Georgia Profile of Health and Well-being

Technical Report · December 2017

1 author:

Nermin Ghith
Technical University of Denmark
81 PUBLICATIONS **17,969** CITATIONS

Georgia
Profile of Health and Well-being

The World Health Organization was established in 1948 as the specialized agency of the United Nations serving as the directing and coordinating authority for international health matters and public health. One of WHO's constitutional functions is to provide objective and reliable information and advice in the field of human health. It fulfils this responsibility in part through its publications programmes, seeking to help countries make policies that benefit public health and address their most pressing public health concerns.

The WHO Regional Office for Europe is one of six regional offices throughout the world, each with its own programme geared to the particular health problems of the countries it serves. The European Region embraces nearly 900 million people living in an area stretching from the Arctic Ocean in the north and the Mediterranean Sea in the south and from the Atlantic Ocean in the west to the Pacific Ocean in the east. The European programme of WHO supports all countries in the Region in developing and sustaining their own health policies, systems and programmes; preventing and overcoming threats to health; preparing for future health challenges; and advocating and implementing public health activities.

To ensure the widest possible availability of authoritative information and guidance on health matters, WHO secures broad international distribution of its publications and encourages their translation and adaptation. By helping to promote and protect health and prevent and control disease, WHO's books contribute to achieving the Organization's principal objective – the attainment by all people of the highest possible level of health.

Georgia
Profile of Health and Well-being

ABSTRACT

Profiles of health and well-being give an overview of a country's health status, describing data on mortality, morbidity and exposure to key risk factors together with trends over time. They are developed in collaboration with WHO European Member States. When possible, each report also compares a country to a reference group, which in this report is the whole WHO European Region and the Commonwealth of Independent States. To make the comparisons as valid as possible, data are as a rule taken from one source to ensure that they have been harmonized in a reasonably consistent way. Unless stated otherwise, data in this report are mainly drawn from the European Health for All database of the WHO Regional Office for Europe. These data are collected from Member States on an annual basis and include metadata that specify the original source of data for specific indicators.

Contents

Acknowledgements

Abbreviations and acronyms

ANACoD	Analysing mortality levels and causes of death
ART	antiretroviral therapy
CIS	Commonwealth of Independent States
DALY	disability-adjusted life year
GDP	gross domestic product
HCV	hepatitis C virus
HFA-DB	Health for All database
ICD-10	International Classification of Diseases, 10th Revision
MDR-TB	multidrug-resistant tuberculosis
NCDs	noncommunicable diseases
NCDC	National Center for Disease Control and Public Health
PPP	purchasing power parity
STEPS	STEPwise approach to surveillance
TB	tuberculosis

Summary of situation and trends in health and well-being in Georgia

Key messages

- Universal health care reform in Georgia has improved access to health services and reduced financial barriers and out-of-pocket costs for the population.
- The maternal mortality rate is high, although infant (including neonatal) mortality also remains a challenge.
- The largest burden of disease in Georgia is related to noncommunicable diseases (NCDs), including circulatory diseases, cancer, diabetes and respiratory diseases.
- Georgia faces ongoing challenges in the form of high levels of communicable diseases, with an increasing incidence of HIV and a high incidence of TB, including multidrug-resistant TB.
- Georgia has used new technologies for electronic data capture and exchange to improve case registration and coverage and quality of information on the existing burden of disease in the country.
- Georgia should address:
  - the need for sustainable financing of the government health programmes and reduction of out-of-pocket costs for the population;
  - the rising rates of communicable and NCDs in the population;
  - the high maternal mortality rate, as well as the infant (including neonatal), mortality rate;
  - the large proportion of ill-defined causes of death in the civil registration and vital statistics system; and
  - the high level of tobacco smoking among Georgian males.

The health status of Georgia's population has over the past three decades generally followed the trends observed in the rest of the WHO European Region. However, despite noticeable improvements since 2000, the country still faces multiple health challenges.

Georgia has made progress on a number of indicators, such as maternal and infant mortality rates, incidence of tuberculosis (TB), and treatment of new and relapse TB cases. Yet the most recent rates for some indicators remain below the averages for both the Region and the Commonwealth of Independent States (CIS).

Several factors contextualize Georgia's health indicator trends: (a) the country's reform of health care service delivery; (b) the change in population size recorded in its 2014 census (1); and (c) improvements in the coverage of case and death registrations and quality of data in the health information system (2).

Over the last 20 years, Georgia's health care system has undergone several reforms that have improved population health status and narrowed the gap between Georgian and regional averages for many indicators (3). The main goals for these reforms were to ensure universal access to high-quality medical services, to improve the primary health care system and to decrease the financial risks to the population posed by high out-of-pocket expenditures on health (2,4).

In 2017, the Georgian Government developed a comprehensive long-term Maternal and Newborn Health Strategy (2017–2030) and a closely related short-term Action Plan (2017–2019) with the aim to give direction and provide guidance for the improvement of maternal and newborn health in the country. Georgia also introduced a national initiative to regionalize the delivery of perinatal care services and ensure the provision of quality care for mothers and newborns (2). This project is an important step towards achieving Sustainable Development Goal 3.2 to reduce maternal and infant mortality. Furthermore, the Georgian Government expanded the universal health care programme with a goal to cover up to 90% of the population by 2014 (2).

The country's infant mortality rate has been decreasing, but is still higher than the average rates for the CIS and the Region. The maternal mortality rate remains high, yet this may indicate an improvement in the registration of maternal deaths rather than an increase in the maternal mortality rate *(5)*.

Georgia also developed its long-term strategy on hepatitis C for 2016–2020. The strategy includes actions in the areas of awareness-raising, surveillance, prevention, screening, diagnostics and treatment *(2)*. The country remains committed to providing free access to the newest antiviral therapy to all people infected with hepatitis C.

The incidence of TB has decreased over the past decade, but remains higher than the average for the Region. At the same time, incidences of HIV and AIDS have increased since 2000.

Birth and death registration have both significantly improved since 2011 *(2)*, when Georgia introduced an electronic system for vital events registration as well as an increase in fines for late registration or nonregistration of deaths. According to the National Center for Disease Control and Public Health, these actions led to an increase in the number of registered deaths and to a decrease in reported population size *(2)*.

The most recent population census, conducted in 2014, showed a significant reduction in the country's population. As population size is the denominator for many health and demographic indicators, this change likely influenced the main health and demographic indicators for that year *(2)*. The total fertility rate in Georgia sharply increased to 2.2 in 2014, which suggests under-reporting of the fertility rate in previous years. The total fertility rate in Georgia exceeds the average rates for the CIS and the Region.

Since 2014, Georgia has gradually introduced new technologies for data reporting in several areas of the health information system *(2)*, including:

- in 2014–2016, electronic case-based reporting systems for in- and outpatients in health care institutions;
- in 2015, a population-based cancer registry; and
- in 2016, a new electronic registration module for antenatal and obstetric services and the surveillance of maternal and child health *(6)*.

In 2015, Georgia began developing national policies in alignment with the European policy framework Health 2020, which will form the basis for the future development of a corresponding implementation plan. It initiated the process of setting targets and indicators for the health sector, with a focus on aligning its national health services with Health 2020 targets. It subsequently developed an implementation plan and accountability mechanism in accordance with the recommendations of Health 2020; however, this document has not yet been formally adopted.

In 2016, Georgia became the first WHO European Member State to implement the second round of the WHO STEPwise approach to surveillance (STEPS) survey *(7)* to ascertain the prevalence of risk factors for NCDs in the country.

Overall, Georgia has made progress in a number of the 19 core Health 2020 indicators (see table below). Some additional challenges remain in the areas of well-being (Gini coefficient and unemployment rates).

Note on data and interpretation

Presenting population rate-based trends in Georgia is currently challenging. As a result of the 2014 census and the major change to the population levels used for calculation, time series are not consistent. The National Statistics Office of Georgia is planning to address this challenge by retrospectively recalculating all health-related indicators, taking into account information from 2014 *(1)*. Furthermore, the large share of ill-defined causes of death and the incomplete coverage of death registrations in the past make it difficult to analyse the trends and distributions of main causes of death in the country.

Increased efforts are needed to improve the quality of Georgia's essential population health data. While improved registration and reporting systems can give more accurate information on Georgia's population health, they can lead to short-term analytical problems when attempting to compare the trends against historic patterns. This challenge is noted throughout this publication.

Core indicators for monitoring Health 2020 policy targets, Georgia, most recent years available

Target	Indicator	Value			Year
		Male	**Female**	**Total**	
1. Reduce premature mortality[a]	Premature mortality rate from cardiovascular diseases, cancer, diabetes mellitus and chronic respiratory diseases among people aged 30 to under 70 years (age-standardized)	618.9	262.9	422.3	2014
	Prevalence of tobacco use among adults aged 15 years and over (age-standardized)[b]	58.5	5.8	30.0	2013
	Pure alcohol consumption per capita among adults aged 15 years and over (recorded data)	–	–	6.1	2014
	Prevalence of overweight and obese (body mass index ≥25) adults aged 18 years and over (age-standardized estimate)	54.0	56.0	55.0	2014
	Mortality rate from external causes of injury and poisoning, all ages (age-standardized)	76.0	21.0	46.0	2014
2. Increase life expectancy	Life expectancy at birth, in years	68.8	77.3	73.1	2014
3. Reduce inequities[c]	Infant deaths per 1000 live births	10.1	8.9	9.5	2014
	Proportion of children of official primary school age not enrolled (net enrollment rate)	3.8	2.7	3.3	2013
	Unemployment rate (percentage)	–	–	12.4	2014
	National policy addressing reduction of health inequities established and documented	NA	NA	Yes, but only partially	2016
	Gini coefficient	NA	NA	40.0	2013
4. Enhance well-being[d]	Overall life satisfaction among adults aged 15 years and over (8)	NA	NA	4.3	2014
	Availability of social support among adults aged 50 years and over (9)	–	–	43.0	2013
	Percentage of population with improved sanitation facilities	–	–	86.3	2015
5. Ensure universal coverage and "right to health"	Private household out-of-pocket expenditure as proportion of total health expenditure	NA	NA	58.6	2014
	Percentage of children vaccinated against measles (1 dose)	–	–	96.0	2015
	Percentage of children vaccinated against poliomyelitis (3 doses)	–	–	89.0	2015
	Percentage of children vaccinated against rubella (1 dose)	–	–	96.0	2015
	Total health expenditure as a percentage of gross domestic product	NA	NA	7.4	2014
6. Set national targets	Establishment of process for target-setting documented	NA	NA	Yes	2016
	Evidence documenting: (a) national health strategy aligned with Health 2020 (b) implementation plan (c) accountability mechanism	NA NA NA	NA NA NA	Yes No Yes, but only partially	2016 2016 2016

NA: not applicable.
[a] Health 2020 target 1 includes percentage of children vaccinated against measles (1 dose), poliomyelitis (3 doses) and rubella (1 dose).
[b] Prevalence includes both daily and occasional (less than daily) use among adults aged 15 years and over.

[c] Target 3 includes life expectancy at birth.
[d] Target 4 includes Gini coefficient, unemployment rate and proportion of children not enrolled in primary school.
Source: WHO European Health for All database (3) unless otherwise specified.

References

1. Population for the beginning of the year by age, year and sex. [website]. Tbilisi: National Statistics Office of Georgia; 2017 (http://91.208.144.188/Selection.aspx?rxid=b59820da-3b78-4465-b8a1-da84f16b0c9b&px_db=Database&px_type=PX&px_language=en&px_tableid=Database%5cDemography%5cPopulation%5cPopulation_by_age_and_sex_for_the_beginning_of_the_year-02.px, accessed 11 August 2017).

2. Health care statistical yearbook 2015: Georgia [e-book]. Tbilisi: National Centre for Disease Control and Public Health of the Ministry of Labour, Health and Social Affairs of Georgia; 2017 (http://www.ncdc.ge/AttachedFiles/yearbook%20 2016_53210b52-12da-4279-9f27-f7a361c84c96.pdf, accessed 11 August 2017).

3. European Health for All database (HFA-DB) [online database]. Copenhagen: WHO Regional Office for Europe; 2016 (https://gateway.euro.who.int/en/hfa-explorer/, accessed 11 August 2017).

4. Chanturidze T, Ugulava T, Durán A, Ensor T, Richardson E. Georgia: health system review. Health Systems in Transition 2009;11(8):1–116 (http://www.euro.who.int/__data/assets/pdf_file/0003/85530/E93714.pdf?ua=1, accessed 11 August 2017).

5. Georgia reproductive age mortality study 2014. Executive summary. Tbilisi: National Centre for Disease Control and Public Health of the Ministry of Labour, Health and Social Affairs of Georgia; 2017 (http://www.ncdc.ge/AttachedFiles/RAMOS%20 2014%20Ex%20Summary_ENG_a502747e-2c09-4f23-9e3f-3fb6ea56d444.pdf, accessed 11 August 2017).

6. UNICEF Georgia. A new electronic system for the maternal and newborn health surveillance is being introduced in Georgia. Tbilisi: UNICEF Georgia; 2015 (http://unicef.ge/44/osrulta_da_akhalshobilta_janmrtelobis_metvalkureobis_akhali_sistema/352/lngeng, accessed 11 August 2017).

7. Georgia STEPS Survey 2016: Fact Sheet. Geneva: World Health Organization; 2017 (http://www.who.int/chp/steps/Georgia_2016_STEPS_FS.pdf?ua=1, accessed 11 August 2017).

8. Human Development Reports. Human Development Index (HDI) [website]. New York: United Nations Development Programme; 2016 (http://hdr.undp.org/en/content/human-development-index-hdi, accessed 11 August 2017).

9. Global AgeWatch Index 2015. AgeWatch report card: Georgia [online database]. London: HelpAge International; 2016 (http://www.helpage.org/global-agewatch/population-ageing-data/country-ageing-data/?country=Georgia, accessed 11 August 2017).

Introduction

In 2012, WHO European Member States adopted Health 2020 *(1,2)*, a policy framework supporting action across government and society for health and well-being. With the accelerated implementation of Health 2020, the WHO Regional Office for Europe introduced two new publication series: the country profiles of health and well-being and the highlights on health and well-being. These follow on from the highlights on health series, which ran from the early 1990s to the mid-2000s with the aim of addressing the need for analyses of the health situations and trends in newly emerging states in order to assist European countries with evidence-informed policy-making.

The profiles provide comparative analyses of the situations and trends in health and well-being in countries, presenting recent data on mortality, morbidity and exposure to key risk factors and giving special emphasis to all Health 2020 indicators *(3)*, including well-being. They are developed in collaboration with Member States and do not constitute a formal statistical publication. The highlights form a separate, complementary series with policy-makers as the target audience, presenting the main findings from the longer profiles.

To make the comparisons as valid as possible, data are taken from a single source to ensure that they are harmonized consistently. Unless otherwise noted, data in the reports are drawn from the European Health for All database (HFA-DB) of the Regional Office *(4)*. These data are collected from Member States and other international sources on an annual basis and include metadata that specify the original source of data for specific indicators. Other data and information used in the report are referenced accordingly. Annex 1 presents the International Classification of Diseases, 10th Revision (ICD-10) codes for causes of death.

When possible, each report also compares a country to one or more reference groups of countries, which in this report are all WHO European Member States and the countries of the Commonwealth of Independent States (CIS).

Selected demographic and economic information

The WHO European Region as a whole is facing a number of demographic and health challenges, including an ageing population and a declining birth rate. The population structure of Georgia reflects in the most part those for the European Region and the CIS (Table 1). However, Georgia's population trends are of particular interest *(5)*.

As reported to the HFA-DB by the National Statistics Office, Georgia had a total population of approximately 3.7 million in 2015. The midyear population in Georgia between the censuses of 2002 *(6)* and 2014 *(7)* decreased by 14.7% *(5)*. This decrease is also reflected in changes to the population structure by sex and age (Fig. 1).

Table 1. **Selected demographic indicators,** Georgia, latest available year

Demographic indicator	Georgia[a]	WHO European Region	CIS
Population (in 1000s)[b]	3727	908 556	281 762
Percentage aged 0–14 years[c]	17.4	17.5	18.9
Percentage aged 15–64 years[c]	68.7	67.4	70.1
Percentage aged 65 years and over[c]	13.9	15.1	11.0
Crude birth rate (live births per 1000)[c]	16.3	12.4	15.5
Crude death rate per 1000[c]	13.2	9.9[d]	11.4
Natural population growth per 1000[e]	3.1	2.4	4.0

[a] Data from Georgia's National Statistics Office may be slightly different. Data from the HFA-DB are used here for comparability purposes.
[b] 2015 data.
[c] 2014 data.
[d] 2013 data.
[e] Birth rate minus death rate.

Fig. 1. **Population structure by age and sex,** Georgia, 2002 and 2014
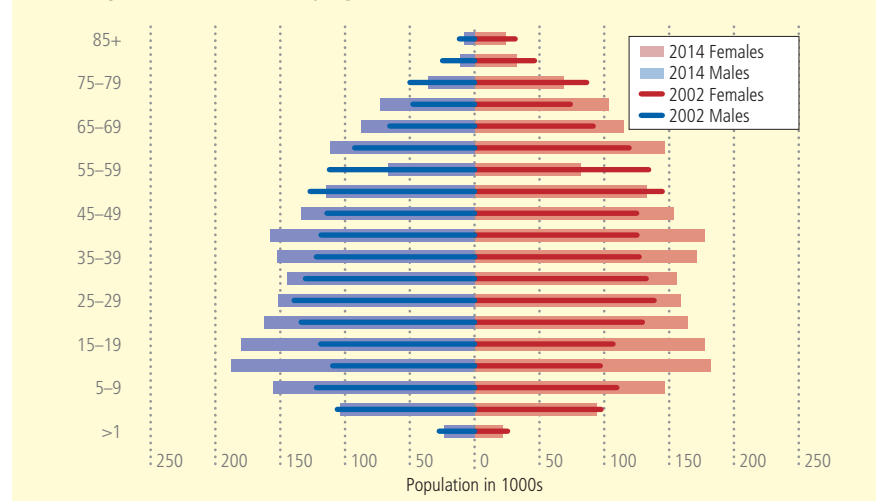
In 2014, the country's net migration (difference between the number of emigrants and immigrants) was negative (-6543 individuals) *(8)*.

The 2014 census determined a marked reduction in the size of the population, which caused a sharp increase in a number of population health indicators. During the past three decades, the share of the population aged 65 years and over increased while the share aged under 15 years decreased. This pattern of population ageing is similar to that seen within the European Region and the CIS (Figs. 2, 3).

The significant reduction of the population size reflected in the 2014 census likely influenced the calculations of main health and demographic indicators for that year. The total fertility rate in Georgia sharply increased to 2.2 in 2014, which suggests under-reporting of the fertility rate in previous years (Fig. 4). A similar change from 2013 to 2014 is observed for the crude death rate (Fig. 5). In the case that the National Statistics Office recalculates the population in the intercensus period (between 2002 and 2014), the sharp changes in these indicators between 2013 and 2014 will be adjusted *(5)*.

Fig. 2. **Percentage of population aged 0–14 years,** Georgia, WHO European Region and CIS, 1985–2014
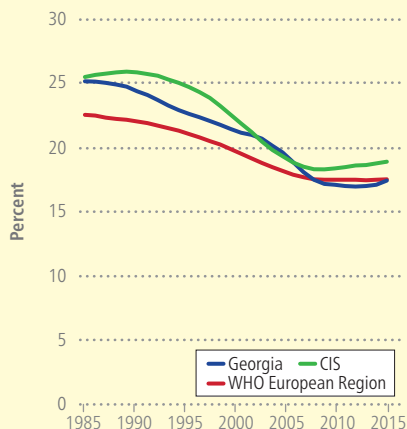
Fig. 3. **Percentage of population aged 65+ years,** Georgia, WHO European Region and CIS, 1985–2014
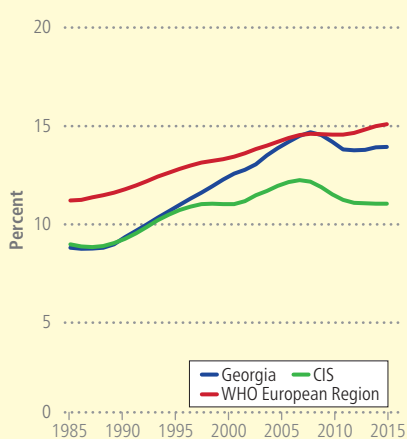
Fig. 4. **Total fertility rate,** Georgia, WHO European Region and CIS, 1985–2014
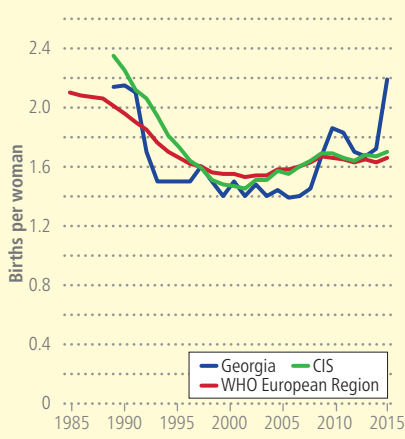
Fig. 5. **Crude death rate,** Georgia, WHO European Region and CIS, 1985–2014
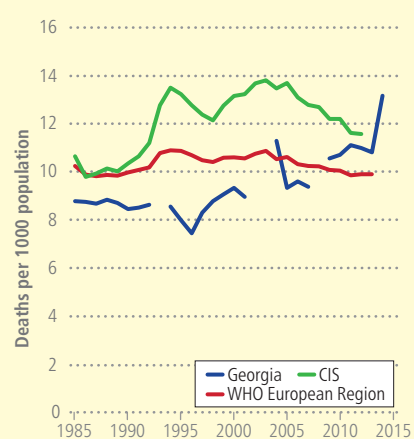
Georgia's natural population growth has increased since 2005, reaching 3.1 per 1000 in 2014 (Fig. 6).

According to the National Statistics Office, in 2014 57.4% of the population lived in urban areas and 42.6% lived in rural areas *(9)*. Between 2002 and 2014, the proportion of the population living in urban areas increased despite the overall drop in population recorded between 2002 and 2014 (Fig. 7).

Unemployment is an indicator for the Health 2020 target to enhance well-being. Georgia's unemployment rate increased from 10.3% in 2000 to 12.4% in 2014 *(4)*, which was higher than the average rates for both the CIS (5.5%) and the European Region (9.1%).

Georgia's gross domestic product (GDP, expressed in dollar purchasing power parity (PPP) per capita) steadily increased to US$ 9679 in 2015 *(10)*. However, this was much lower than the average GDP for the European Region (US$ 29 698) and the CIS (US$ 17 792).

According to WHO estimates *(11)*, the country's total health expenditures as a percentage of GDP fluctuated during the last decades, reaching 7.4% in 2014. This was similar to average expenditures in the CIS (6.6%) and slightly lower than those in the European Region (8.2%).

Fig. 6. **Natural population growth,** Georgia, WHO European Region and CIS, 1985–2014
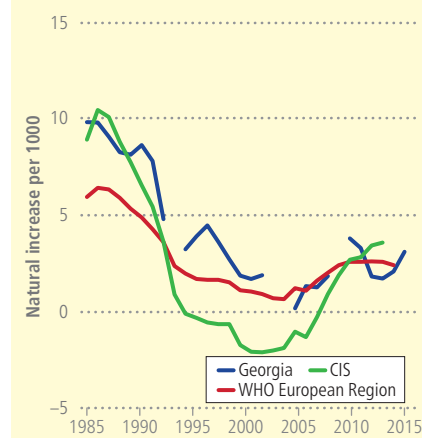
Fig. 7. **Urban and rural population,** Georgia, 2002 and 2014
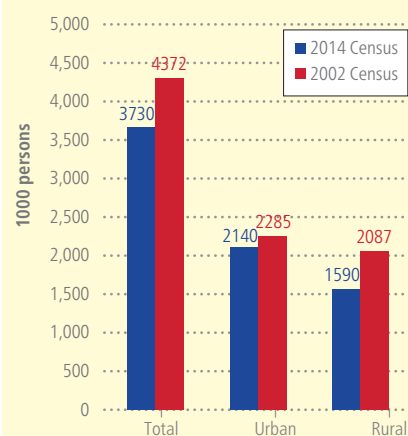
Source: National Statistics Office of Georgia *(9)*.

Health status and burden of disease

Fig. 8. **Life expectancy at birth for males,** Georgia, WHO European Region and CIS, 1985–2014
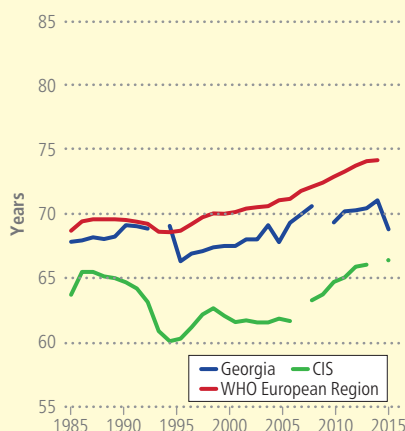
Fig. 9. **Life expectancy at birth for females,** Georgia, WHO European Region and CIS, 1985–2014
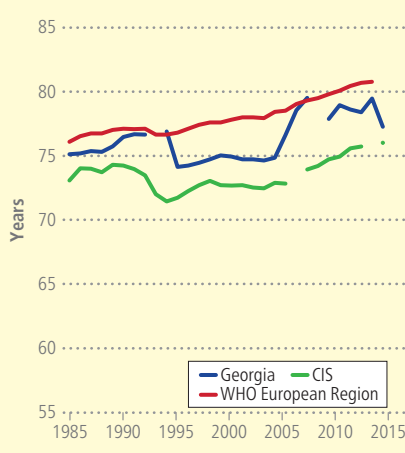
As described above, the trends reported in this section were likely influenced by the recent changes in recorded population size and improvements to Georgia's data registration systems such as death and birth registries (5). Where possible, absolute values are included to provide additional information for the interpretation of long-term trends.

Life expectancy

Life expectancy at birth is defined as the average number of years that a newborn infant would live if prevailing patterns of mortality at the time of birth were to continue throughout his or her life.

Georgia has had one of the highest rates of life expectancy compared to the countries of the CIS. While life expectancy at birth has been increasing, a sharp drop occurred in 2014 due to the decrease in population as measured by the 2014 census. This means that the life expectancy calculation for prior years, which used the higher population recorded in the 2002 census, consequently produced higher life expectancy. The marked difference between 2014 and preceding years seems to appear in all life expectancy-related indicators (5).

In 2014, life expectancy at birth in Georgia was 68.8 years for males and 77.3 years for females (Figs. 8, 9). This was higher than the average for the CIS (66.4 years for males and 76.0 years for females) but lower than that for the European Region (74.2 years for males and 80.8 years for females, in 2013). The difference in life expectancy between females and males was 8.5 years in favour of females, which was larger than the difference in the European Region (6.7 years), but smaller than that in the CIS (9.7 years).

Life expectancy at 65 is defined as the average number of years a 65-year-old would expect to live based on prevailing mortality statistics. Georgia's rate reflects a trend similar to that for life expectancy at birth (Figs. 8, 9). Life expectancy at 65 in the country was 13.4 years for males and 16.9 years for females in 2014; the sharp

drop from 2013 rates (15.2 years for males and 18.8 years for females) was likely due to the change in population size determined in the 2014 census. This rate was lower than the average for the European Region (16.3 years for males and 19.9 years for females) (Figs. 10, 11); the most recent data for this indicator show a widening gap between Georgia and the European Region as a whole.

Healthy life expectancy and disability-adjusted life years

Healthy life expectancy summarizes mortality and nonfatal outcomes in a single measure of average population health. It has been used to compare health between countries and to measure changes over time *(12)*.

In Georgia, the estimated healthy life expectancy increased to 66.4 years for both sexes, 63.4 for males and 66.4 for females in 2015 *(13)*. This was lower than the estimated healthy life expectancy for the European Region in the same year *(14)*, which was 68.0 years for both sexes, 64.1 for males and 70.5 for females.

Morbidity

Comparable information on morbidity is more limited than on mortality. However, data are available in the HFA-DB on certain infectious diseases, cancers and mental disorders based on routine health reporting systems. The coverage, completeness and quality of these data vary between countries and over time, and comparisons should be interpreted with caution. Primary sources of data are diverse and include registries, surveillance systems and hospitals.

Infectious diseases and vaccinations

Hepatitis C

In 2015, within the framework of the hepatitis C elimination programme launched in April of that year, the National Center for Disease Control and Public Health (NCDC) in Georgia, in collaboration with the Centers for Disease Control and Prevention of the United States of America, conducted the first nationwide hepatitis C virus (HCV) serosurvey in the country *(5)*. According to the survey findings, 7.7% of the population was anti-HCV positive and 5.4% had the active infection (RNA positive).

Fig. 10. **Life expectancy at age 65 years for males,** Georgia, WHO European Region and CIS, 1985–2014
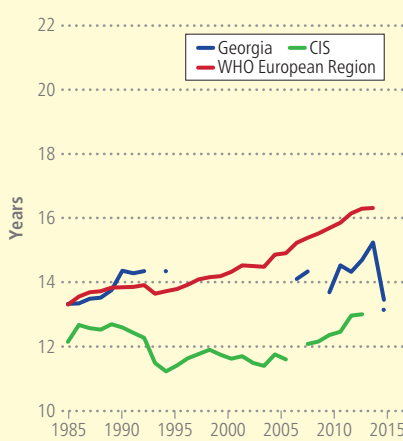
Fig. 11. **Life expectancy at age 65 years for females,** Georgia, WHO European Region and CIS, 1985–2014
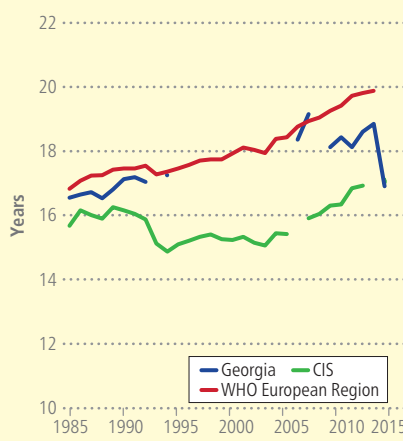
The major risk factors for hepatitis C were injecting drug use and blood transfusions. Around 38.2% of antibody-positive study participants had mentioned injecting drug use, and 19.7% had mentioned blood transfusions *(5)*. Almost half of the participants (46.7%) had not reported either of these two risk factors *(5)*.

Currently, each person infected with hepatitis C has free access to the newest antiviral therapy (ART) *(5)*. However, while diagnostic costs are partially covered by the Government, the share of copayment depends on patients' socioeconomic status. To achieve the country's ambitious goals to eliminate hepatitis C and streamline efforts to strengthen the national response, Georgia developed a long-term strategy on hepatitis C for 2016–2020 *(15)*. This strategy covers awareness-raising among the population, surveillance, prevention, screening, diagnostics and treatment *(5)*.

Tuberculosis

Tuberculosis (TB) remains a public health concern in Georgia. According to the *Roadmap to implement the tuberculosis action plan for the WHO European Region 2016–2020 (16)* Georgia remains among the 18 high-priority countries for ending TB in the Region. This is despite the marked decreasing trend in notified TB cases over the past 10 years: from 104 cases per 100 000 in 2006 to 86 per 100 000 in 2014 (Fig. 12).

The high burden of anti-TB drug resistance is a key challenge for the national TB programme and the main obstacle for effective TB control in the country. In 2015, the prevalence of multidrug-resistant TB (MDR-TB) was 12% and 33% in new and previously treated TB cases, respectively *(17)*.

In 2015, pulmonary TB constituted 80% of new and relapse cases *(17)*. The successful treatment of the combined cohort of new and relapse cases is a representative marker of the overall performance of the national TB control programme. In 2005, the treatment success rate reached only 64.1%; in 2015, it reached 83% (2014 treatment enrolment cohort) *(17)*.

The treatment success rate among cases of MDR-TB declined in 2011–2015 from 54% to 43% (in 2009 and 2013 treatment enrolment cohorts, respectively). Such poor treatment outcomes are predominantly due to the high proportion of cases lost to follow-up, which was 34.3% in 2015 (2013 treatment enrolment cohort). In 2011–2015,

Fig. 12. **Incidence of TB,** Georgia, WHO European Region and CIS, 1985–2014

multidrug resistance increased among new and previously treated cases, from 11% to 12% and from 32% to 33%, respectively *(17)*.

HIV

The overall rate of newly diagnosed HIV infections in Georgia has continued to increase over the last decade (Fig. 13) and is now among the highest in the Region.

The HIV epidemic in the country is largely concentrated among men who have sex with men, people who inject drugs and their female sexual partners *(5)*. Heterosexual transmission is the main reported transmission mode, accounting for 50% of newly reported cases in 2015 (Table 2).

The rate of new AIDS diagnoses has declined since 2011, but remains among the highest in the European Region and well above the Region's average (Fig. 14).

Georgia provides universal access to ART *(5)*. Since 2015, the country has implemented its "Treat All" strategy by offering ART to all diagnosed people living with HIV despite their immune status *(5)*.

As described above, in 2015 Georgia launched its ambitious plan for eliminating hepatitis C by 2021 and initiated a large-scale HCV testing programme. Within the national HIV and hepatitis C elimination programmes, the country decided to integrate HIV and HCV screening and provide tandem testing for both infections *(18,19)*. Tandem screening for HIV and HCV is also offered to all people who inject drugs and who use harm reduction services within the Global Fund to Fight AIDS, Tuberculosis and Malaria's HIV programme in Georgia *(18,19)*.

Fig. 13. **Incidence of HIV,** Georgia, WHO European Region and CIS, 1990–2014
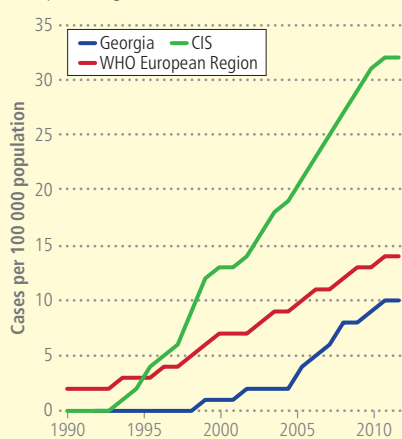
Fig. 14. **Incidence of AIDS,** Georgia, WHO European Region* and CIS, 1985–2014
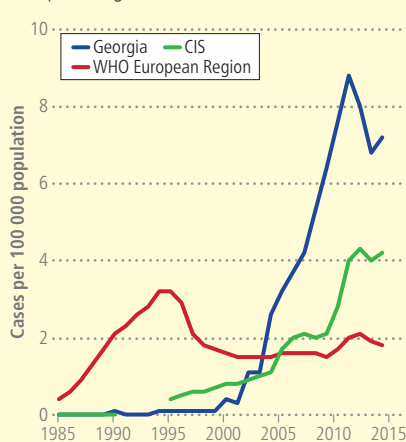
* No AIDS data are available from the Russian Federation.

Table 2. **HIV, percent distribution of new cases by mode of transmission,** Georgia, 2015

Mode of transmission	Percent
Injecting drug use	28.0
Heterosexual contacts	50.2
Homosexual contacts	19.8
Vertical transmission	0.8
Blood or blood products transfusion	0.6
Unidentified	0.6

Source: NCDC *(5)*.

Vaccine-preventable diseases and immunization

In Georgia, measles notification and epidemiological surveillance are obligatory. The country reported outbreaks of measles in 2004 and 2013, indicating the need for improved immunization programmes (Fig. 15). According to NCDC data *(5)*, the heaviest burden of morbidity is among those aged under 1 year and those aged 15–30 years.

Coverage of immunization against measles has increased in recent years, except for 2009 (Fig. 16). The decrease in 2009 can be explained by a long-time shortage of the vaccine in the country. In 2015, the coverage rate (97%) exceeded the 95% coverage level recommended by WHO to achieve elimination of measles.

Georgia introduced vaccinations against rotavirus, gastroenteritis and pneumococcal infection in 2013 and 2014 *(5)*. The country reported its last detection of wild poliovirus (polio) in 2001, and since 2002 has been certified as a polio-free country. In December 2015, within the framework of the Global Polio Eradication Initiative, Georgia introduced the hexavalent vaccine *(5)*. It also developed an action plan for the transition from the trivalent oral polio vaccine to the bivalent vaccine *(5)*. In recent years, coverage of immunization against polio has increased, although it reached only 89% in 2015 (Fig. 17).

All vaccinations included in the national vaccination calendar are free of charge for the population.

Fig. 15. **Incidence of measles,** Georgia, WHO European Region and CIS, 1990–2015

Fig. 16. **Percentage of children with measles vaccination,** Georgia, WHO European Region and CIS, 1985–2015

Fig. 17. **Percentage of children with polio vaccination,** Georgia, WHO European Region and the CIS, 1985–2015
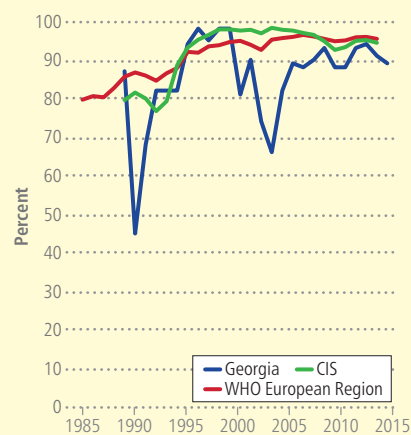
Fig. 18. **Incidence of cancer,** Georgia, WHO European Region and CIS, 1985–2014

Cases per 100 000 population

— Georgia — CIS
— WHO European Region

1985 1990 1995 2000 2005 2010 2015
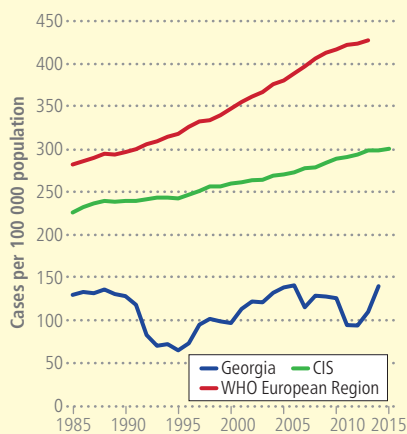
Fig. 19. **Incidence of malignant neoplasms,** Georgia, 2005–2015

Cases per 100 000 population

Introduction of the population-based cancer registry

2005 2007 2009 2011 2013 2015
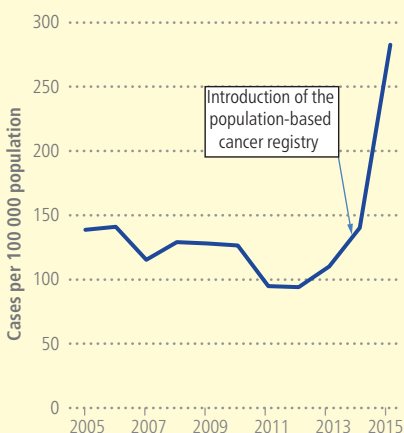
Source: NCDC *(5).*

Other diseases

The major causes of death in Georgia are related to noncommunicable diseases (NCDs) including circulatory diseases, cancer, diabetes and respiratory diseases. Due to the collapse of the registr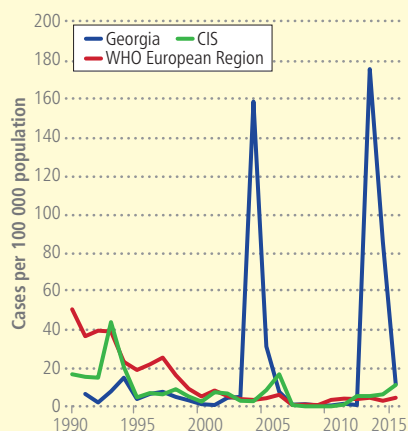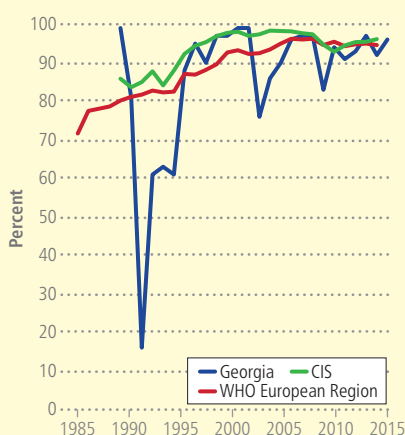ation system in the country, which interrupted surveillance of cases of some chronic diseases,[1] the availability of consistent data on malignant neoplasms and cancer morbidity in Georgia is limited *(20)*. Reported cancer incidence and mortality rates from malignant neoplasms in Georgia are therefore significantly lower than the average rates for both the CIS and the European Region (Fig. 18).

On 1 January 2015, Georgia established a population-based cancer registry in order to improve the epidemiological surveillance of cancer *(5)*. Following this, more than 9500 new cases of malignant neoplasms were registered in 2015, excluding non-melanoma skin cancers and cancers in situ *(5)*. In 2015, the incidence rate was 282.7 per 100 000 *(5)* (Fig. 19).

As in the rest of the European Region and the CIS, rates of diabetes mellitus have increased in Georgia in recent years. The 2014 rate (2.2%) was similar to the average for the CIS (2.3%) but lower than that for the European Region (3.8%, in 2013).

Infant and maternal mortality

The infant mortality rate in Georgia has declined over the past 10 years (Fig. 20). In 2014, it was 9.5 deaths per 1000 live births, which was higher than the Region's average (6.6 deaths per 1000 live births) and similar to that of the CIS (9.3 deaths per 1000 live births).

---

[1] Until 2007, a special dispensary surveillance system for patients with some chronic diseases, such as cancer, mental disorders (including alcohol and drug dependence), endocrine diseases and TB, was in place in Georgia. In 2003–2007, the country began replacing these dispensaries with integrated health care centres; introduced incentives for building private health care centres; and established a programme to provide private-practice medical services in rural settings. These reforms redistributed patients across primary health care facilities and, as a result, the monitoring of patients with some chronic diseases ceased. Georgia therefore introduced electronic systems for data capture and exchange, and established several registries.

Deaths per 1000 live births

Georgia   CIS
WHO European Region
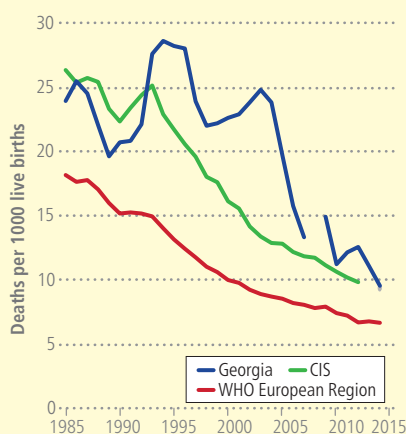
Georgia   CIS
WHO European Region

Deaths per 100 000 live births
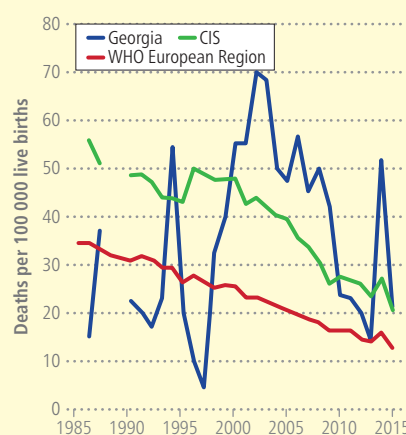
The maternal mortality rate in Georgia has fluctuated widely over the past decades (Fig. 21). In 2014, it was 31 deaths per 100 000 live births, which was higher than the average rates for both the European Region (12 deaths per 100 000 live births) and the CIS (17 deaths per 100 000 live births).

Reproductive-age mortality studies revealed significant improvements in the completeness of death registration for women of reproductive age over the past decade. This was determined to be 98% in 2012 *(21)*.

In 2016, the country implemented an electronic registration system for monitoring maternal and child health, and antenatal and obstetric services. This Electronic Module of Pregnant Women and Newborn Health Care (the "birth registry") *(22)* registers the first antenatal visit for each pregnant woman and each subsequent follow-up until childbirth or the end of pregnancy. The system also records information about the health status of newborns at the moment of delivery.

Leading causes of death

A comparison of countries' age-standardized mortality rates[2] highlights population differences in the most common causes of death, allowing for easier identification of preventable deaths. Yet the quality of cause-of-death data is of concern in Georgia, as a large proportion of causes of death are unrecorded due to the breakdown of civil registration system in the 1990s *(20)*. In addition, the share of ill-defined causes of death among all deaths in Georgia has been steadily increasing.

Experts used the WHO Analysing mortality levels and causes of death (ANACoD) tool *(23)* to review cause-of-death data and assess the quality of mortality statistics in the Georgian dataset reported to the WHO Mortality Database *(24)*. The results of the review showed that the proportion of ill-defined causes of death in overall reported causes was 37.6% in 2014; most of these are registered in ICD-10 Chapter XVIII: Symptoms, signs and abnormal clinical and laboratory findings. The fact that some deaths may not be captured in the dataset either because of

[2]   Age-standardized death rates are calculated by the direct method: that is, they represent what the crude rates would have been if the population had the same age distribution as the standard European population.

ill-defined causes of death or their not having been registered warrants caution in the interpretation of mortality indicators in Georgia.

Georgia's age-standardized mortality rate from all causes in 2014 (984.4 per 100 000) was slightly lower than the average for the CIS (1078.4 per 100 000), yet higher than the average for the European Region (738.2 per 100 000, in 2013). Quite alarmingly, there is a wide gender gap for this indicator: in 2014, the mortality rate for males (1310.7 per 100 000) was almost twice the rate for females (734.8 per 100 000).

As in most European countries, the major causes of mortality in Georgia are related to NCDs. According to WHO estimates, NCDs accounted for 93% of total deaths in Georgia for both sexes in 2014 *(25)*. Diseases of the circulatory system and malignant neoplasms were the leading causes of death for both overall and premature mortality (under 65 years) in Georgia in the same year (Fig. 22).

Georgia's mortality rate due to circulatory diseases has been cause for concern for years. Following the improvements in death registration in 2011, however, the rate for this indicator dropped significantly. In 2014, it was 386.1 deaths per 100 000, which was similar to the average for the European Region (332.7 per 100 000, in 2013) and lower than that for the CIS (602.2 per 100 000) (Fig. 23).

Fig. 22. **Mortality profile from main causes of death, age-standardized death rate per 100 000 population,** Georgia (2014), WHO European Region (2013) and CIS (2014)
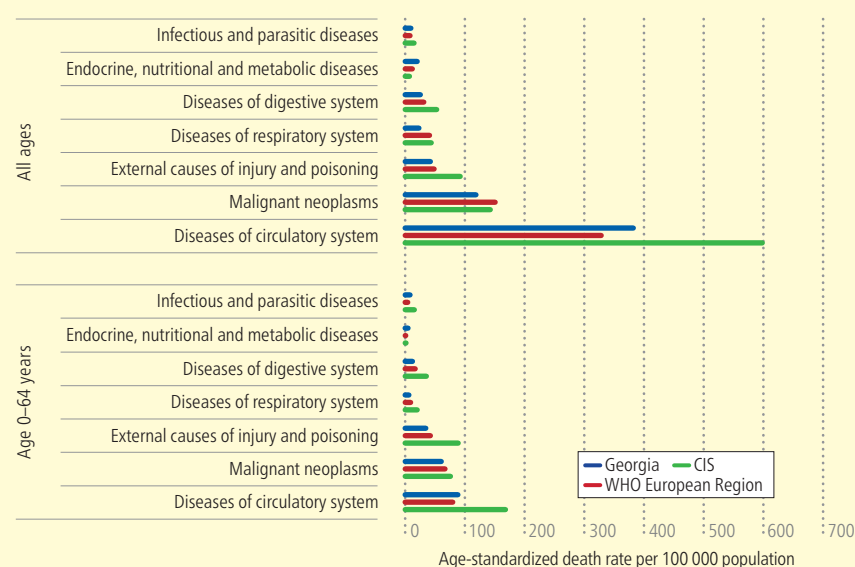
Fig. 23. **Age-standardized death rate from diseases of the circulatory system, all ages per 100 000 population,** Georgia, WHO European Region and CIS, 1985–2014
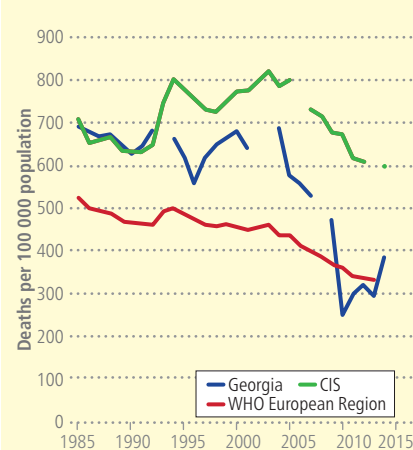
Other major causes of death

Georgia's age-standardized mortality rates from external causes of injury and poisoning, as well as diseases of the respiratory and digestive systems for all ages, are below the averages for the CIS and the Region. The age-standardized mortality rate from external causes and poisoning has fluctuated, but remains at the level of the late-1980s (Fig. 24).

The number of recorded deaths in motor vehicle accidents changed dramatically between 2012 and 2014; these changes are also attributed to the improvement of death registration in the civil registration system. Mortality rates from motor vehicle accidents among males (22.0 per 100 000) are about 4 times higher than among females (5.8 per 100 000). The overall mortality rate from motor vehicle accidents is higher than the average rate for the European Region (Fig. 25).

In 2014, the age-standardized mortality rate from homicides and intentional injuries for all ages (2.1 per 100 000) was far below the average for the CIS (7.4 per 100 000) and closer to that for the European Region (2.9 per 100 000, in 2013) (Fig. 26). In the same year, it was almost three times higher for males (3.2 per 100 000) than for females (1.2 per 100 000).

The mortality rate from respiratory system diseases in 2014 (27 per 100 000) was very low compared to the European Region (45 per 100 000, in 2013) and the CIS (48 per 100 000) (Fig. 27).

Fig. 24. **Age-standardized death rate from external causes of injury and poisoning, all ages per 100 000 population,** Georgia, WHO European Region and CIS, 1985–2014

Fig. 25. **Age-standardized death rate from motor vehicle traffic accidents, all ages per 100 000 population,** Georgia, WHO European Region and CIS, 1985–2014
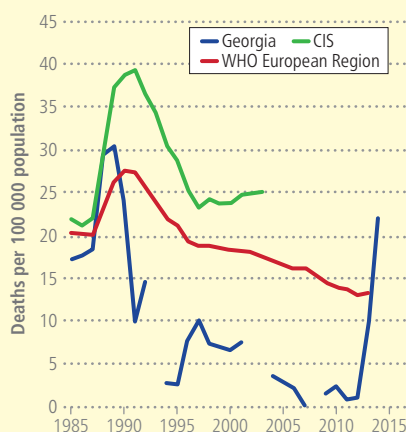
Fig. 26. **Age-standardized death rate from homicides and intentional injuries, all ages per 100 000 population,** Georgia, WHO European Region and CIS, 1985–2014
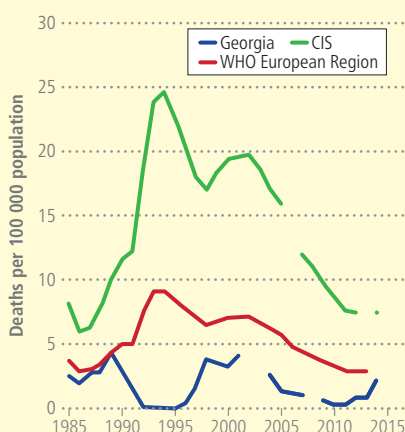
Fig. 27. **Age-standardized death rate from respiratory system diseases, all ages per 100 000 population,** Georgia, WHO European Region and CIS, 1985–2014
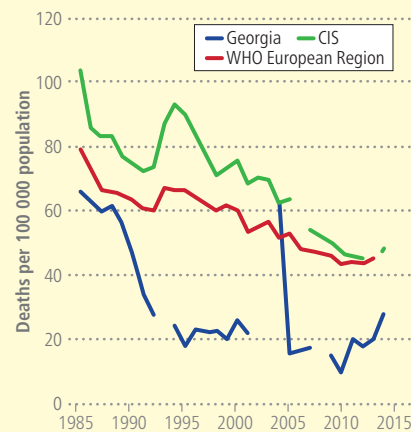
In 2014, the age-standardized mortality rate from diseases of the digestive system (29.3 per 100 000) was lower than the Region's average (35.2 per 100 000) and that of the CIS (56.9 per 100 000) (Fig. 28).

The mortality rate due to endocrine diseases increased over the last decade to 24.3 per 100 000 in 2014 (Fig. 29). Diabetes was responsible for the largest share of all deaths attributed to endocrine diseases (Fig. 30).

The age-standardized mortality rate from infectious and parasitic diseases in Georgia has been increasing since 2010, and reached 13.9 per 100 000 in 2014. The improved registration of deaths and coding of underlying causes of death could explain this. The 2014 rate was slightly higher than the average for the European Region (12.3 per 100 000, in 2013), yet much lower than that of the CIS (19.3 per 100 000).

Mortality from TB in 2014 was 2.8 per 100 000, and has slowly decreased since the 1990s (Fig. 31).

Annex 2 presents selected causes of mortality, comparing the percentage of change from 2000 to the latest available year in Georgia (2014) with the averages for the European Region (2013) and the CIS (2014).
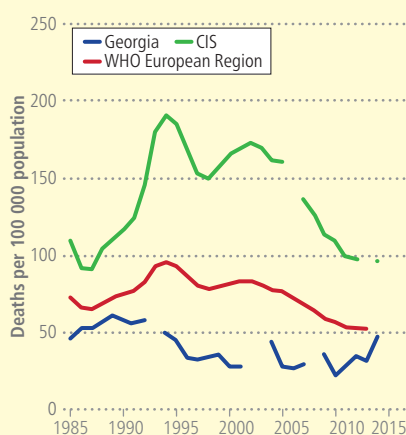

Fig. 28. **Age-standardized death rate from digestive system diseases, all ages per 100 000 population,** Georgia, WHO European Region and CIS, 1985–2014
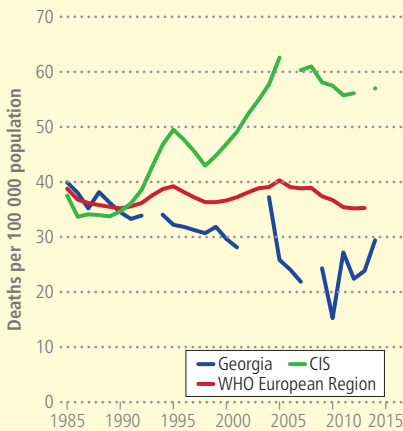
Fig. 29. **Age-standardized death rate from endocrine, nutritional and metabolic diseases, all ages per 100 000 population,** Georgia, WHO European Region and CIS, 1985–2014
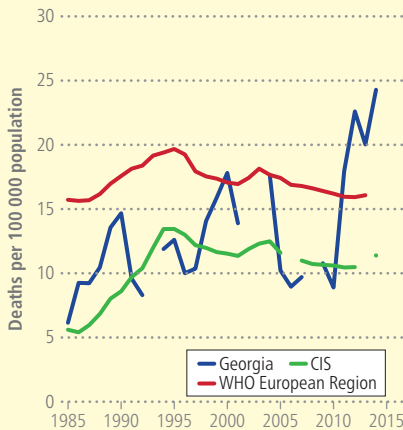
Fig. 30. **Age-standardized death rate from diabetes, all ages per 100 000 population,** Georgia, WHO European Region and CIS, 1985–2014
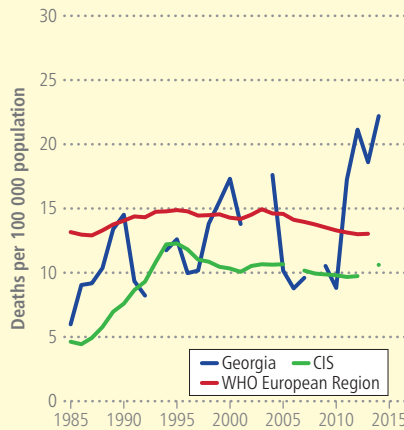
Fig. 31. **Age-standardized death rate from TB, all ages per 100 000 population,** Georgia, WHO European Region and CIS, 1985–2014
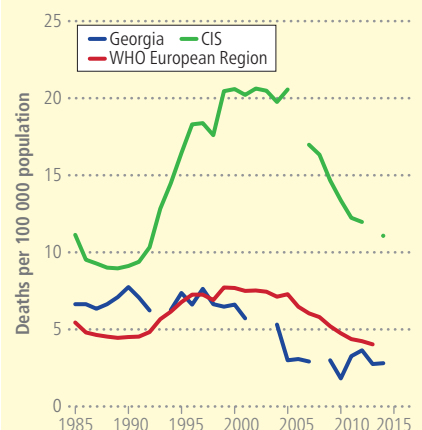
Premature mortality

In Georgia, the lowest age-standardized all-causes premature mortality rates for both sexes was registered in 2001 (298.4 per 100 000). Between 2001 and 2014, the mortality rate (380.2 per 100 000) increased by 27%. This change might be explained by the improvements in the vital registration system as well as the changes in recorded population size after the 2014 census. The rate in Georgia was 33.2% higher than the Region's average (285.4 per 100 000, in 2013), yet lower than the average for the CIS (483.7 per 100 000). Furthermore, there is a large gender gap in all-cause premature mortality: in 2014 the mortality rate for males (580.5 per 100 000) was much higher than for females (207.8 per 100 000) (Fig. 32, 33).

A large share of premature deaths from cardiovascular diseases, cancer and accidents are influenced by health-related behaviours and risk factors. These can be addressed with treatments and health promotion and prevention measures, but their impact is more challenging to clearly ascertain in analyses of trends of premature mortality.

In 2014, the share of mortality due to major NCDs among those aged 30–69 years made up 43% of all causes of death in all ages. This is a core indicator of both Health 2020 and the Sustainable Development Goals. The large differences between the reported rates for Georgia (618.9 per 100 000 for males and 262.9 per 100 000 for females) and the

Fig. 32. **Age-standardized death rate from all causes, males aged 0–64 years per 100 000 population,** Georgia, WHO European Region and CIS, 1985–2014
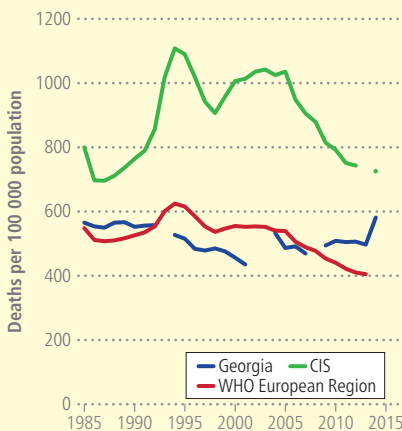
Fig. 33. **Age-standardized death rate from all causes, females aged 0–64 years per 100 000 population,** Georgia, WHO European Region and CIS, 1985–2014
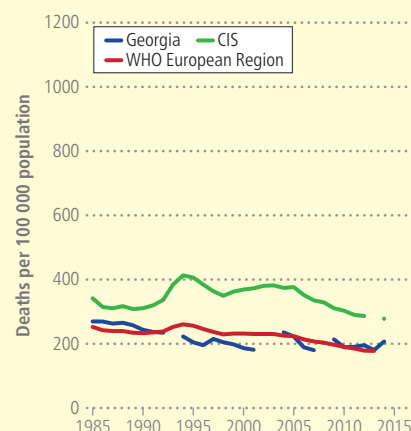
CIS (972.0 per 100 000 for males and 409.9 per 100 000 for females) indicate possible problems in the identification of underlying causes of death in Georgia (Fig. 34, 35). The trends in the disease groups below must therefore be interpreted with caution.

Premature mortality (0–64 years) from diseases of the circulatory system has decreased in most European countries in recent decades, including Georgia. In 2014, the rate for males in Georgia was 151.7 per 100 000, which was slightly higher than the average for the European Region (127.9 per 100 000, in 2013) and lower than that for the CIS (268.4 per 100 000). The rate for females (42.3 per 100 000) was similar to the Region's average (45.8 per 100 000, in 2013) and lower than that for the CIS (92.8 per 100 000). This indicator displays a significant gender gap: in 2014, premature mortality from diseases of the circulatory system for males (151.7 per 100 000) was much higher than for females (42.3 per 100 000) (Fig. 36, 37).

Mortality rates for premature deaths from ischaemic heart disease in Georgia have declined for both males and females since 2000. In 2014, they reached 50.7 per 100 000 for males and 9.3 per 100 000 for females. These were lower than the average rates for the European Region (65.5 per 100 000 for males and 18.0 per 100 000 for females, in 2013) and the CIS (143.3 per 100 000 for males and 39.6 per 100 000 for females).

Fig. 34. **Age-standardized death rate from major NCDs, males aged 30–69 years per 100 000 population,** Georgia, WHO European Region and CIS, 1985–2014

Fig. 35. **Age-standardized death rate from major NCDs, females aged 30–69 years per 100 000 population,** Georgia, WHO European Region and CIS, 1985–2014

Fig. 36. **Age-standardized death rate from diseases of the circulatory system, males aged 0–64 years per 100 000 population,** Georgia, WHO European Region and CIS, 1985–2014

Fig. 37. **Age-standardized death rate from diseases of the circulatory system, females aged 0–64 years per 100 000 population,** Georgia, WHO European Region and CIS, 1985–2014
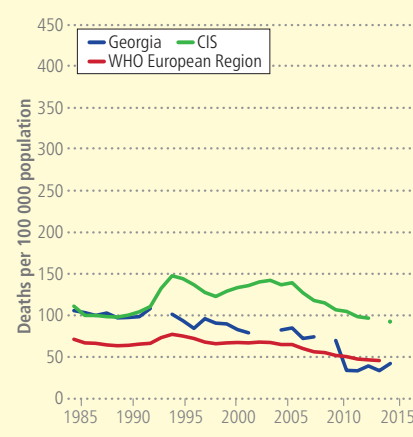
The mortality rate for premature deaths from cerebrovascular diseases has declined by more than half for both males and females since 2000. In 2014, the age-standardized mortality rate for males (31.9 per 100 000) was still higher than the average for the European Region (24.7 per 100 000, in 2013) but lower than that of the CIS (54.6 per 100 000). In the same year, the rate for females (12.7 per 100 000) was closer to the Region's average (12.5 per 100 000, in 2013) and lower than that of the CIS (25.4 per 100 000).

The mortality rate for premature deaths from malignant neoplasms in males has increased since 2000, and in 2014 reached 81.8 per 100 000. This was lower than the average rates for both the CIS (101.9 per 100 000) and the European Region (86.2 per 100 000, in 2013) (Fig. 38). Premature mortality due to malignant neoplasms for females declined to 50.9 per 100 000 in 2014, which was also lower than the averages for the European Region (57.4 per 100 000, in 2013) and the CIS (63.1 per 100 000) (Fig. 39).

In 2014, the premature mortality rate due to malignant neoplasms for males from cancers of the trachea, bronchus and lung (23.0 per 100 000) was responsible for about one quarter of males' cancer deaths in Georgia (Fig. 40). This rate was close to the average for the European Region (25.4 per 100 000, in 2013). The corresponding rate for females decreased over the same period to reach 2.3 per 100 000 in 2014; this might be explained by low smoking rates among females.
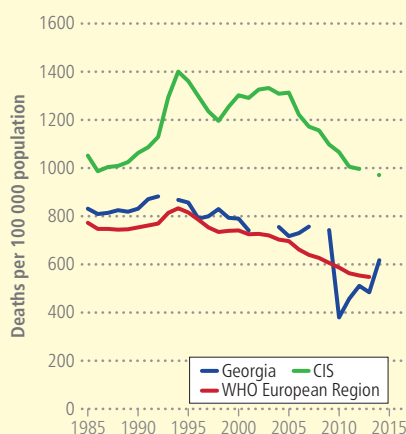
Fig. 38. **Age-standardized death rate from malignant neoplasms, males aged 0–64 years per 100 000 population,** Georgia, WHO European Region and CIS, 1985–2014
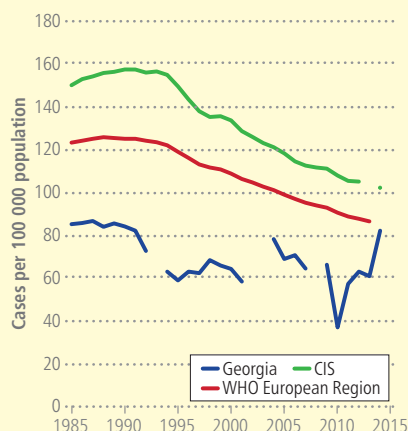
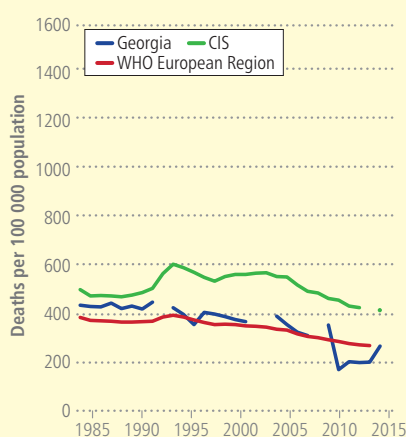Fig. 39. **Age-standardized death rate from malignant neoplasms, females aged 0–64 years per 100 000 population,** Georgia, WHO European Region and CIS, 1985–2014
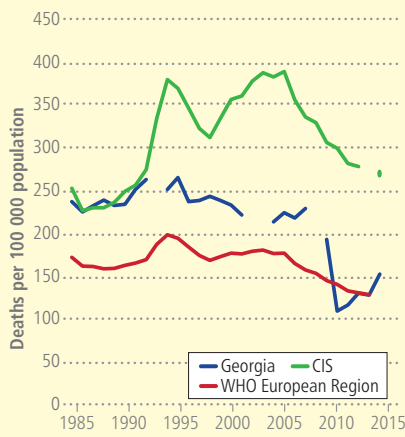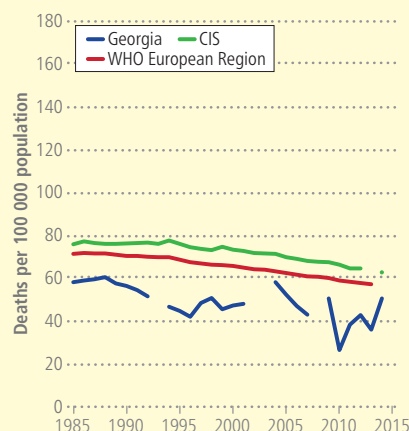

Fig. 40. **Age-standardized death rate from trachea, bronchus and lung cancer, males aged 0–64 years per 100 000 population,** Georgia, WHO European Region and CIS, 1985–2014
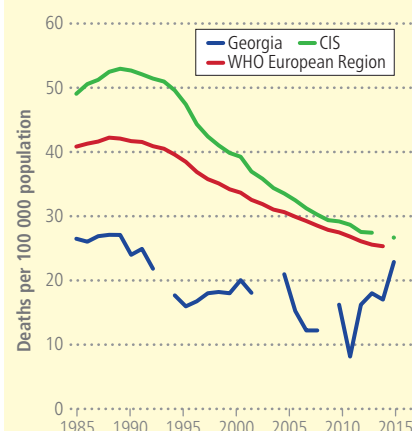
Premature mortality due to female breast cancer was responsible for 27% of all premature cancer deaths among females in Georgia in 2014.

Premature mortality due to female breast and cervix uteri cancers decreased significantly between 2000 and 2006; this was also the period of the sharp decline in death registration by the civil registration and vital statistics system. After 2006, the rates for the two indicators began increasing, although both show volatility in trends. Some of this increase can also be attributed to the introduction of the state screening programme in 2011 *(5)*.

Premature mortality due to female breast cancer reached 13.7 per 100 000 in 2014, which was lower than the average for the European Region (12.3 per 100 000) and similar to that of the CIS (13.5 per 100 000) (Fig. 41). The premature mortality due to cervix uteri cancer in the same year was 5.1 per 100 000, which was higher than the average for the European Region (3.4 per 100 000, in 2013) and slightly lower than that for the CIS (5.9 per 100 000) (Fig. 42).

Fig. 41. **Age-standardized death rate from female breast cancer, 0–64 years per 100 000 population,** Georgia, WHO European Region and CIS, 1985–2014
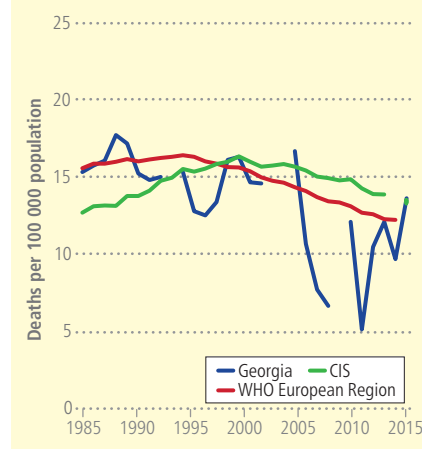
Fig. 42. **Age-standardized death rate from cancer of the cervix uteri, 0–64 years per 100 000 population,** Georgia, WHO European Region and CIS, 1985–2014
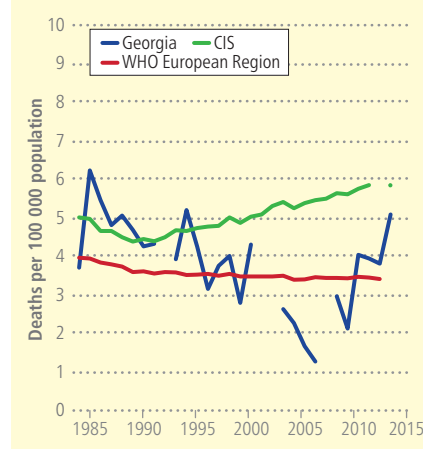
Risk factors and determinants of health

Several factors, including genetics, physical and social environments, and health behaviour, affect the health and well-being of individuals and the population. Risk factors such as unhealthy diets, low physical activity, smoking and heavy alcohol consumption are linked to elevated blood pressure, high serum cholesterol and overweight. These risk factors contribute to premature mortality from cardiovascular diseases and cancers in particular, the two main causes of death in Europe. Risk factors also contribute to a wide range of other chronic illnesses and thus affect the quality of life in general (2).

In Georgia, there are no regularly conducted population surveys to assess the prevalence of health risk factors such as tobacco, alcohol and illicit drug consumption, obesity, low physical activity and poor nutrition. Developing a good level of understanding of these risk factors and identifying measures to reduce their influence is essential to acting against the leading causes of mortality and morbidity.

Georgia implemented the WHO STEPwise approach to surveillance (STEPS) survey (26) in 2010 and 2016 (27,28) to obtain core data on the established risk factors that determine the major disease burden among the population aged 18–69 years.

Fig. 43. **Pure alcohol consumption, recorded litres per capita among those aged 15 years and over,** Georgia, WHO European Region and CIS, 1990–2014
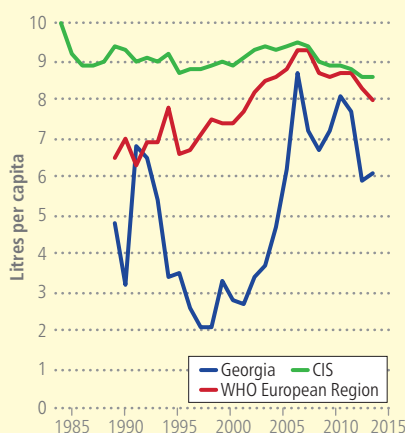
Alcohol consumption

The consumption of alcohol is measured as the recorded amount of alcohol consumed per adult aged 15 years or more over a calendar year in a country, in litres of pure (100%) alcohol.[3]

In 2014, the recorded alcohol consumption per capita for the adult population in Georgia was around 6.1 litres (Fig. 43). This was lower than the averages for both the European Region (8.6 litres) and the CIS (8.0 litres).

Although sales figures do not cover the unrecorded consumption of alcohol, the WHO Global Health Observatory estimates that the unrecorded consumption of alcohol in Georgia is moderate: 2.3 litres per capita in 2010 (29).

[3]   Measurements are based on sales figures among people aged 15 years and over.

Tobacco smoking

The percentage of regular daily smokers is measured among adults aged 15 years and over. Data on prevalence of smoking are obtained through surveys, so comparability of the data may be limited due to the different methods used. To increase the comparability of data, WHO has produced estimates of age-standardized tobacco use. In 2013, the estimated age-standardized prevalence of tobacco use in Georgia was 58.5% for males, which is one of the highest values in the European Region (where the average rate is 38.5%) and higher than the average for the CIS (51.8%). In contrast, only 5.8% of Georgian females are estimated to use tobacco – this is lower than the averages for both the European Region (20.7%) and the CIS (16.1%).

In 2015, Georgia conducted the European School Survey Project on Alcohol and Drugs to study alcohol, tobacco and other drug use among students *(30)*. It showed that 21% of students had tried smoking at the age of 13 years or younger (28% of boys and 13% of girls), and that 4% were daily smokers (6% of boys and 2% of girls).

Georgia has in recent years introduced several tobacco control measures. The Government developed a tobacco control strategy, an action plan for 2013–2018 and a state tobacco control programme, as well as a draft of legislative changes to bring tobacco control measures similar to international and national legislation mandates and to initiate a large-scale anti-tobacco campaign *(31)*. It also developed a national health promotion strategy for 2014–2019 and a health promotion programme with a tobacco control component *(31)*.

Overweight

In 2014, 56% of females and 54% of males in Georgia were overweight (body mass index of 25 or more), representing a slight increase since 2010 for both sexes. The prevalence of obesity (body mass index of 30 or more) also increased between 2010 and 2014. More females (24%) were obese than males (18%) in 2014. Georgia's prevalence of overweight and obesity are similar to the Region's averages for females (55% are overweight and 25% are obese), but lower than its average for males (63% are overweight and 21% are obese).

Comparative risk assessment

WHO estimates for the number of disability-adjusted life years (DALYs) attributable to selected risk factors only apply at the regional level. For this reason, estimates produced by the Institute for Health Metrics and Evaluation, which are available at the country level, are used here *(32,33)*. The Institute estimates that the highest burden of disease in Georgia is caused by dietary risks, followed by high systolic blood pressure. Estimates of the top 10 risk factors and the associated burden of disease measured in DALYs for Georgia are given in Table 3, disaggregated by sex.

Table 3. **Top 10 risk factors and the associated age-standardized burden of disease,** Georgia, by sex, 2015

Risk factors	DALYs (average rate per 100 000 population)	
	Estimated value	**Uncertainty interval (lower and upper)**
Females		
Dietary risks	6109	(5205–7091)
High systolic blood pressure	5698	(4975–6428)
High body mass index	3260	(2224–4312)
High fasting plasma glucose	2625	(2177–3204)
High total cholesterol	1977	(1468–2609)
Air pollution	1831	(1340–2474)
Impaired kidney function	1181	(977–1409)
Tobacco smoke	1036	(855–1237)
Child and maternal malnutrition	714	(502–990)
Low physical activity	614	(441–790)
Males		
Dietary risks	11 412	(9860–13 006)
High systolic blood pressure	10 253	(9105–11 353)
Tobacco smoke	8433	(7377–9499)
High body mass index	4840	(2971–6627)
High fasting plasma glucose	3742	(3150–4456)
High total cholesterol	3712	(2928–4642)
Air pollution	3684	(2799–4833)
Alcohol and drug use	3503	(3001–3994)
Impaired kidney function	1432	(1184–1692)
Low physical activity	1124	(765-1489)

Source: Institute for Health Metrics and Evaluation *(32).*

Health system

The key indicators for the health system in 2014 are shown in Table 4. The number of hospital beds in Georgia fell between 2000 and 2014; in 2014, the rate was much lower than the averages for both the European Region and the CIS.

The number of physicians has been increasing since 2006 and is notably higher than the averages for the European Region and CIS (Fig. 44). In contrast, the number of nurses has been decreasing since 1998 and is much lower than the averages for the European Region and the CIS (Fig. 45).

WHO's estimate for total health expenditure in Georgia as a percentage of GDP has increased. It reached 7.4% in 2014, which was higher than the averages for both the European Region and the CIS. WHO's estimate of the country's public sector health expenditure as a percentage of total health expenditure was 21% in 2014, which was much lower than the averages for the European Region and the CIS.

Table 4. **Key indicators for health resources, use of health services and health expenditure,** Georgia, WHO European Region and CIS, 2014

Indicator	Georgia, 2014	Percent change since 2000	WHO European Region	CIS
Hospital beds per 100 000	313.3	−34.8%	553.9	715.7
Physicians per 100 000	517.0	+36.5%	322.3	309.98
Dentists per 100 000	57.7	+69.6%	53.4	33.2
Nurses per 100 000	413.6	−10.9%	740.4	622.3
Midwives per 100 000	16.3	−61.3%	39.9	45.2
Inpatient care discharges per 100	10.5	+125.8%	17.9	19.9
Average length of stay, all hospitals (days)	5.2	−48.6%	8.7	11.0
Outpatient contacts per person per year	3.5	+150.0%	7.6	8.9
Total health expenditure as percentage of GDP[a]	7.4	+6.9%	8.2	6.6
Total health expenditure, PPP (US$) per capita[a]	627.7	+274.9%	2574.7	1233.1
Public-sector health expenditure as percentage of total health expenditure[a]	20.9	+23.1%	67.9	51.1
Private household out-of-pocket payments as percentage of total health expenditure	58.6	−29.0%	26.6	46.2

[a] WHO estimates.
Source: WHO HFA-DB *(4).*

WHO's estimate of Georgia's total health expenditure in PPP (US$) per capita in 2014 was below the averages for the European Region and the CIS. Georgia's rate of private household out-of-pocket expenditure is one of the highest in the Region: in 2014, it represented 58.5% of total health expenditure.

A detailed description of the country's health system is available in *Georgia: health system review (20)*.

Fig. 44. **Physicians per 100 000 population,** Georgia, WHO European Region and CIS, 1985–2014
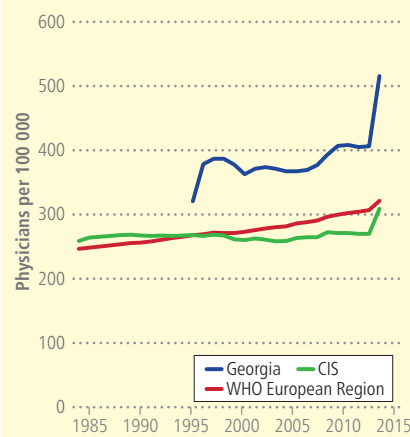
Fig. 45. **Nurses per 100 000 population,** Georgia, WHO European Region and CIS, 1985–2014
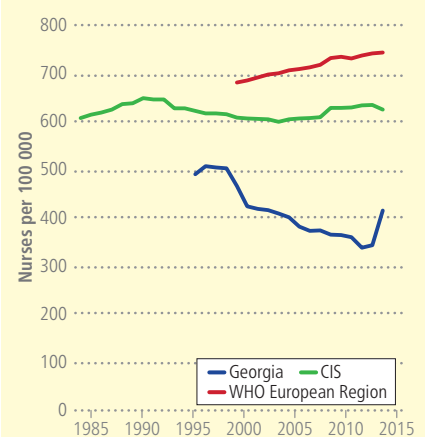
Health 2020

Health 2020, the health policy of the Region, aims to support action across government and society to improve the health and well-being of populations, reduce health inequalities, strengthen public health and ensure people-centred health systems that are universal, equitable, sustainable and of high quality *(2)*. Member States of the European Region have agreed on a set of core indicators to monitor progress towards the Health 2020 policy targets *(3)*.

The newly revised country profiles of health and well-being and accompanying highlights on health and well-being constitute a country-by-country means of reporting progress towards achieving the overarching targets of Health 2020. For Georgia, the Health 2020 indicators are given in Table 5.

Target 1. Reduce premature mortality by 2020

The age-standardized premature mortality rate from the four major NCDs (cardiovascular diseases, cancer, diabetes mellitus and chronic respiratory diseases) among people aged 30 to under 70 years in Georgia decreased to 422.3 per 100 000 in 2014. This was lower than the average for the CIS (652.0 per 100 000) and the European Region (395.5 per 100 000, in 2013). Moreover, premature mortality from the four major NCDs in 2014 was much higher for males (618.9 per 100 000) than for females (262.9 per 100 000).

Age-standardized mortality from external causes of injury and poisoning is below the averages for both the European Region and the CIS. However, the death rate among males is 3.7-fold higher than among females.

In Georgia, the recorded alcohol consumption in 2014 was lower than the averages for the European Region and the CIS. The prevalence of tobacco smoking among males was higher than that of the Region. As in the rest of the Region, the prevalence of overweight and obesity has been increasing in Georgia, reaching 55% in 2014; this was similar to averages for both the European Region and the CIS.

Over the last decade, the child immunization coverage for measles, polio and rubella has increased, and yet the coverage for polio in 2015 was still lower than the averages for the European Region and the CIS.

Table 5. **Core indicators for monitoring Health 2020 policy targets,** Georgia, most recent years available

Target	Indicator	Value			Year
		Male	Female	Total	
1. Reduce premature mortality[a]	Premature mortality rate from cardiovascular diseases, cancer, diabetes mellitus and chronic respiratory diseases among people aged 30 to under 70 years (age-standardized)	618.9	262.9	422.3	2014
	Prevalence of tobacco use among adults aged 15 years and over (age standardized)[b]	58.5	5.8	30.0	2013
	Pure alcohol consumption per capita among adults aged 15 years and over (recorded data)	–	–	6.1	2014
	Prevalence of overweight and obese (body mass index ≥25) adults aged 18 years and over (age-standardized estimate)	54.0	56.0	55.0	2014
	Mortality rate from external causes of injury and poisoning, all ages (age-standardized estimate)	76.0	21.0	46.0	2014
2. Increase life expectancy	Life expectancy at birth, in years	68.8	77.3	73.1	2014
3. Reduce inequities[c]	Infant deaths per 1000 live births	10.1	8.9	9.5	2014
	Proportion of children of official primary school age not enrolled (net enrollment rate)	3.8	2.7	3.3	2013
	Unemployment rate (percentage)	–	–	12.4	2014
	National policy addressing reduction of health inequities established and documented	NA	NA	Yes, but only partially	2016
	Gini coefficient	NA	NA	40.0	2013
4. Enhance well-being[d]	Overall life satisfaction among adults aged 15 years and over (33)	NA	NA	4.3	2014
	Availability of social support among adults aged 50 years and over (34)	–	–	43.0	2013
	Percentage of population with improved sanitation facilities	–	–	86.3	2015
5. Ensure universal coverage and "right to health"	Private household out-of-pocket expenditure as proportion of total health expenditure	NA	NA	58.6	2014
	Percentage of children vaccinated against measles (1 dose)	–	–	96.0	2015
	Percentage of children vaccinated against polio (3 doses)	–	–	89.0	2015
	Percentage of children vaccinated against rubella (1 dose)	–	–	96.0	2015
	Total health expenditure as a percentage of GDP	NA	NA	7.4	2014
6. Set national targets	Establishment of process for target-setting documented	NA	NA	Yes	2016
	Evidence documenting: (a) national health strategy aligned with Health 2020 (b) implementation plan (c) accountability mechanism	NA NA NA	NA NA NA	Yes No Yes, but only partially	2016 2016 2016

NA: not applicable.
[a] Target 1 includes percentage of children vaccinated against measles (1 dose), polio (3 doses) and rubella (1 dose).
[b] Prevalence includes both daily and occasional (less than daily) use among adults aged 15 years and over.
[c] Target 3 includes life expectancy at birth.
[d] Target 4 includes Gini coefficient, the unemployment rate and the proportion of children not enrolled in primary school.
Source: WHO HFA-DB (4) unless otherwise specified.

Target 2. Increase life expectancy

Life expectancy at birth in Georgia in 2014 was 68.8 years for males and 77.3 years for females – lower than in previous years. However, this lower value is likely due to the drop in population size determined by the 2014 population census. As discussed above, this change in population size in 2014 resulted in lower values for all population-based health indicators for that year. If the National Statistics Office retrospectively corrects population size for preceding years based on the 2014 census, the indicator trends will be corrected to a uniform population denominator.

Target 3. Reduce inequalities in health (social determinants target)

Georgia has made gains in closing the gaps in children's health status. In 2014, infant mortality rates were 10.1 per 1000 live births for boys and 8.9 per 1000 live births for girls; both have steadily decreased since 2003. However, infant mortality rates in 2014 remained higher than the rates for the CIS and the Region.

Since 2000, the country has also made some improvements in the proportion of children of official primary school age not enrolled; this indicator decreased to 3.8% for boys and 2.7% for girls in 2013.

Unemployment is an indicator measuring the target of reducing inequities (1). Georgia's unemployment rate increased to 12.4% in 2014, which was higher than the averages for both the European Region (9.1%) and the CIS (5.5%).

The measure of income inequality (Gini coefficient) has remained steady since 2000, and was 40.0 in 2013. This was higher than the averages for the European Region (33.4) and the CIS (35.1, in 2012). Georgia's unemployment and Gini coefficient rates highlight the need for a national policy to effectively tackle inequalities in the country.

Target 4. Enhance the well-being of the population

Well-being, as monitored by a set of indicators, is a relatively new construct, and further country data is required for adequate trend analysis. Data from the Gallup World Poll for 2014, obtained through

the United Nations Development Programme's Human Development Report *(33)*, give Georgia an overall life satisfaction index of 4.3 on a scale from zero (least satisfied) to 10 (most satisfied). This is lower than the average for the European Region (5.9) *(33)*.

Among people aged 50 years and above, 43% of Georgians reported in 2013 that they had relatives or friends on whom they could count when in trouble. This was much lower than the average for the European Region (86%).

As of 2015, 86.3% of both urban and rural populations in Georgia had access to a sewage system, septic tank or other hygienic means of sewage disposal. This has decreased since 2000 primarily due to the decline of improved sanitation facilities in rural areas, which was 75.9% in 2015. By contrast, the availability of improved sanitation facilities in urban areas was 95.2% in 2015.

Target 5. Ensure universal coverage and the "right to health"

Since 2013, Georgia has laid the foundation for health policy that is oriented towards public health and welfare *(5)*. In February 2013, it implemented a universal health care insurance programme to provide universal state-funded medical care *(35)*. More than 90% of the population takes part in the programme; the remaining 10% of the population has private medical insurance *(5)*.

The programme covers planned outpatient, emergency in- and outpatient services, elective surgeries, cancer treatments, obstetrical care and funding for essential drugs. This has improved access to health services and reduced financial barriers and out-of-pocket costs for the population *(5)*. The proportion of private household out-of-pocket expenditure has decreased since 2000, and was 58.6% in 2014. However, the 2014 expenditure was almost twice the average for the Region. This likely results in inequitable access to health care and financial hardship for many households – especially poorer households – which may in turn exacerbate poverty and have a negative impact on health.

WHO estimated that Georgia's total expenditure on health (as a percentage of GDP) slightly increased between 2000 and 2014 to 7.4%. This level of expenditure was close to the average for the CIS (6.6%) and slightly below the average for the European Region (8.2%).

According to a recent survey of the United States Agency for International Development *(36)*, 96.4% of beneficiaries of the universal health care programme in Georgia are satisfied or very satisfied with the emergency medical services at hospital level.

Target 6. Set national goals and targets related to health

In 2015, Georgia began establishing a process for target-setting in the health sector. The NCDC organized a multisectoral meeting to discuss national perspectives on Health 2020 targets and indicators *(5)*. It focused on the alignment of national health services with Health 2020 targets, and the subsequent development of an implementation plan and an accountability mechanism in accordance with the recommendations of the Health 2020 policy framework. Policy-makers defined a national set of indicators to monitor progress towards the Health 2020 targets. The document has, however, not yet been formally adopted.

Conclusions

Although the health status of the Georgian population has steadily improved for a number of health indicators over the past two decades, some improvements have been relatively slow.

The main population health indicators show significant changes from the trends observed up to 2013 and in 2014, when a new population census was conducted. This 2014 census measured a large decrease in the size of population, which in turn caused a break in the trends of the main population health indicators whose calculation depends on the population denominator. Therefore, trends and values for 2014, the last-available year, must be interpreted with caution.

Despite improvements, the most recent data show some specific areas of concern in Georgia: a number of health indicators are worse than the averages for both the European Region and the CIS.

In terms of key indicators of health, Georgians are living longer lives. Fewer infants are dying, but levels of maternal mortality remain very high compared with other countries across the Region.

The majority of deaths in Georgia are due to major NCDs. The main causes of death are diseases of the circulatory system and malignant neoplasms (cancers), other NCDs, and external causes of injury and poisoning (accidents, suicides and homicides). Since 1990, overall premature mortality has been decreasing, although it is still high compared to the regional average.

Georgia introduced a population-based cancer registry in 2015 to improve the surveillance of cancer. A review of the latest data obtained from the registry indicates that it records more cancer cases than were known of before it was introduced. The cancer incidence rate derived from this registry is close to the average rates for both the European Region and the CIS.

Unlike many countries across the Region, Georgia faces ongoing challenges in the form of high levels of communicable diseases. The incidence of TB is decreasing but remains higher than the average for the Region; a high burden of MDR-TB is the major contributing factor. Data show rapid increases in incidences of HIV and AIDS since 2000. Georgia's HIV rate approached the average for the Region, but

due to late diagnoses its rate of new AIDS diagnoses (2006–2015) is considerably higher.

Overall, vaccination coverage is high for measles, rubella and polio. In 2009, a drop in measles vaccination coverage was followed by an outbreak. Since 2013, Georgia has implemented additional vaccination campaigns to address the epidemic. Georgia also has a very ambitious programme for eliminating hepatitis C. The NCDC is running programmes to address the burden of communicable disease.

The rate of physicians per 100 000 population is one of the highest in the Region. The number of nurses, however, is one of the lowest.

Between 2000 and 2010, Georgia's total health expenditure as a percentage of GDP was higher than the regional average, but has since decreased. At the same time, the total health expenditure in PPP (US$) per capita has stayed low compared to the Region's average. Georgia's major challenge in this area is the high share of private household out-of-pocket health expenditure. Out-of-pocket expenditure in the country is among the highest in the Region. Since 2013, as part of its efforts to lay the foundation for health policy that is oriented towards public health and welfare, Georgia has increased public sector expenditures on health.

The recorded alcohol consumption per capita among those aged 15 years and over has decreased over recent years. The most recent reported level of alcohol consumption was lower than the average rates for the European Region and the CIS. Georgia is among the European countries with the highest levels of tobacco use among males (estimated at 58.5% in 2013), which points to increased health risks among this group. Georgia has in recent years introduced several tobacco control measures, including a tobacco control strategy, an action plan for 2013–2018, a state tobacco control programme and a draft of legislative changes. These will bring tobacco control measures similar to international and national legislation mandates and contribute to the initiation of a large-scale anti-tobacco campaign in the country. In addition, Georgia has a national health promotion strategy for 2014–2019, which includes a health promotion programme with a tobacco control component.

Data on overall life satisfaction among adults aged 15 years and over, collected by the Gallup World Poll, show that Georgia's life satisfaction index is below the average for the Region.

There is cause for concern regarding inequality in Georgia, reflected in the country's higher-than-average Gini coefficient and proportion of children of official primary school age not enrolled, as well as its limited improvement in the unemployment rate. An effective policy is needed to tackle health inequities in the country.

Although the overall health situation has improved in Georgia in the past decades, the gaps between national figures and the averages for the Region, as described above, are still substantial for a large number of indicators.

The noticeable improvements in the national registration systems, however, are particularly encouraging. Georgia introduced systems for electronic data collection and exchange in several areas of the health information system, and established both the birth registry and the cancer registry. In addition, Georgia introduced measures to ensure more complete registration of deaths and improve quality of the causes-of-death data.

These measures will improve the coverage and quality of essential health information in the country, which will enhance overall understanding of the population's health challenges. The cancer registry in particular will help to improve the health of the population by supporting actions and informing policies on these illnesses that form one of the major causes of death in the country.

Population estimates still need to be adjusted based on the results of the 2014 population census. This will facilitate the analysis of changes within the country over time, as well as comparisons with neighbouring countries and those across the Region.

Of particular importance are Georgia's ongoing efforts to continue aligning national health policies with Health 2020 targets and goals. Sustained implementation of existing and planned health programmes, along with ongoing monitoring of changes in health trends, will allow Georgia to improve its health profile in the coming years. The continued adoption of this approach, supported by evidence-informed system reforms, will assist Georgia in becoming a healthier nation.

References

1. Health 2020: a European policy framework supporting action across government and society for health and well-being. Copenhagen: WHO Regional Office for Europe; 2012 (EUR/RC62/9; http://www.euro.who.int/en/about-us/governance/regional-committee-for-europe/past-sessions/sixty-second-session/documentation/working-documents/eurrc629-health-2020-a-european-policy-framework-supporting-action-across-government-and-society-for-health-and-well-being, accessed 11 August 2017).

2. Health 2020: a European policy framework and strategy for the 21st century [website]. Copenhagen: WHO Regional Office for Europe; 2013 (http://www.euro.who.int/en/publications/policy-documents/health-2020.-a-european-policy-framework-and-strategy-for-the-21st-century-2013, accessed 11 August 2017).

3. Targets and indicators for Health 2020: Version 3. Copenhagen: WHO Regional Office for Europe; 2016 (http://www.euro.who.int/en/health-topics/health-policy/health-2020-the-european-policy-for-health-and-well-being/publications/2016/targets-and-indicators-for-health-2020.-version-3-2016, accessed 11 August 2017).

4. European Health for All database (HFA-DB) [online database]. Copenhagen: WHO Regional Office for Europe; 2016 (https://gateway.euro.who.int/en/hfa-explorer/, accessed 11 August 2017).

5. Health care statistical yearbook 2015: Georgia [e-book]. Tbilisi: National Centre for Disease Control and Public Health of the Ministry of Labour, Health and Social Affairs of Georgia; 2017 (http://www.ncdc.ge/AttachedFiles/yearbook%20 2016_53210b52-12da-4279-9f27-f7a361c84c96.pdf, accessed 11 August 2017).

6. Tsuladze, G. Demographic yearbook of Georgia, 2013. Tbilisi: United Nations Population Fund Georgia; 2014 (http://iliauni.edu.ge/uploads/other/13/13240.pdf, accessed 11 August 2017).

7. Population by age and sex for the beginning of the year, 2014 [spreadsheet]. Tbilisi: National Statistics Office of Georgia; 2017 (http://geostat.ge/cms/site_images/_files/english/population/02%20 Population%20by%20age%20and%20sex%20for%20the%20 beginning%20of%20the%20year.xls, accessed 11 August 2017).

8. Migration: emigrants and immigrants by sex and age, 2016 [online database]. Tbilisi: National Statistics Office of Georgia; 2017 (http://geostat.ge/index.php?action=page&p_id=173&lang=eng, accessed 11 August 2017).

9. Preliminary results of 2014 general population census of Georgia, 2016. Tbilisi: National Statistics Office of Georgia; 2017 (http://geostat.ge/cms/site_images/_files/english/population/According%20to%20preliminary%20results%20of%20the%20 2014%20population%20census%20Final.pdf, accessed 11 August 2017).

10. Real gross domestic product, purchasing power parity (USD) per capita. European Health for All database (HFA-DB) [online database]. Copenhagen: WHO Regional Office for Europe; 2016 (https://gateway.euro.who.int/en/visualizations/line-charts/hfa_34-real-gross-domestic-product-ppp-per-capita/?=country:GEO;WHO_EURO;CIS, accessed 11 August 2017).

11. Total health expenditure as % of GDP, WHO estimates. European Health for All database (HFA-DB) [online database]. Copenhagen: WHO Regional Office for Europe; 2016 (https://gateway.euro.who.int/en/visualizations/line-charts/hfa_565-total-health-expenditure-as-of-gdp-who-estimates/?country=GEO;WHO_EURO;CIS, accessed 11 August 2017).

12. Global Health Observatory (GHO) data. Healthy life expectancy (HALE) at birth [website]. Geneva: World Health Organization; 2017 (http://www.who.int/gho/mortality_burden_disease/life_tables/hale/en/, accessed 11 August 2017).

13. Global Health Observatory (GHO) data repository. Healthy life expectancy (HALE). Data by country [website]. Geneva: World Health Organization; 2017 (http://apps.who.int/gho/data/view.main.HALEXv?lang=en, accessed 11 August 2017).

14. Global Health Observatory (GHO) data repository. Healthy life expectancy (HALE). Data by WHO region [website]. Geneva: World Health Organization; 2017 (http://apps.who.int/gho/data/view.main.HALEXREGv?lang=en, accessed 11 August 2017).

15. Strategic plan for the elimination of hepatitis C virus in Georgia, 2016–2020 Tbilisi: Ministry of Labour, Health and Social Affairs of Georgia; 2017 (http://www.moh.gov.ge/uploads/files/2017/akordeoni/failebi/Georgia_HCV_Elimination_Strategy_2016-2020.pdf, accessed 11 August 2017).

16. Roadmap to implement the tuberculosis action plan for the WHO European Region 2016–2020. Towards ending tuberculosis and multidrug-resistant tuberculosis (2016). Copenhagen: WHO Regional Office for Europe; 2016 (http://www.euro.who.int/en/health-topics/communicable-diseases/tuberculosis/publications/2016/roadmap-to-implement-the-tuberculosis-action-plan-for-the-who-european-region-20162020.-towards-ending-tuberculosis-and-multidrug-resistant-tuberculosis-2016, accessed 11 August 2017).

17. WHO Tuberculosis country profiles: Georgia. Geneva: World Health Organization; 2017 (https://extranet.who.int/sree/Reports?op=Replet&name=%2FWHO_HQ_Reports%2FG2%2FPROD%2FEXT%2FTBCountryProfile&ISO2=GE&LAN=EN&outtype=html, accessed 11 August 2017).

18. Georgian national HIV/AIDS strategy for 2016–2018. Tbilisi: Ministry of Labour, Health and Social Affairs of Georgia; 2017 (http://www.georgia-ccm.ge/wp-content/uploads/HIV-NSP-2016-20181.pdf, accessed 11 August 2017).

19. National Centre for Disease Control and Public Health, 2016. Tbilisi: National Centre for Disease Control and Public Heatlh of the Ministry of Labour, Health and Social Affairs of Georgia, 2017 (http://ncdc.ge/AttachedFiles/Brochure_2016_website_f8d37697-27e6-42b9-a676-7cfe6d204dc8.pdf, accessed 11 August 2017)

20. Chanturidze T, Ugulava T, Durán A, Ensor T, Richardson E. Georgia: health system review. Health Systems in Transition 2009;11(8):1–116 (http://www.euro.who.int/en/about-us/partners/observatory/publications/health-system-reviews-hits/full-list-of-country-hits/georgia-hit-2009, accessed 11 August 2017).

21. Georgia reproductive age mortality study 2014. Executive summary. Tbilisi: National Centre for Disease Control and Public Heatlh of the Ministry of Labour, Health and Social Affairs of Georgia, 2017 (http://www.ncdc.ge/AttachedFiles/RAMOS%202014%20Ex%20Summary_ENG_a502747e-2c09-4f23-9e3f-3fb6ea56d444.pdf, accessed 11 August 2017).

22. A new electronic system for the maternal and newborn health surveillance is being introduced in Georgia [website]. Tbilisi: UNICEF Georgia; 2015 (http://unicef.ge/44/osrulta_da_akhalshobilta_janmrtelobis_metvalkureobis_akhali_sistema/352/lngeng, accessed 11 August 2017).

23. Analysing mortality levels and causes of death (ANACoD) electronic tool. Version 2.0. Geneva: World Health Organization; 2017 (http://www.who.int/healthinfo/anacod/en/, accessed 11 August 2017).

24. WHO Mortality Database [raw data files]. Geneva: World Health Organization; 2017 (http://www.who.int/healthinfo/statistics/mortality_rawdata/en/, accessed 11 August 2017).

25. Noncommunicable Diseases (NCD) Country Profiles: Georgia, 2014. Geneva: World Health Organization; 2014 (http://www.who.int/nmh/countries/geo_en.pdf, accessed 11 August 2017).

26. STEPwise approach to surveillance (STEPS). Geneva: World Health Organization; 2017 (http://www.who.int/chp/steps/en/, accessed 11 August 2017).

27. Georgia STEPS Survey 2010: Fact Sheet. Geneva: World Health Organization; 2017 (http://www.who.int/chp/steps/Georgia_2010_Fact_Sheet.pdf?ua=1, accessed 11 August 2017).

28. Georgia STEPS Survey 2016: Fact Sheet. Geneva: World Health Organization; 2017 (http://www.who.int/chp/steps/Georgia_2016_STEPS_FS.pdf?ua=1, accessed 11 August 2017).

29. Global Health Observatory (GHO) data [online database]. Geneva: World Health Organization; 2015 (http://www.who.int/gho/en/ , accessed 11 August 2017).

30. European School Survey Project on Alcohol and Other Drugs: Georgia Country Report, 2016. Tbilisi: National Centre for Disease Control and Public Health of the Ministry of Labour, Health and Social Affairs of Georgia; 2016 (http://ncdc.ge/AttachedFiles/ESPAD%202015%20Eng_ff90040a-5688-4d6d-8e66-87f2f4a5a41b.pdf, accessed 11 August 2017).

31. ჯანმრთელობის ხელშეწყობის ეროვნული სტრატეგია [National Health Promotion Strategy]. Tbilisi: Ministry of Labour, Health and Social Affairs of Georgia; 2014 (in Georgian).

32. Global Burden of Disease (GBD) results tool [website]. Seattle: Institute for Health Metrics and Evaluation; 2016 (http://ghdx.healthdata.org/gbd-results-tool, accessed 11 August 2017).

33. Human Development Reports. Human Development Index (HDI) [website]. New York: United Nations Development Programme; 2016 (http://hdr.undp.org/en/content/human-development-index-hdi, accessed 11 August 2017).

34. Global AgeWatch Index 2015. AgeWatch report card: Georgia [online database]. London: HelpAge International; 2016 (http://www.helpage.org/global-agewatch/population-ageing-data/country-ageing-data/?country=Georgia, accessed 11 August 2017).

35. Government of Georgia. 2015 წლის ჯანმრთელობის დაცვის სახელმწიფო პროგრამების დამტკიცების შესახებ [Universal health care programme 2015]. Tbilisi: Legislative Herald of Georgia; 2015 (https://matsne.gov.ge/ka/document/view/2891068, accessed 11 August 2017) (in Georgian).

36. Government of Georgia. On approval of the 2014–2020 state concept of health care system of Georgia for "universal health care and quality control for the protection of patients' rights". Tbilisi: Legislative Herald of Georgia; 2014 (https://matsne.gov.ge/en/document/view/2657250, accessed 11 August 2017).

Annex 1. ICD-10 codes for causes of death

Table A1. **ICD-10 codes for causes of death**

Cause of death	ICD-10 codes
Cancer of cervix uteri	C53
Cancer of female breast	C50
Cancer of trachea, bronchus and lung	C33–C34
Cerebrovascular diseases	I60–I69
Chronic liver disease and cirrhosis	K70, K73, K74, K76
Diseases of the circulatory system	I00–I99
Diseases of the digestive system	K00–K93
Diseases of the respiratory system	J00–J99
External causes of injury and poisoning	V00–V99, W00–W99, X00–X99, Y00–Y99
Homicide and intentional injury	X85–X99, Y00–Y09
Infectious and parasitic disease	A00–A99, B00–B99
Ischaemic heart disease	I20–I25
Malignant neoplasms	C00–C97
Motor vehicle traffic accidents	V02–V04, V09, V12–V14, V20–V79, V82, V87, V89
Suicide and self-inflicted injury	X60–X84
Symptoms, signs and ill-defined conditions	R00–R53, R55–R99
Tuberculosis	A15–A19, B90

Annex 2. Selected mortality data

Table A2 presents selected mortality data for total population by sex in Georgia compared to the WHO European Region and the Commonwealth of Independent States (CIS). The age-standardized death rate per 100 000 population and percentage changes from 2000 to the latest available year are outlined.

Table A2 **Selected mortality for total population by sex in Georgia,** 2014

Cause of death	Sex	Georgia (2014)		WHO European Region (2013)		CIS (2014)	
		Rate	Percent change since 2000	Rate	Percent change since 2000	Rate	Percent change since 2000
All causes	Both	984.4	+3.7%	738.2	−22.2%	1078.4	−22.0%
	M	1310.7	+6.0%	963.5	−23.3%	1477.0	−22.7%
	F	734.8	−2.7%	566.6	−21.3%	795.08	−21.1%
Infectious and parasitic diseases	M	23.5	+54.8%	17.1	−22.3%	29.8	−34.0%
	F	5.7	+19.1%	8.1	+6.2%	10.0	−5.8%
Malignant neoplasms	M	166.1	+34.3%	208.2	−14.6%	207.3	−16.2%
	F	92.5	+18.1%	118.0	−9.7%	111.2	−10.9%
Diseases of the circulatory system	M	500.0	−42.3%	418.9	−26.9%	789.0	−20.7%
	F	302.6	−46.4%	269.1	−28.6%	475.7	−24.4%
Diseases of the respiratory system	M	40.9	+19.0%	66.7	−29.2%	79.3	−39.2%
	F	17.9	−12.0%	30.8	−22.6%	28.0	−34.0%
Diseases of the digestive system	M	47.5	+3.9%	46.7	−5.8%	78.1	+18.5%
	F	15.3	−11.6%	25.7	−1.8%	40.6	+25.1%
Symptoms, signs and ill-defined conditions	M	363.8	+998.7%	39.3	−4.5%	60.3	−13.6%
	F	212.7	+1908.4%	25.3	−4.2%	39.0	−20.0%
External causes of injury and poisoning	M	75.9	+55.7%	83.5	−37.0%	161.6	−43.0%
	F	20.7	+90.9%	24.7	−33.0%	39.6	−39.6%
Motor vehicle road traffic injuries	M	22.0	+228.8%	13.3	−27.4%	–	–
	F	5.8	+248.5%	4.1	−27.2%	–	–
Suicide and self-inflicted injury	M	8.4	+64.3%	18.8	−34.7%	28.0	−48.5%
	F	1.6	+53.3%	4.4	−28.1%	5.3	−38.9%
Homicide and intentional injury	M	3.2	−45.4%	4.4	−60.1%	11.83	−61.9%
	F	1.2	+17.0%	1.4	−60.2%	3.37	−63.9%

The WHO Regional Office for Europe

The World Health Organization (WHO)
is a specialized agency of the United
Nations created in 1948 with the primary
responsibility for international health
matters and public health. The WHO
Regional Office for Europe is one of six
regional offices throughout the world,
each with its own programme geared
to the particular health conditions of
the countries it serves.

Member States

Albania	Finland	Malta	Slovenia
Andorra	France	Monaco	Spain
Armenia	Georgia	Montenegro	Sweden
Austria	Germany	Netherlands	Switzerland
Azerbaijan	Greece	Norway	Tajikistan
Belarus	Hungary	Poland	The former
Belgium	Iceland	Portugal	Yugoslav
Bosnia and	Ireland	Republic of	Republic
Herzegovina	Israel	Moldova	of Macedonia
Bulgaria	Italy	Romania	Turkey
Croatia	Kazakhstan	Russian	Turkmenistan
Cyprus	Kyrgyzstan	Federation	Ukraine
Czechia	Latvia	San Marino	United Kingdom
Denmark	Lithuania	Serbia	Uzbekistan
Estonia	Luxembourg	Slovakia	

9 789289 052726