalence among those aged 15 years and over has slightly decreased over the last years, from an estimated 24.4% in 2018 to 23.2% in 2023, which was lower than the averages in 2020 in the WHO European Region (23.7%) and the CIS countries (23.3%), but higher than the EU average (22.7%).

Although smoking prevalence among males is estimated to have declined from 61.7% in 2000 to 49% in 2023, it remained higher than the prevalence of male smoking in the WHO European Region (32.4%), the EU (26.3%) and in CIS countries (40.8%) in 2020. The smoking prevalence among females in Armenia is much lower, at 1.6% in 2023, compared to a WHO European Region average of 15.8% and a CIS average of 8.3% in 2020, although there may be some underreporting of female smoking in Armenia. A study on the investment case for tobacco control in Armenia in 2021 estimated that tobacco results in costs to the country of AMD 273 billion a year, equivalent to 4.2% of its GDP. This includes AMD 76 billion in health care expenditures, and AMD 197 billion in lost productivity due to premature mortality and disability and smoking breaks. Implementing seven proven WHO Framework Convention on Tobacco Control (FCTC) measures would, over the next 15 years, save 23 245 lives, reduce disease incidence and avert AMD 889 billion in economic losses. Additionally it would save AMD 246 billion in health care expenditures, with economic benefits (AMD 889 billion) far outweighing the costs of implementing the FCTC measures (AMD 10.4 billion) (UNDP, 2021).

Alcohol consumption, at 3.8 litres per capita in 2019, was comparatively low, in view of an average in the WHO European Region of 7.8 and in CIS countries of 5.8.

Fig.15

High blood pressure, dietary risks and smoking remain the leading risk factors contributing to deaths in Armenia



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%.

Poverty levels remain high and contribute to exposure to low temperatures and suboptimal water supply

Although the proportion of the population living below the national poverty line has more than halved from its peak of 53.5% in 2004 to 23.5% in 2018, it remains one of the highest in the WHO European Region **(see Country data summary)**. Poverty levels in Armenia are above the averages for the EU (17%), the CIS (11%) and the WHO European Region (14.9%). In addition to the impact that poverty has on access to health services, dietary risks and smoking, it also contributes to exposure to low temperatures and indoor air pollution, which are estimated to account for sizeable shares of deaths **(Fig. 15)**.

According to data from the Integrated Living Conditions Survey, 73% of extremely poor, 42.7% of poor and 29.4% of non-poor households complained about poor heating of their residence in 2022. At the same time, only 42.7% of poor households had access to safely managed centralized drinking-water services in 2022. This was much lower than the national average of 95.6% (99.7% in urban areas vs. 88.1% in rural areas), an increase from 83.8% in 2000. Furthermore, access to a centralized water system did not yet guarantee appropriate water supply. In 2022, water was available to households for an average of about 21 hours daily. Only 80.5% of households with centralized water supply systems reported to have 24-hour supply (while 5.8% of households had water for only 1–5 hours daily) (ARMSTAT, 2023).

5 SPOTLIGHT ON HEALTH WORKFORCE TRENDS

The health workforce density remains low

As mentioned in Section 3, Armenia faces challenges in terms of both relatively low numbers of health workers per population and their unequal geographical distribution between the capital city and the regions. Between 2013 and 2019 (the latest internationally available data for Armenia) the number of doctors per 100 000 population increased by 7.6% (from 290 to 312), but the number of nurses per 100 000 population decreased by 6.7% (from 475 to 443) **(see Fig. 16)**.

These trends are consistent with the dynamics of the training of health workers. In 2019, there were 839 medical graduates compared to 748 in 2016 (an increase of 12.2%), while the number of nursing graduates had almost halved from 940 in 2012 to 491 in 2019 (a decrease of 47.8%).

The health workforce is predominantly female

According to the WHO National Health Workforce Accounts database, 22.3% of medical doctors and 17.7% of nurses were aged 55 years and over in 2011 (the latest year for which there are internationally available data) (WHO, 2024c). While these numbers may seem not very high in general, the situation is more critical in certain less popular specialties, such as phthisiology and psychiatry. The ageing workforce in these areas, if not adequately addressed, could potentially lead to problems in access to care in the near future.

The gender ratio of the medical workforce in Armenia, similar to that of many other countries of Eastern Europe and the former Soviet Union, is characterized by a predominance of female health workers. In 2018, 69.3% of doctors were female, and in 2011 an even higher percentage of nurses were female, at 97.6%.

The share of generalist medical practitioners has decreased

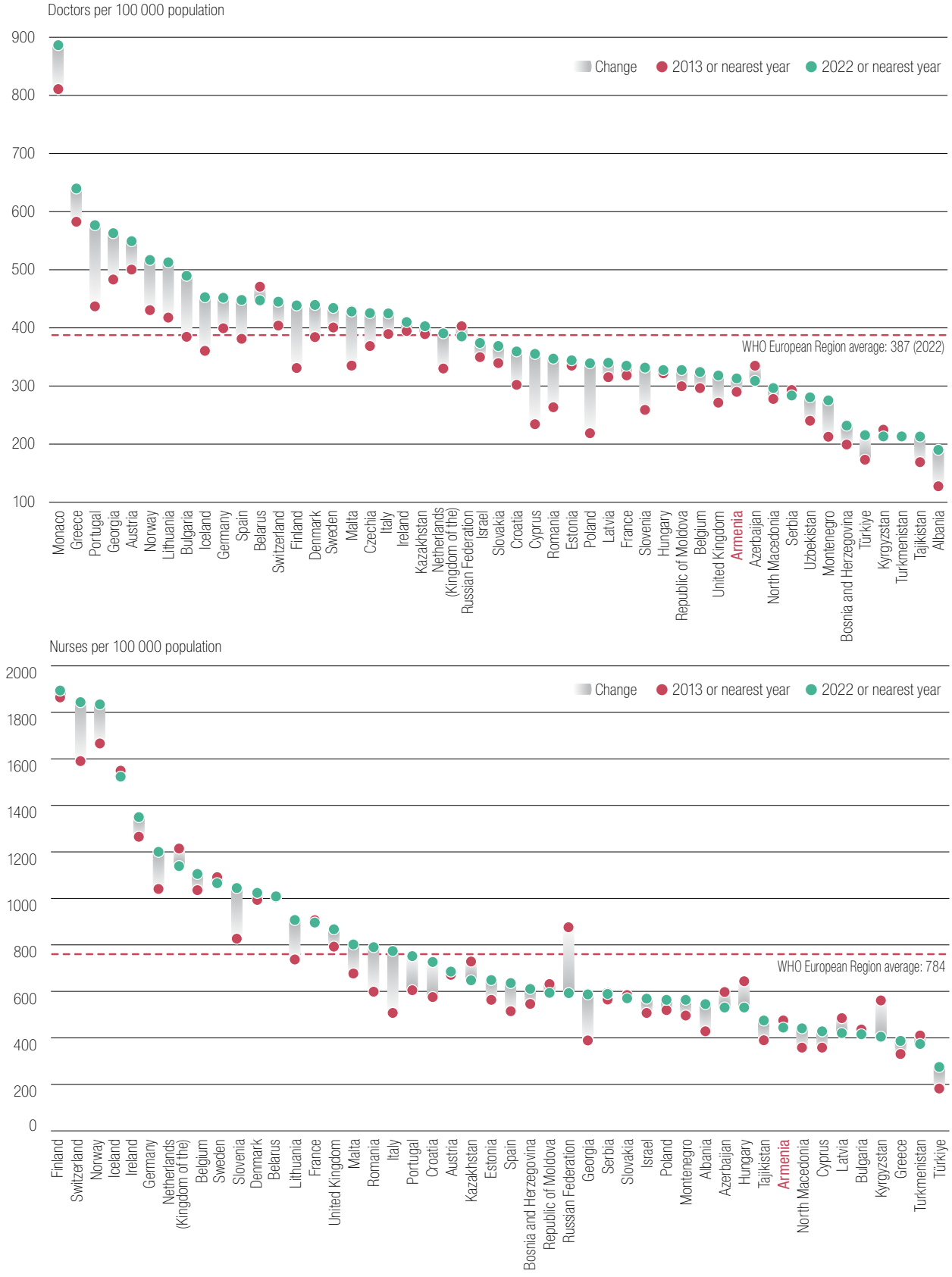
Between 2012 and 2019 (the latest available year for Armenia), the share of generalist medical practitioners (including district medical doctors – therapists and paediatricians, family doctors and primary health care physicians) as a share of all medical doctors decreased from 18.6% to 16.1%, which may potentially create problems with adequate access to primary health care services, especially in remote rural areas where patients often have no real choice of PHC doctor **(see Fig. 17)**.

Migration has a limited impact on the availability of health workers

Reliable data on the international migration of health workers in Armenia are lacking. The issue seems to exist on a limited scale and does seem to have a major impact on the availability of health workers in the country. In 2011 (the latest year for which data are internationally available), 9.1% of medical doctors and 7.1% of nurses in Armenia were foreign born, but data on outmigration of health workers are unavailable.

Fig.16

Doctors and nurses per 100 000 population in 2013 and 2022 remain below the WHO European Region averages

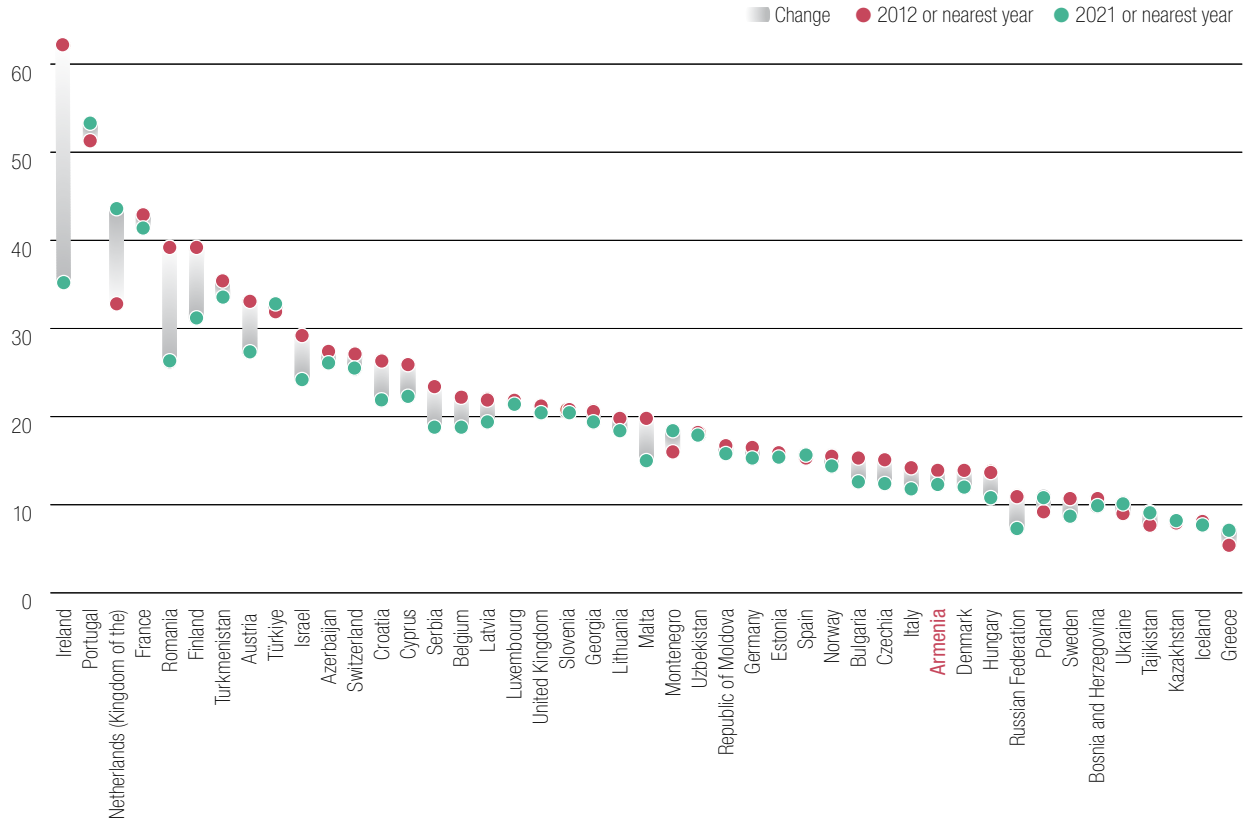


Source: WHO, 2024c.

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

Fig.17

The share of doctors who are generalist medical practitioners has declined in Armenia



Source: WHO Regional Office for Europe, 2024b.

Notes: Generalist medical practitioners (ISCO-08 code: 2211) are physicians who do not limit their practice to certain disease categories or methods of treatment and may assume responsibility for the provision of continuing and comprehensive medical care to individuals, families and communities. They include general practitioners, district medical doctors, therapists, family medical practitioners, PHC physicians, medical doctors (general), medical officers (general) and medical interns or residents specializing in general practice or without any area of specialization yet. Although in some countries "general practice" and "family medicine" may be considered as medical specializations, these occupations are also classified here. The data for Ireland should be treated with caution due to a break in series.

6 EUROPEAN PROGRAMME OF WORK (EPW)

Moving towards universal health coverage (UHC)

Armenia is progressing towards UHC with increased public funding for health and expanded coverage. WHO's support focuses on financial protection strategies to ensure affordability for all, including capacity building for monitoring financial protection measures. Primary health care services are being strengthened with WHO's support. In 2022, the Strategy for Healthcare Quality Improvement was adopted. Ongoing reforms aim to establish a people-centred, safe and efficient care model and a comprehensive family doctor practice. Key pillars of the reforms include strengthening quality and patient safety systems, and performance management. Significant investment in the workforce focuses on aligning professional competences with the aspiration of UHC, particularly through the introduction of licensing for medical doctors. Armenia is boosting its national capacity in information technologies, with WHO and other partners supporting the digital transformation of the health system. Through these comprehensive reforms, Armenia is making strides towards achieving UHC and ensuring access to quality health services for all.

Protecting against health emergencies

WHO supports Armenia in finalizing the National Action Plan of Public Health Security (NAPHS), to address the needs and challenges identified in the Joint External Evaluation (JEE, December 2023) of the International Health Regulations' core capacities and capabilities. WHO will support Armenia in revising its pandemic preparedness plan based on lessons learned from COVID-19 and the new WHO Preparedness and Resilience for Emerging Threats (PRET) guidance. Armenia aims to strengthen its resilience to health emergencies by establishing the Public Health Emergency Operation Centre, which will be part of the Public Health Emergency Operations Centre Network formed by WHO in 2012. WHO also supports the National Emergency Medical Team in the Global Classification process in achieving the status of a globally classified organization with a high quality of care.

Promoting health and wellbeing

WHO supports Armenia in its efforts to prevent and control NCDs and promote healthy lifestyles through multisectoral action. This includes the enforcement of the tobacco control law, the implementation of the WHO Framework Convention on Tobacco Control, the National Tobacco Control and Healthy Lifestyle Promotion Strategic Programmes 2022–2026. Mental health is one of the flagship initiatives of the EPW and is recognized by the Government of Armenia as a high priority for the country. WHO is helping the country in its efforts to improve mental health and psychosocial support services. WHO also provides continuous support to improve sexual, reproductive, maternal, newborn, child and adolescent health and to promote a life-course approach in the health agenda.

COUNTRY DATA SUMMARY

	Armenia	WHO European Region	European Union
Life expectancy at birth, both sexes combined (years)	76.6 [a] (2019)	78.2 [a]	79.9 [a]
Estimated maternal mortality per 100 000 live births (2020)	27.2	12.6	6.4
Estimated infant mortality per 1 000 live births (2021)	9.5	6.3	3.2
Population size, in millions (2022)	2.7	929.1	512.7
GDP per capita, PPP$ (2021)	14 630	38 936	48 615
Poverty rate at national poverty lines, % of population	24.8 [b] (2022)	14.9 (2018)	17.0 (2018)

Sources: WHO Regional Office for Europe, 2024a;

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

Note: Life expectancy averages refer to latest available years.

References

ARMSTAT (2023). Social Snapshot and Poverty in Armenia. Yerevan: Statistical Committee of Armenia (ARMSTAT).

ARMSTAT (2024) Statistical indicators. Yerevan: State Statistical Committee of the Republic of Armenia.

Eurostat (2024). EU statistics on income and living conditions [EU-SILC]. European Commission. Available at: https://ec.europa.eu/eurostat/web/microdata/european-union-statistics-on-income-and-living-conditions (accessed 29 July 2024).

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

NIH (2023a). Health and Healthcare: Statistical Yearbook. Yerevan: National Institute of Health, Ministry of Health of Armenia.

NIH (2023b). National Health Accounts Report. Yerevan: National Institute of Health, Ministry of Health of Armenia.

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

UNDP (2021). Investment Case for Tobacco Control in Armenia. The case for scaling up WHO FCTC Implementation. New York: United Nations Development Programme.

WHO (2018). Noncommunicable diseases country profiles. Geneva: World Health Organization.

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

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

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

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

WHO (2024d). Global Tuberculosis Program database. Geneva: World Health Organization.

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

WHO Regional Office for Europe (2022). Report on the fifth round of data collection, 2018–2020: WHO European Childhood Obesity Surveillance Initiative (COSI). Copenhagen: WHO Regional Office for Europe.

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

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

WHO Regional Office for Europe (2024b). European database on human and technical resources for health (HIthRes-DB). Copenhagen: WHO Regional Office for Europe. Available at: https://gateway.euro.who.int/en/datasets/european-database-on-human-and-technical-resources-for-health/ (accessed 5 June 2024).

WHO Regional Office for Europe (2024c). UHC watch – tracking progress on affordable access to health care in Europe and central Asia. Online database. Copenhagen: WHO Regional Office for Europe. Available at: https://apps.who.int/dhis2/uhcwatch/#/ (accessed 15 June 2024).

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

WHO Regional Office for Europe

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

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

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

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

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

The European Observatory on Health Systems and Policies

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

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