



Health Care Highlights

GEORGIA

2018



ABBREVIATIONS

AAP	Advisory Assistance Programme
AFP	Acute Flaccid Paralysis
AIDS	Acquired Immune Deficiency Syndrome
AMR	Anti-microbial Resistance
ANC	Antenatal Care
BCA	Biennial Collaborative Agreements
BMJ	British Medical Journal
BNSR	Bio-surveillance Network of the Silk Road
BSL-3	Biosafety Level 3
CDC	US Centers for Disease Control and Prevention
COPD	Chronic Obstructive Pulmonary Diseases
COSI	Childhood Obesity Surveillance Initiative
CRD	Chronic Respiratory Diseases
EDPs	Especially Dangerous Pathogens
EHII	European Health Information Initiative
EIDSS	Electronic Integrated Disease Surveillance System
EU	European Union
GARP	Genetic Algorithm for Rule-set Production
GAVI	Global Vaccine Alliance
GBD	Global Burden of Disease Study
GEL	Georgian Lari
GFTAM	Global Fund to Fight AIDS, Tuberculosis and Malaria
GHSA	Global Health Security Agenda
GLAAS	Global analysis and Assessment of Sanitation and Drinking-Water Survey
GYTS	Global Youth Tobacco Survey
HBSC	Health Behaviour in School-aged Children
HCAIs	Healthcare-associated Infections
HCV	Hepatitis C virus
HFA DB	Health For All Data Base
HIV	Human Immunodeficiency Virus Infection
HPV	Human Papillomavirus
HSPA	Health System Performance Assessment
IDUs	Internally Displaced Persons
IFD	In-facility delivery
IGME	Inter-agency Group for Child Mortality Estimation
IHME	Institute for Health Metrics and Evaluation
IHR	International Health Regulations
IPC	Infection Prevention and Control
IPV	Inactivated Polio Vaccine
LB	Live Births

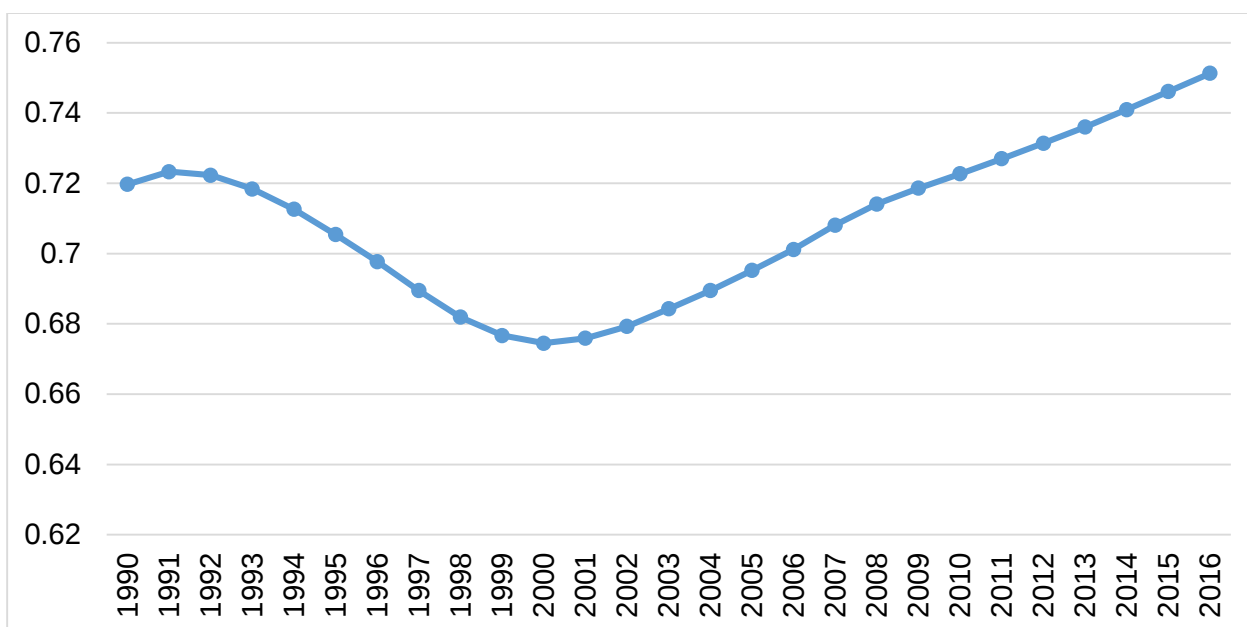
LSS	Laboratory Support Stations
M/XDR	Multidrug and extensively drug-resistant TB
MDG	Millennium Development Goals
MDR-TB	Multi Drug Resistant TB
MMEIG	Maternal Mortality Estimation Interagency Group
MoLHSA	Ministry of Internally Displaced Persons from the Occupied Territories, Labour, Health and Social Affairs of Georgia
NCDC	National Center for Disease Control and Public Health
NEHAP	National Environmental Health Action Plan
NFP	National Focal Point
NIC	National Influenza Center
NSO	National Statistics Office of Georgia
NSP	National HIV Strategic Plan
NTP	National TB Program
PCR	Population-based Cancer Registry
PFGE	Pulsing Field Gel Electrophoresis
RHS	Reproductive Health Survey
SBA	Skilled Birth Attendance
SDG	Sustainable Development Goals
STI	Sexually Transmitted Infection
TB	Tuberculosis
UHC	Universal Health Coverage
UN	United Nations
VOT	Video Observed Therapy
WASH	Water, Sanitation and Hygiene
WHO	World Health Organization
WHO CO	WHO Country Office
WHO/Euro	WHO Regional Office for Europe
ZDL	Zonal Diagnostic Laboratories



Demographic and Socio-economic Indicators, Georgia

Area, km²	69 700
Administrative units	11 regions, 64 municipalities
Capital	Tbilisi
Mid-year population (2018)	3 726 549
Female population	52%
Male population	48%
Urban population	58.7%
Ethnic composition (according to the Census 2014)	Georgian - 86.8%, Azeri - 6.3%, Armenian - 4.5%, Other - 2.4%
Main religions (according to the Census 2014)	Orthodox Christian - 83.4%, Muslim - 10.7%, Armenian Apostolic - 2.9%, Catholic - 0.5%
State system	Parliamentary republic
Independence	Since 1991
National currency	Lari
Membership in international organizations	International Monetary Fund, United Nations, World Health Organization, World Bank, International Trade Organization, etc.
GDP per capita, current US\$	4,068
Human development index	0.78 (2017)
Socioeconomic index (2016)¹	0.75

¹ Socioeconomic index reflects the education, income, and prestige associated with different occupations

Socioeconomic index, Georgia

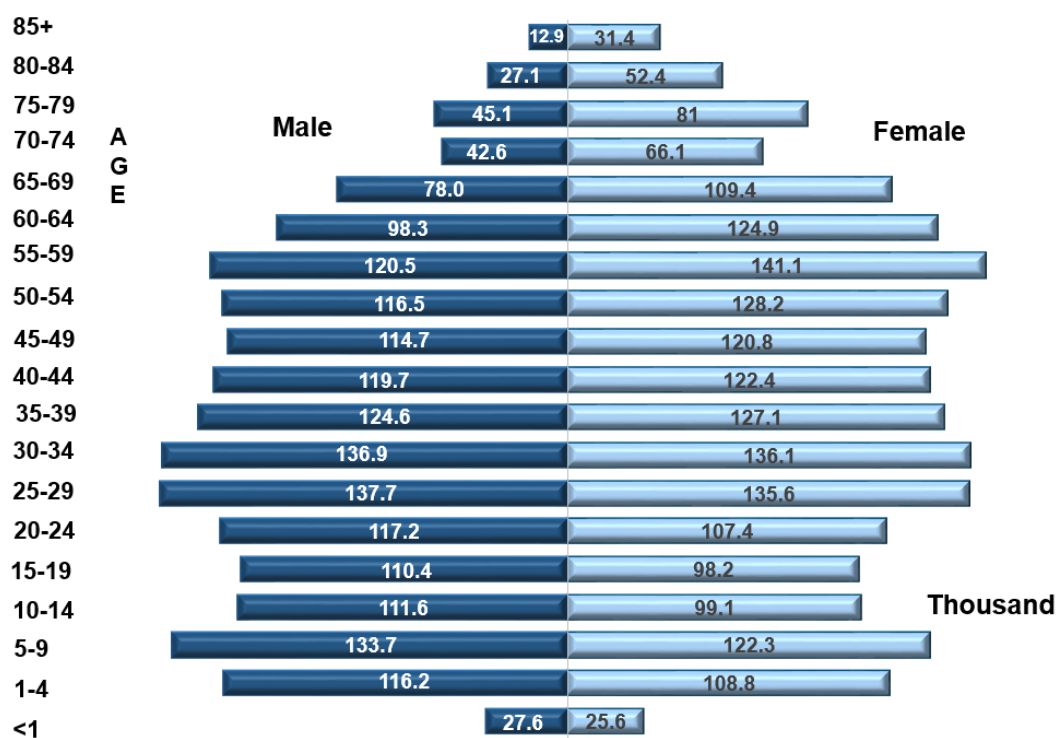
Source: Global, regional, and national under-5 mortality, adult mortality, age-specific mortality, and life expectancy, 1970-2016: a systematic analysis for the Global Burden of Disease Study 2016

Main demographic indicators, Georgia, 2017-2018

	2017	2018
Number of live births (birth rate per 1000 population)	53 293 (14.3)	51 138 (13.7)
Natural population growth (natural population growth rate per 1000 population)	5 471 (1.5)	4 614 (1.2)
Number of deaths (mortality rate per 100000 population)	47 822 (12.8)	46 524 (12.5)
Number of still-births (still-birth rate per 1000 births)	506 (9.4)	438 (8.5)
Number of marriages (marriage rate per 1000 population)	23 684 (6.4)	23 202 (6.2)
Number of divorces (divorce rate per 1000 population)	10 222 (2.7)	10 288 (2.8)
Migration (migration rate per 1000 population)	-2 212 (-0.6)	-10 783 (-2.9)

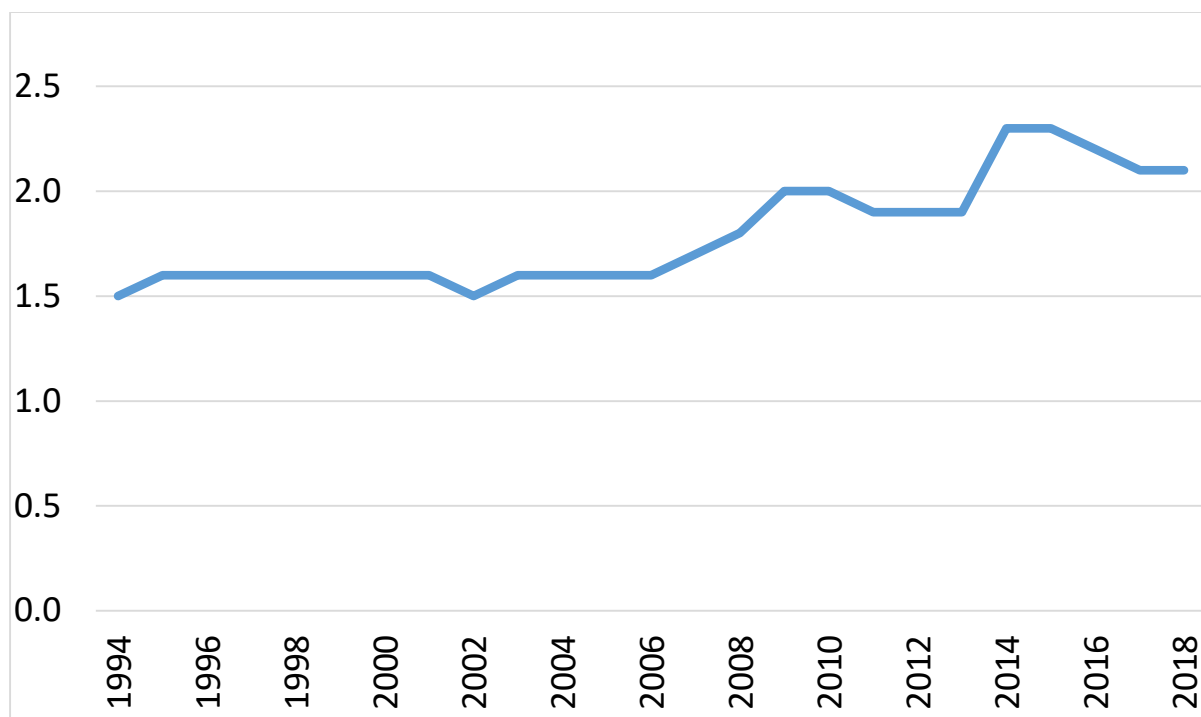
Source: NSO Georgia

Population pyramid, Georgia, 2018



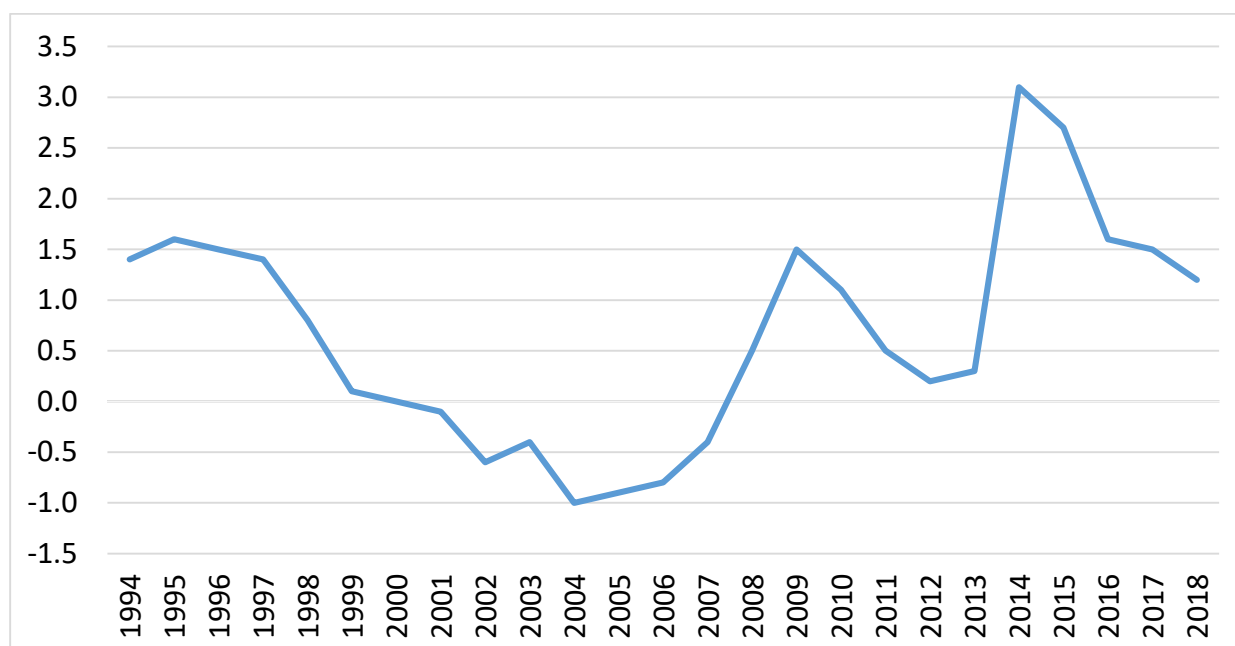
Source: NSO Georgia

Total fertility rate (TFR), Georgia



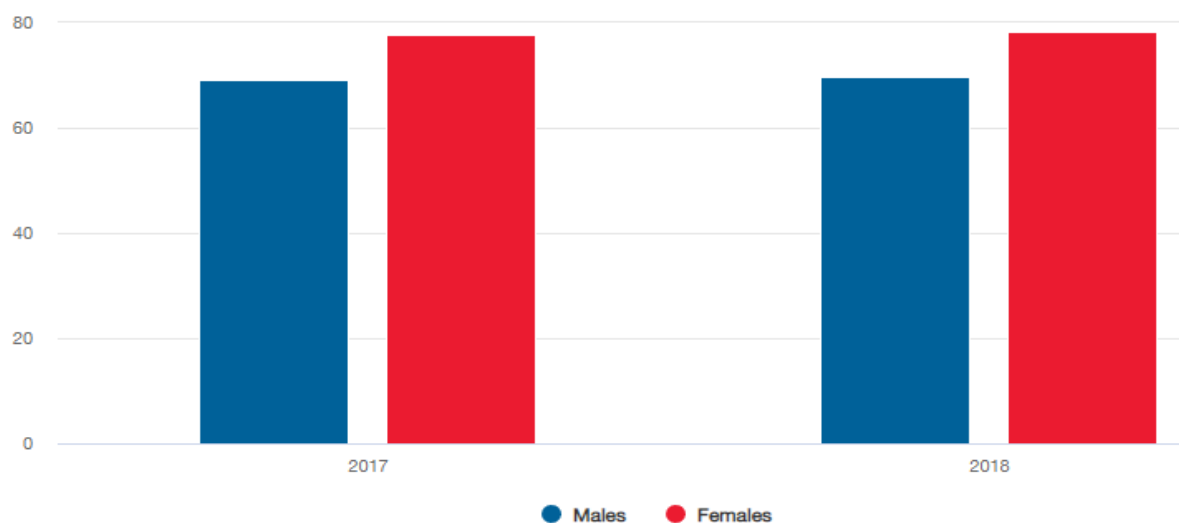
Source: NSO Georgia

Natural Increase Rate, per 1000 population, Georgia



Source: NSO Georgia

Life expectancy at birth, Georgia



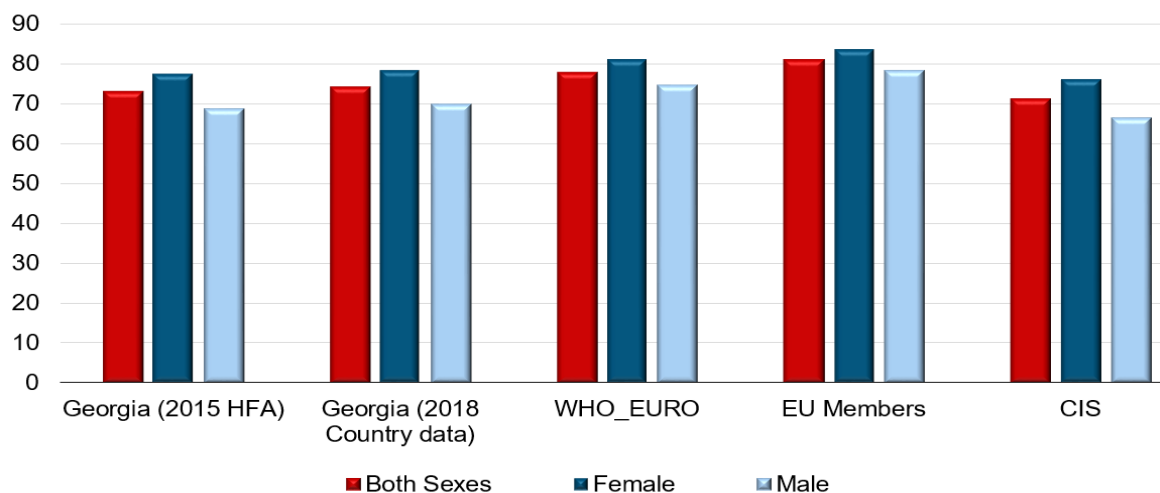
Source: NSO Georgia

Life expectancy at birth, Georgia

	1990	1995	2000	2005	2010	2014	2015	2016	2017	2018
Both sexes	71.4	70.3	71.3	74.0	74.4	72.9	72.9	72.7	73.5	74.0
Male	67.5	66.3	67.5	70.0	70.0	68.6	68.6	68.2	69.2	69.7
Female	75.0	74.2	75.0	77.6	78.7	77.2	77.2	77.1	77.8	78.2

Source: NSO Georgia

Life expectancy at birth (Last available year)



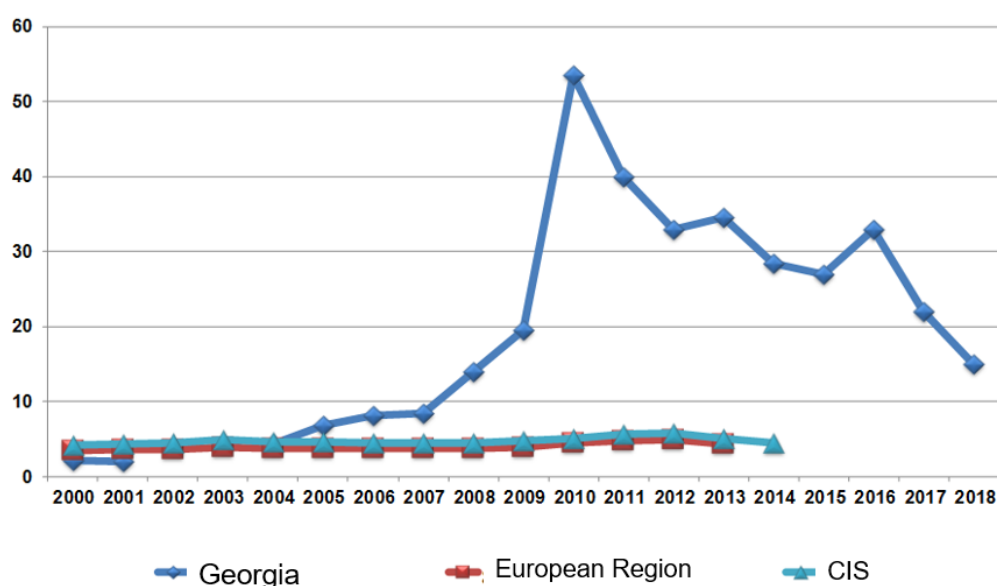
Source: HFA DB, Geostat

Mortality

The completeness of death registration and correct identification of the underlying causes of death are the main criteria for mortality assessment. In Georgia, during the recent years, there have been serious developments in this area, results of which have been proved by international evaluations. According to the WHO estimates, the completion of the registration since 2011 keeps stable position and is about 98%.

The quality of identification of the underlying causes of death remains a challenge in Georgia, although the share of ill-defined causes of death has decreasing tendency.

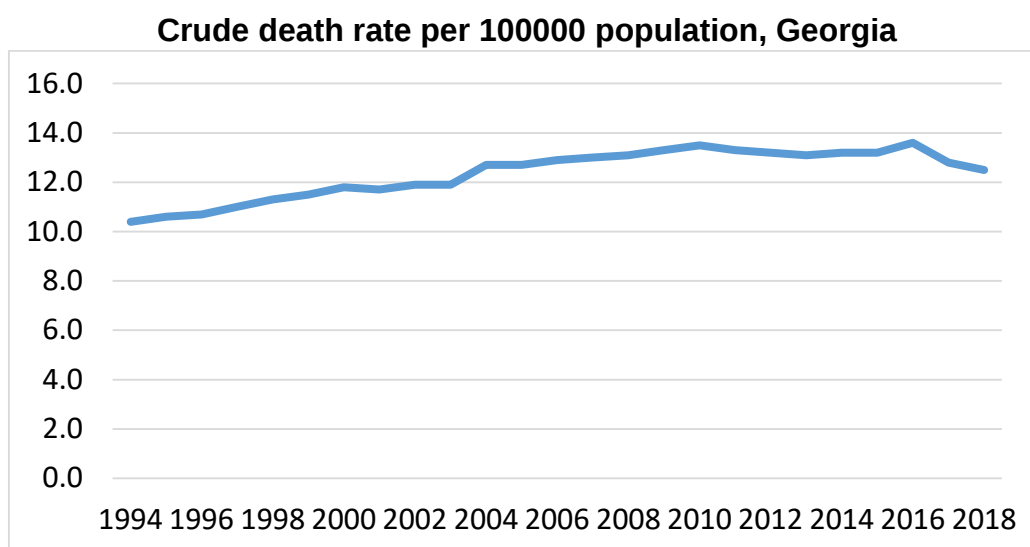
Share of ill-defined causes of death in mortality structure



Source: HFA DB, Geostat

During the last several decades, a decrease of global mortality and increase of global life expectancy at birth have been marked. This change is partially associated with the increase of the share of non-communicable diseases/chronic conditions and the reduction of number of deaths caused by injuries, also with improved management and early detection of diseases and improved control of risk factors.

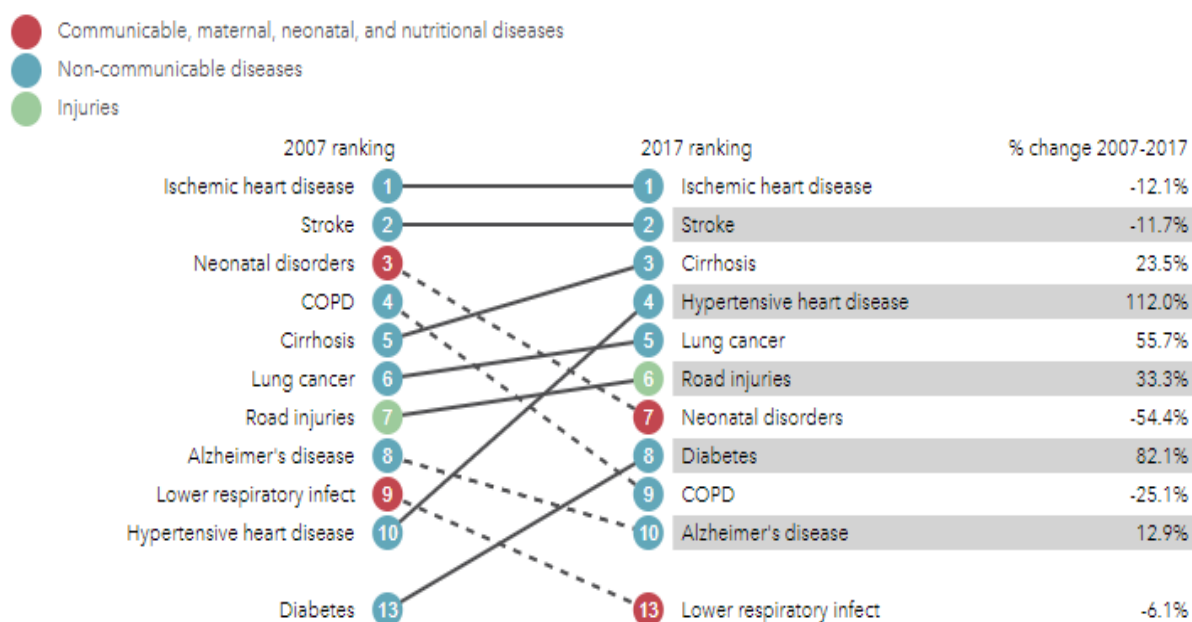
According the National Statistics Office of Georgia, in the last three years, the general mortality rate has decreasing tendency.



Source: NSO Georgia

In Georgia, like in the most countries, the burden of mortality is mainly caused by noncommunicable diseases.

Top 10 causes of death in 2017 and percent change, 2007-2017, all ages, number



Source: <http://www.healthdata.org/georgia>

Maternal health and mortality

In 2016, in order to improve the maternal and child health surveillance in the country, an „Electronic Module for Pregnant and Newborn Health Surveillance“, so-called "birth" registry was introduced. Each pregnant woman, starting from the first antenatal visit, including childbirth, is continuously monitored through the electronic module.

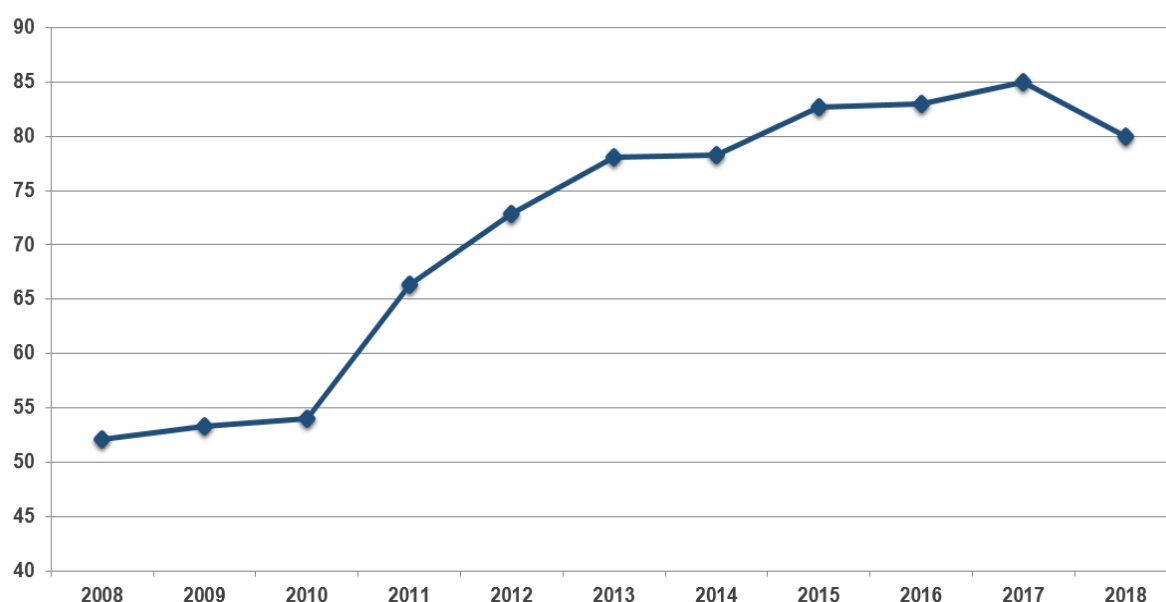
The system also records newborn's health status. For Georgia, considering the fact that globally there are only few countries, which have got „birth" registries, this initiative is a crucial step forward.

Main indicators of reproductive health

	2015	2016	2017	2018
Coverage with at least 4 antenatal care visits	88.3%	81.2%	85.0%	81%
Timely initiated antenatal care	83%	85%	89.1%	80%
Number of deliveries	58 830	55 940	52660	50 468
Full term deliveries	82.1%	81.9%	86.8%	92%
Normal deliveries	55.0%	52.7%	52.4%	55%
Pathological deliveries (caesarean sections, forceps, vacuum delivery, all delivery process complication)	45.0%	47.3%	47.6%	44.6%
Adolescent pregnancy rate	48.6	43.6	36.2	32.3%
Proportion of births attended by skilled health personnel	99.8%	99.9%	99.9%	99.9%

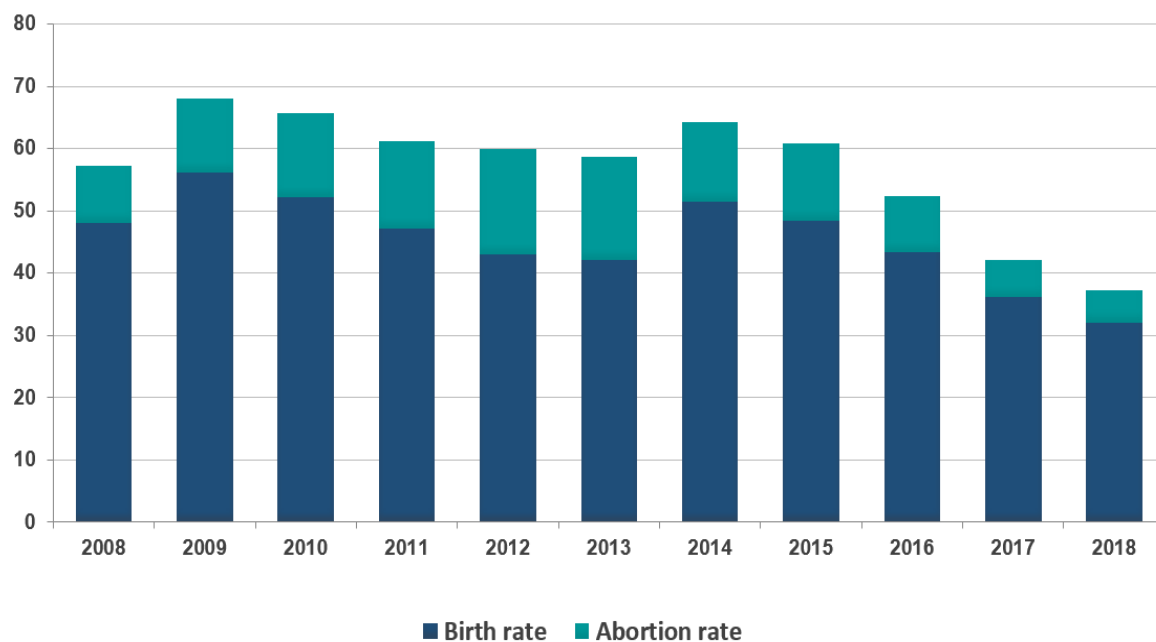
Source: NCDC

Share of pregnant women (%) initiating antenatal care within the 1st trimester



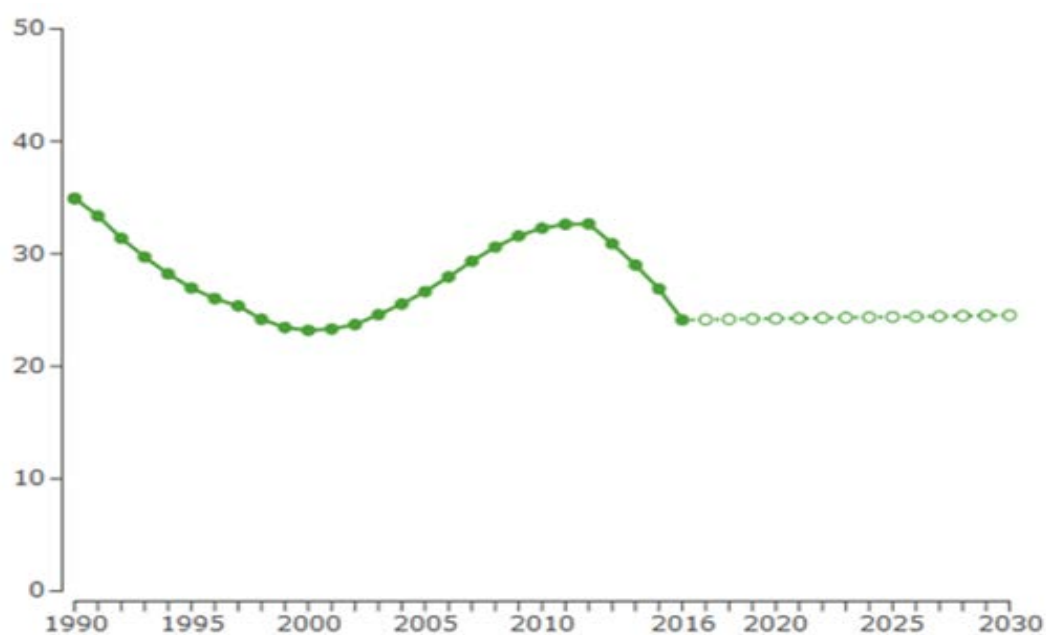
Source: NCDC

Adolescent pregnancy rate (rate per 1000 women aged 15-19)



Source: NCDC

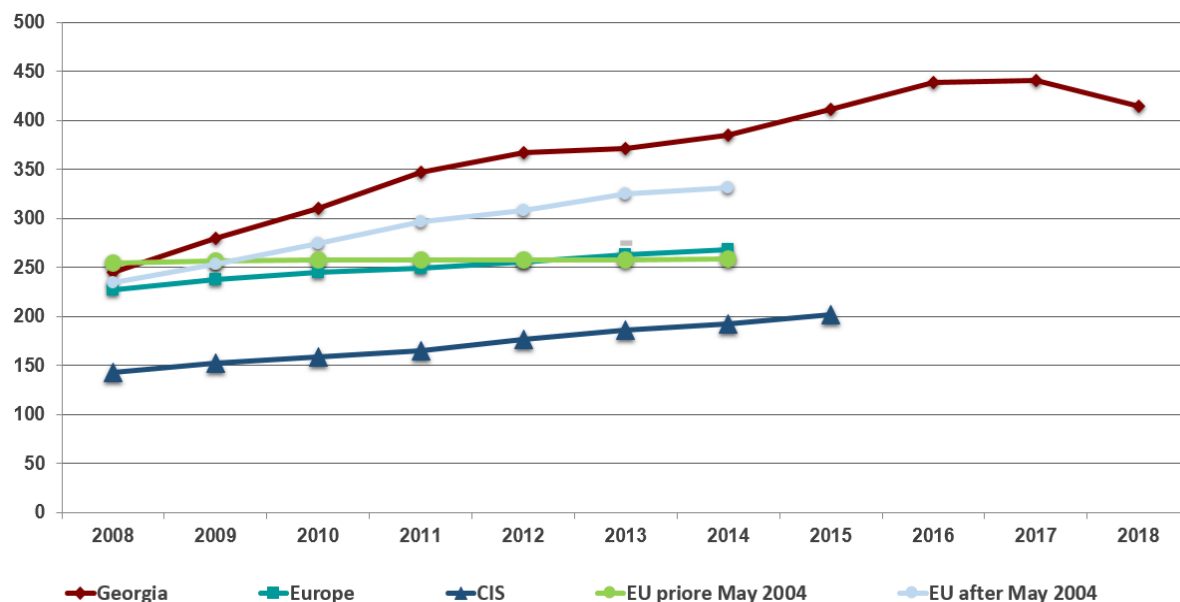
Adolescent pregnancy rate (rate per 1000 women aged 15-19)



Source: <http://www.thelancet.com/lancet/visualisations/gbd-SDGs>

Since 2000, in Georgia, a share of caesarean section deliveries has increased 4.3 times and reached 44.7% in 2017. Although, in 2018, the caesarean section share dropped and reached 41.6%.

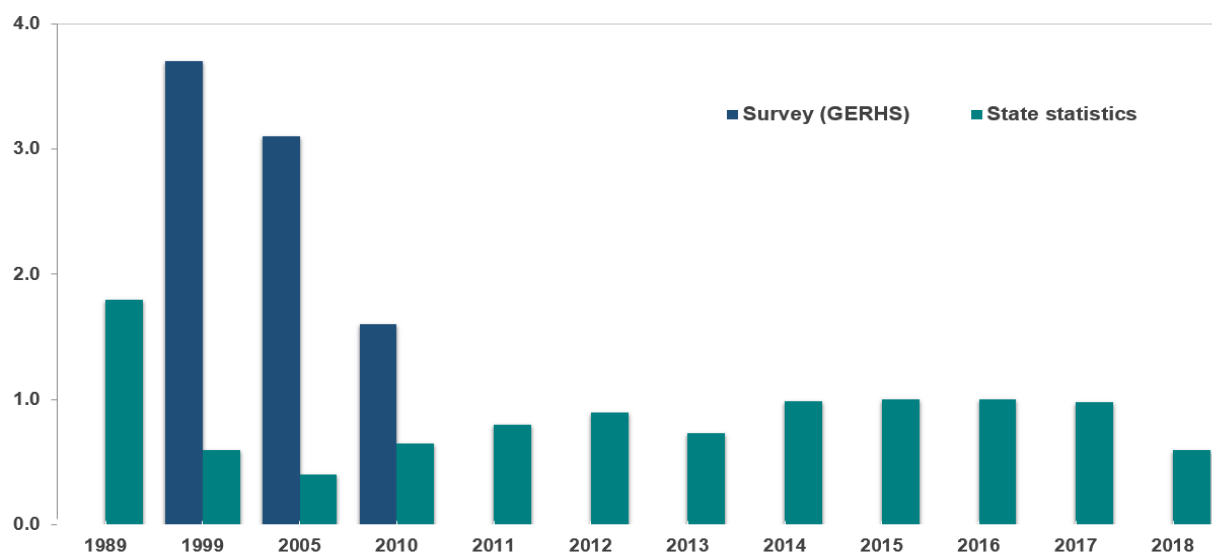
Caesarean sections (ratio per 1000 live births), last available data



Source: World Health Organization HFA DB

In 2018, 22733 abortions have been registered (447 per 1000 live births), of which, induced abortions constituted 61.9%. Compared to the previous year, the total number of abortions decreased by 9%. The total induced abortion rate (TIAR) is stable decreased. It is important that the share of abortions in women aged under-20 has decreased and equals 2.3% of the total number of abortions. Induced abortion rates were the most high in 25-29 and 30-34 age groups.

Total induced abortion rate (TIAR), Georgia



Source: NCDC, World Health Organization HFA DB

In the transition period from the MDG framework to Sustainable Development Goals (SDG), a complex assessment of maternal mortality is necessary to identify successful areas and address existing problems.

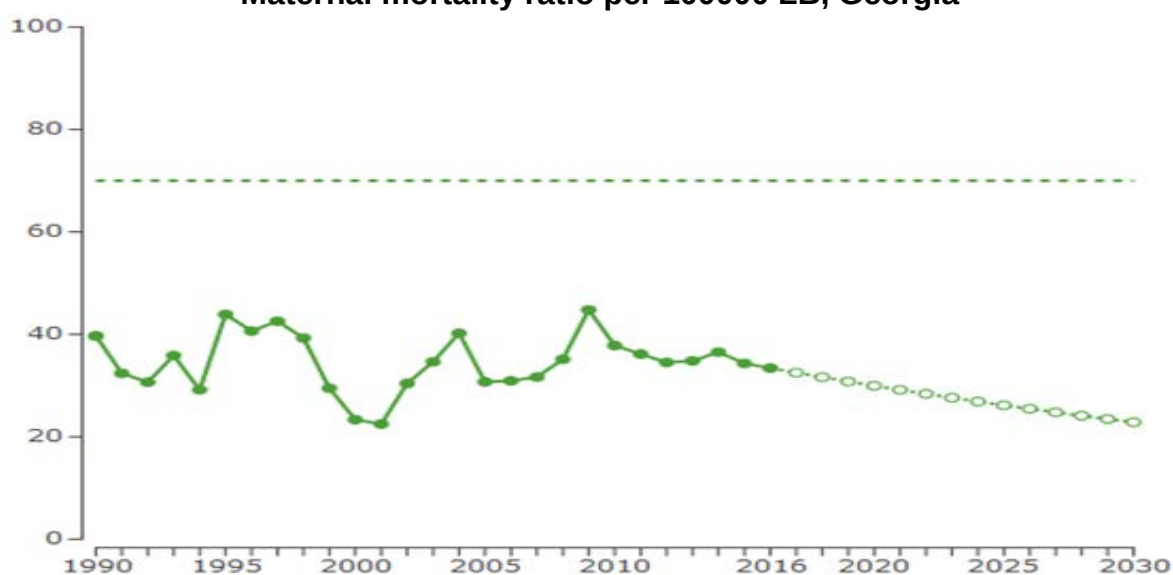
Globally only ten countries achieved the Goal 5 of the MDG (reduction of maternal mortality by three-quarters in 1990 – 2015). The same time 122 out of 195 countries have already achieved SDG 3.1: reduce maternal mortality ratio to less than 70 per 100 000 live births by 2030. In 2015 there were 24 countries where maternal mortality rate exceeded 400.

Achievement of SDG 3.1 will require 91% coverage of one antenatal care (ANC) visit, 78% of four ANC visits, 81% of in-facility delivery (IFD), and 87% of skilled birth attendance (SBA). For preventing HIV and syphilis mother-to-child transmission, at least 95% of pregnant women must be tested for these infections. The share of labor in a medical facility must be not less than 81%, the share of labor assisted by qualified medical personnel - 87%.

Maternal mortality ratio per 100 000 live births, Georgia²

Source	1990	1995	2000	2005	2006	2010	2012	2013	2015	2016	2017
Official statistics	40.9	55.1	49.2	23.4	23.0	19.4	22.8	27.7	32.1	23.0	13.1
MMEIG ³	34	35	37	37	-	40	-	41	36	-	-
GBD ⁴	41.5	-	30.7	-	-	-	-	-	42.3	-	-
RAMOS	-	-	-	-	44	-	26	-	-	-	-

Maternal mortality ratio per 100000 LB, Georgia



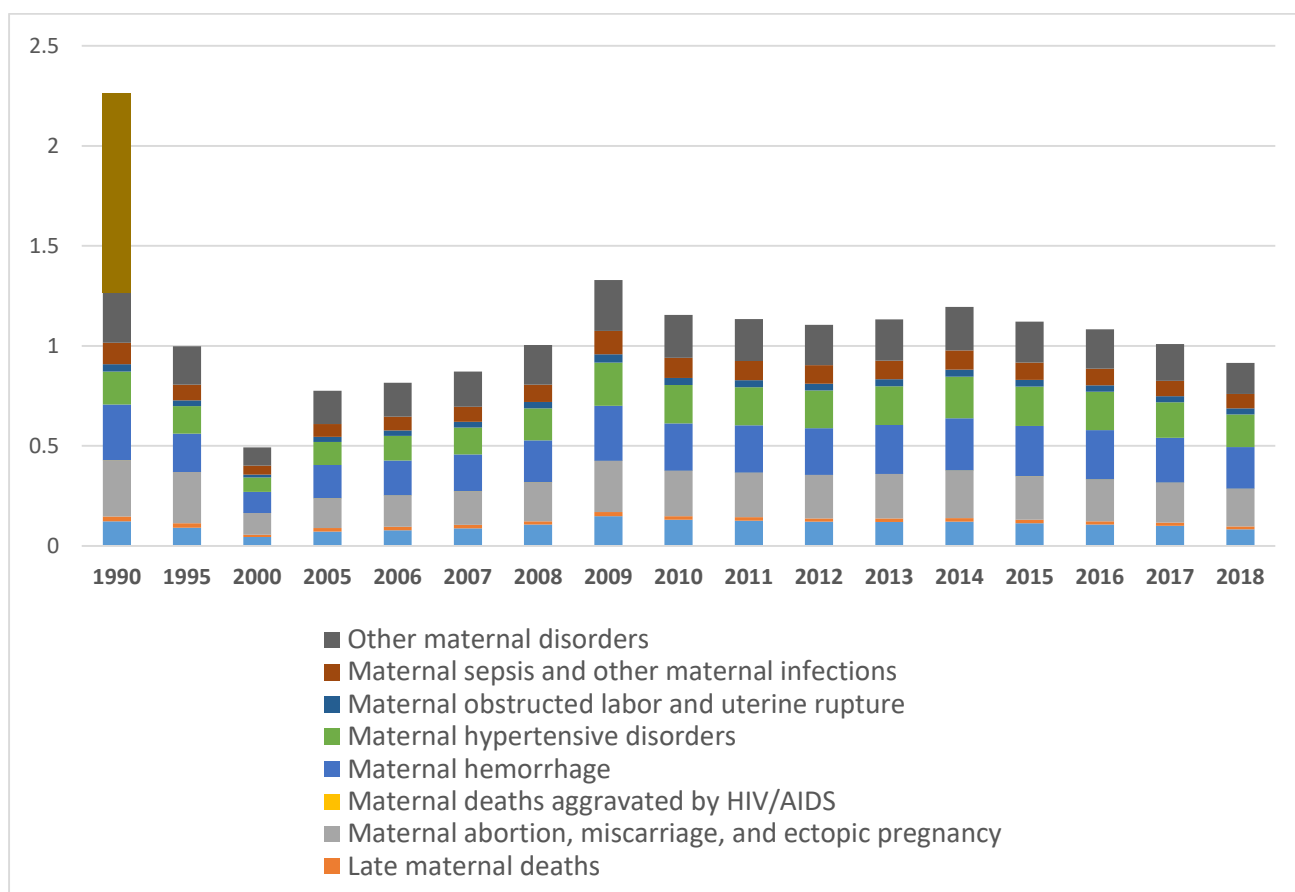
Source: <http://www.thelancet.com/lancet/visualisations/gbd-SDGs>

² Data on Maternal mortality for 2018 are in the process of data checking. There are several steps, which maternal mortality data must undergo: 1) data collection by different sources (NCDC, MoLHSA, vital statistics), reconciliation of all available sources, medical records checking and verbal autopsies conduction, finalization of the causes of death by special commission at the Ministry level.

³ UN Maternal Mortality Estimation Interagency Group

⁴ Global Burden of Disease Study

Maternal mortality by cause of death, Georgia



Source: <https://vizhub.healthdata.org/gbd-foresight/>

Morbidity and mortality of children under-5

Morbidity of children under-5

Top causes of morbidity of children under-5	Incidence per 1000 children aged under-5
Diseases of the respiratory system	606.0
Diseases of the ear and mustoid process	57.8
Infectious and parasitic diseases	94.3
Diseases of the eye and adnexa	44.2
Diseases of the skin and subcutaneous tissue	28.3
Injury poisoning and certain other consequences of external causes	25.7
Diseases of the digestive system	15.9
Diseases of the blood and blood forming organs	15.0
Diseases of the nervous system	14.5

Source: NCDC

Under-5 mortality

Globally, 5.8 mln children under age 5 died in 2015, representing 52.0% decline in the number of under-5 deaths since 1990. Neonatal deaths and stillbirths fell at a slower pace since 1990, decreasing 42.4% to 2.6 mln neonatal deaths and 47.0% to 2.1 mln stillbirths in 2015. Between 1990 and 2015, under-5 mortality decreased at an annualised rate of decline of 3.0%, falling short of the 4.4% annualised rate of decline required to achieve MDG4.

During this time, 58 countries met or exceeded the pace of progress required to meet MDG4. Yet since 2000, the time at which MDG4 was formally enacted, 28 additional countries, that did not achieve the 4.4% rate of decline of under-5 mortality from 1990, met the MDG4 goal. Georgia has been able to reach the Millennium Development Goal 4, since in 2015 the mortality rate of children under five was 10.2 per 1000 live birth.

In Georgia, the value of the under-5 mortality indicator, according to all sources, such as official statistics, international estimates and surveys (Georgian Reproductive Health Survey - GERHS) met the MDG4 Goal. It is essential, that IGME⁵ estimates for the global and regional levels are almost the same (matching level – 98%).

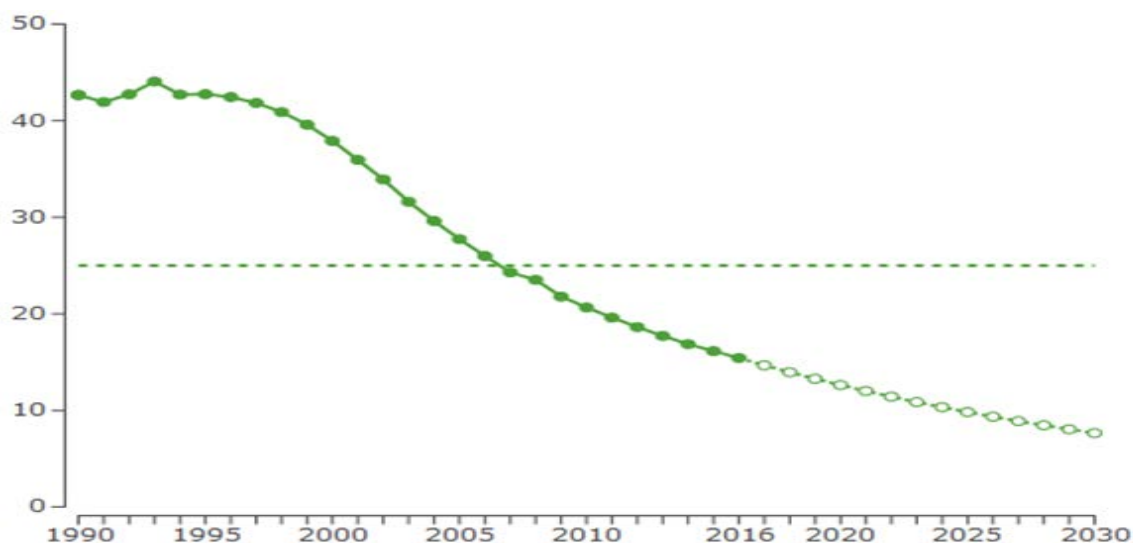
Under-5 mortality rate per 1000 live births, Georgia

Source	2000	2005	2010	2011	2012	2013	2014	2015	2016	2017	2018
NSO	24.9	21.1	13.0	13.8	14.4	13.0	10.9	10.2	10.7	11.1	9.8
IGME	35.3	24.5	16.4	15.2	14.1	13.1	12.6	11.9	10.7	11.1	-

⁵ Inter-agency Group for Child Mortality Estimation

GBD	36.2	28.0	21.8	-	-	21.1	-	17.4	-	-	-
GERHS	45.8	25.1	16.4	-	-	-	-	-	-	-	-

Under-5 mortality rate per 1000 live births, Georgia



Source: <http://www.thelancet.com/lancet/visualisations/gbd-SDGs>

In Georgia, according to the WHO latest available data, the under-5 mortality rate, despite the downward trend, still maintains the higher value, compared to the average indicator for the European Region and EU countries, and stays at the mid-position among the former Soviet Union countries. According to all sources, the infant mortality is declining in Georgia.

Infant mortality rate per 1000 LB, Georgia

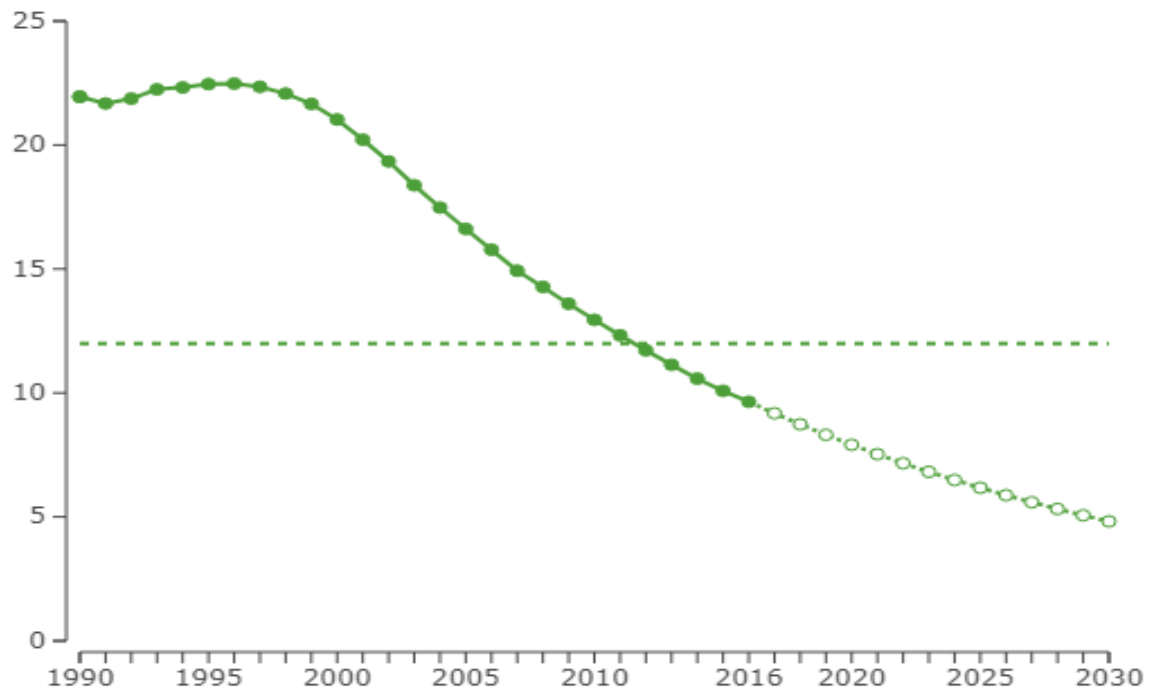
Source	2000	2005	2010	2012	2013	2014	2015	2016	2017	2018
NSO	22.5	19.7	11.2	12.6	11.1	9.5	8.6	9.0	9.6	8.1
IGME	30.9	21.7	14.6	12.6	11.7	11.3	10.6	9.0	9.6	-
GERHS	41.6	21.1	14.1	-	-	-	-	-	-	-

Neonatal and perinatal mortality, Georgia

	Neonatal mortality per 1000 LB	Early neonatal mortality per 1000 LB	Late neonatal mortality per 1000 LB	Perinatal mortality per 1000 births
2010	9.6	6.6	3.0	17.4
2015	5.8	3.8	2.1	13.6
2016	6.3	4.1	2.2	13.8
2017	6.8	4.5	2.3	13.8
2018	4.9	3.2	1.7	11.7

Source: NSO

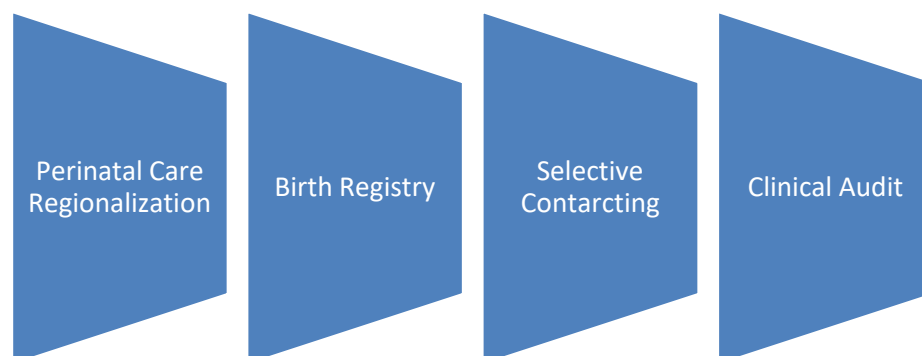
Neonatal mortality rate per 1000 live births, Georgia



Source: <http://www.thelancet.com/lancet/visualisations/gbd-SDGs>

In 2018, in Georgia, the stillbirth rate was 8.5 per 1,000 births (according to the 2015 (latest available data) in the CIS - 7.08, in the EU - 5.95).

“National Maternal and New-born Health Strategy for 2017-2030” with related short term Action Plan (2017-2019) is developed and approved by the Government with the aim to provide long-term guidance and coherent plan of action for the improvement of maternal and new-born health in Georgia. Key constituents of the strategy are:



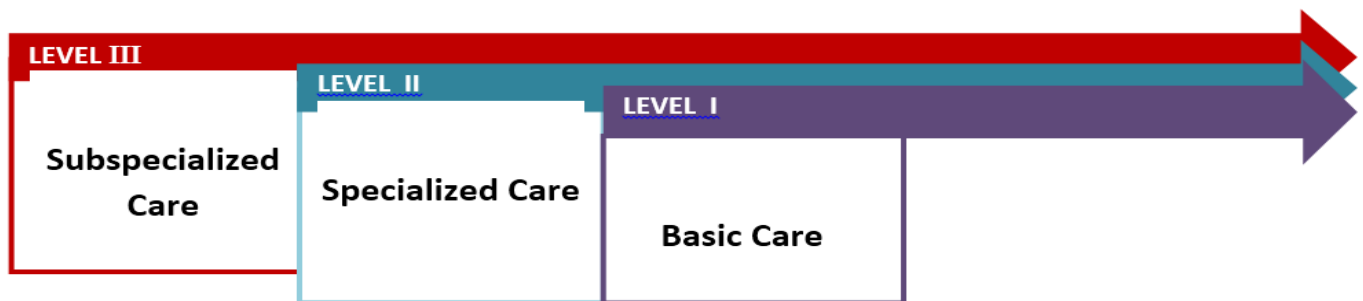
Perinatal Care Regionalization - “gold” model of maternal and newborn service organization

Goal: to improve the health outcomes and decrease maternal and infant morbidity and mortality through provision of risk-appropriate care.

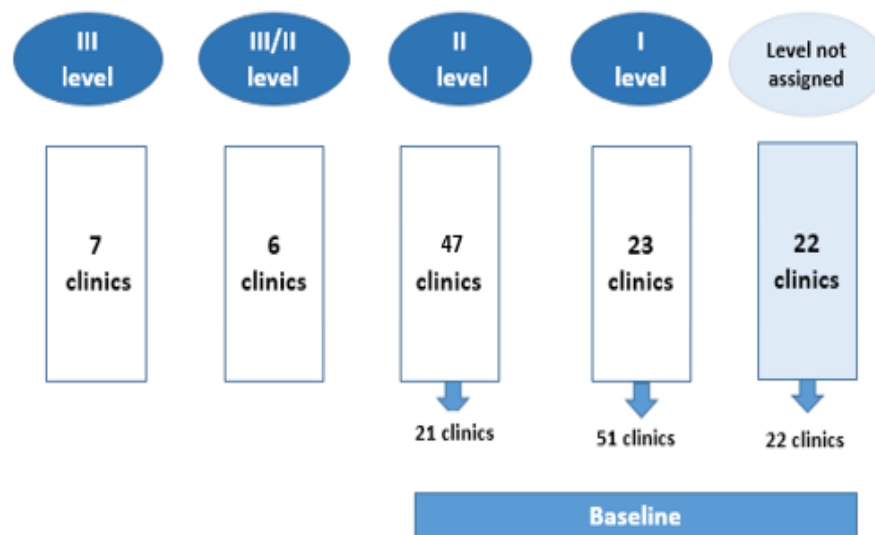
Principle: each mother and new-born is delivered and cared for in a facility appropriate for his or her healthcare needs.



Process: all facilities providing maternal and newborn care services are divided by levels of care according to their capacity.



105 facilities were evaluated, 82 facilities received designated levels of care. All 82 facilities strengthened their capacity, including infrastructure/equipment and competencies of service providers according to the level requirements. In 2018, the regionalized facilities looked as follows:

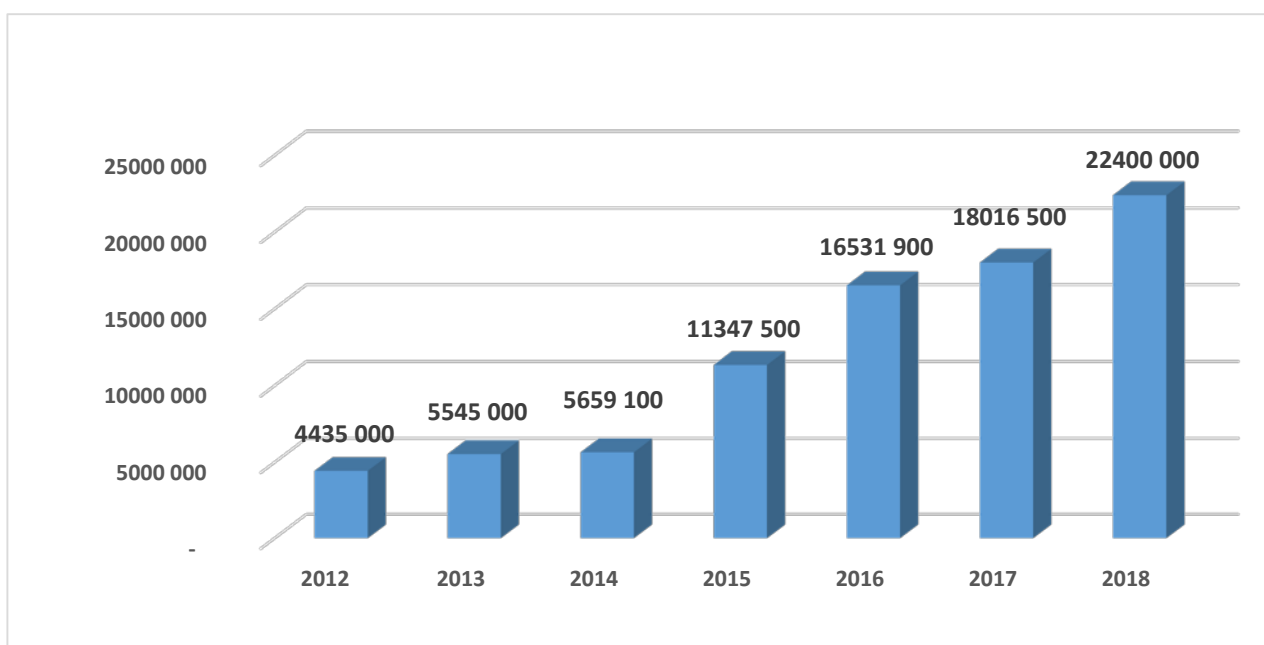


Communicable diseases

Immunization

Immunization is one of the highest Public Health priorities for the Government of Georgia, the clear confirmation of which is that funding of the program significantly increased past years from 4 mln GEL in 2012 to 22 400 mln GEL in 2018.

Immunization Program Budget (GEL)



Source: NCDC

According to the WHO recommendations the seasonal influenza vaccination is provided for selected high risk groups of population.

Immunization Calendar

Vaccines	# of doses	Timing
BCG	1	Newborns 0-5 days
HepB	1	0-12 hours from birth
Hib+DPaT+HepB+IPV	3	2, 3, 4 months
Polio (bOPV)	2	18 months, 5 years

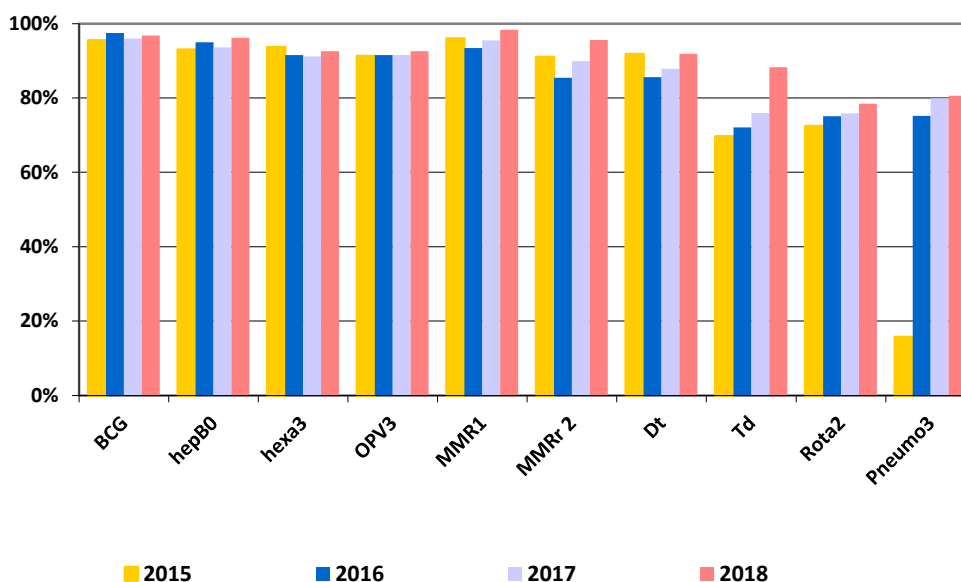
DPT, DT, Td	3	18 m, 5 y, 14 y
MMR	2	12 m, 5 y
Rota	2	2 , 3 months
PCV	3	2, 3, 12 months

Source: NCDC

Five new vaccines were successfully introduced during recent years in the National Immunization Calendar: rotavirus vaccine in 2013, the PCV10 in late 2014 (with GAVI support), IPV (switch from Penta to Hexavalent vaccine) in 2015 followed by transition to bivalent Oral Polio Vaccine (bOPV) in 2016. Since 2017 HPV vaccine in the four territorial areas of the country (Tbilisi, Kutaisi, Adjara AR, Abkhazia AR), aiming 9 year old girls. From August 2019, the HPV vaccine will be introduced throughout the country and will covered girls aged 10-11-12.

All vaccinations included into the National Vaccination Calendar are free of charge for the population. To guarantee high quality and safe immunization, the State purchases vaccines, which are prequalified by the World Health Organization.

Immunization coverage trends (%), Georgia



Source: NCDC

Georgia has maintained strong coverage rates for most of the 12 antigens (Hexa3 coverage at 92,6% and MMR1 - 95% in 2018). It does not meet the set target of 95% for some vaccines, and there are some low coverage areas that still require technical support and assistance for vaccination.

Georgia is certified as a country free from the wild poliomyelitis virus since 2002.

A mobile application on vaccination for parents (uses iOS and Android platforms) was developed. Thanks to the application, parents are able to receive information about the National vaccination calendar, vaccines, vaccination contraindications, and false contraindications, warnings, recommendations about vaccination, and vaccine preventable diseases. A reminder for parents about the date of the vaccination and types of the vaccines is one of the features of the application.



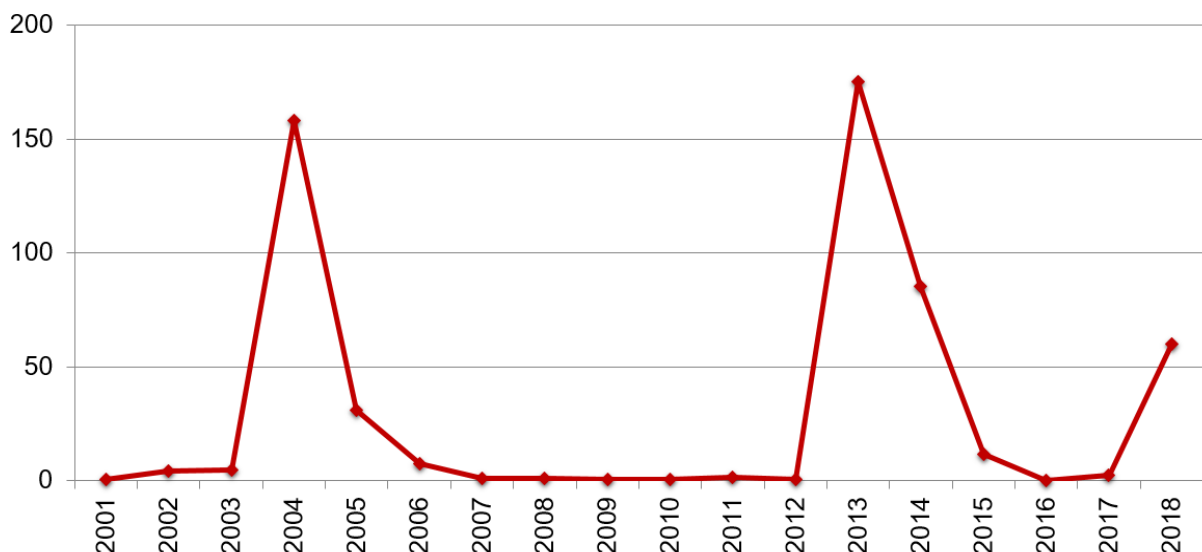
Measles

In Georgia, measles notification and epidemiological surveillance are obligatory. In 2004 and 2013 peaks of the measles morbidity were registered. The 2013 peak was caused by the failure of the mass immunization campaign in 2008, resulting in the accumulation of a non-immune layer of the population, which escalated conditions for a measles epidemic. The heaviest burden of morbidity mainly registered in under-1 and 15-30 years-old age groups.

Since 2013, additional campaigns have been implemented to seize the epidemic: the completion of the anti-measles vaccination course for children aged 14; provision of additional vaccination to population aged 15-30, health professionals and some other specific groups. In 2013-2014, about 150,000 people were vaccinated, and the number of cases of measles in the country significantly decreased.

In 2018, the number of cases has increased, 2200 cases were registered throughout the country.

Measles, incidence per 100000 population



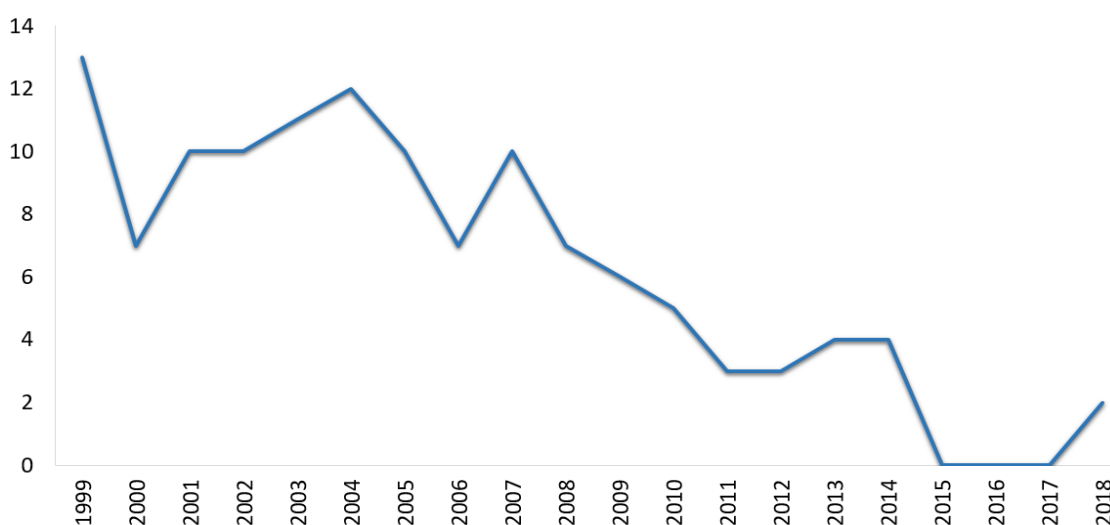
Source: NCDC

Rabies

In the ten year period (1997-2006) 96 human rabies cases were registered in Georgia, and in following years (2007-2014) – 42 cases. The tendency of increasing the human morbidity with rabies reached the maximum number in 1996, when it caused death of 21 humans. Number of humans involved in a prescribed vaccination course against rabies varied between 35000-49000 over the years.

Continuous provision of the anti-rabies serum (immunoglobulin) and vaccines created good background to reach the zero incidence of rabies in humans. In 2015, this happened the first time starting from 1990. The achievement was sustained in 2016-2017. In 2018, the number of persons contacted by suspect rabid animals reached 59420, out of them 53558 injured persons received the rabies prophylaxis under the State program, among them combined prophylaxis against the rabies (vaccine + immunoglobulin) was provided to the 18.5% of injured persons. 2 people died from rabies and in 2018.

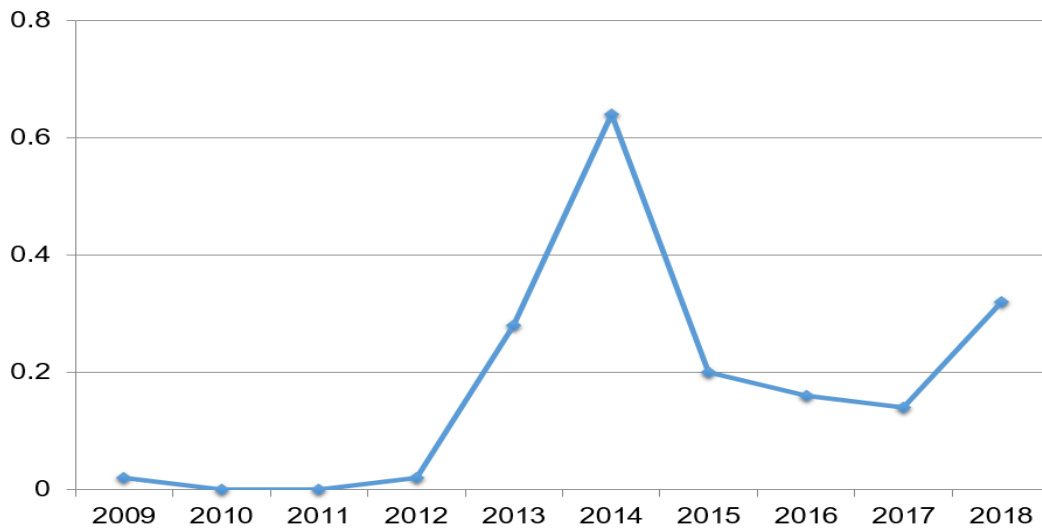
Rabies, number of cases, Georgia



Source: NCDC

Crimean-Congo Hemorrhagic Fever (CCHF)

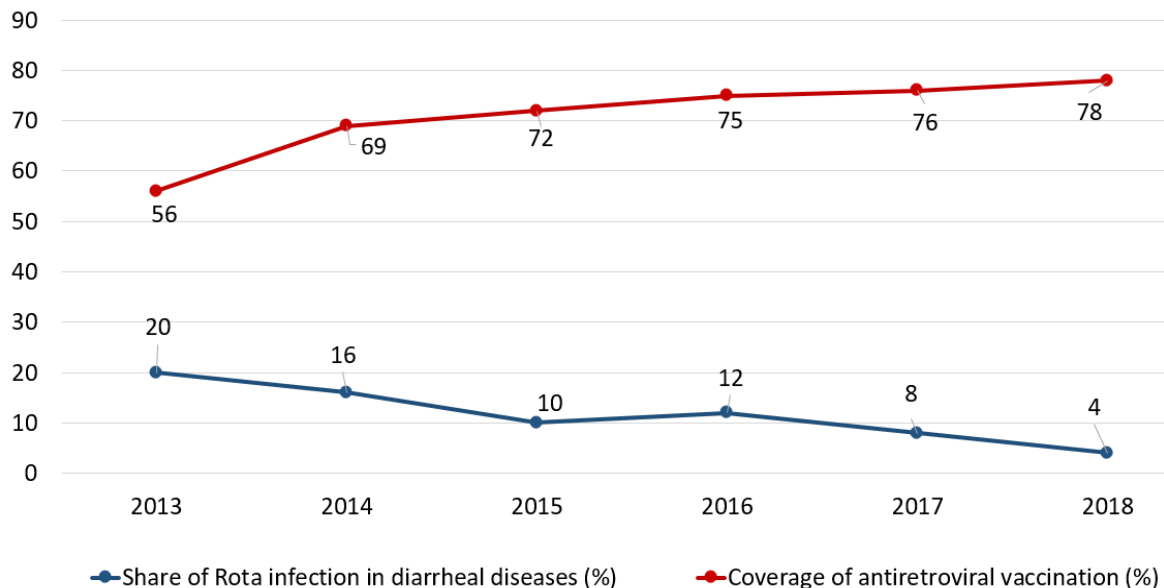
In 2014, in the East part of Georgia there was an outbreak of CCHF. Total number of registered cases was 24 (incidence per 100000 population – 0.6); 4 cases were fatal (case fatality rate – 16.6). In 2017, a surveillance system revealed 5 cases of hemorrhagic fever. Compared to the previous year, the number of cases has decreased (in 2016, 6 cases of Crimean-Congo hemorrhagic fever were registered). In 2018, 12 cases were registered, one of them was fatal. After 2014 it was the first episode of incidence increasing (incidence per 100000 population – 0.32).

Crimean-Congo hemorrhagic fever, incidence per 100000 population, Georgia

Source: NCDC

Rotaviral infection

After the implementation of rotavirus vaccine in the country, according to the sentinel surveillance data, there was a decrease of the rotaviral diarrhea cases in the tested patients. In 2014, coverage with two doses of rotavirus vaccine was 69%, in 2015 - 72%, and in 2016 - 75%; in 2017 – 75.9% and in 2018 – 78.5%.

Reduction of rotaviral diarrhea through increasing the coverage of the antirotaviral vaccination

Source: NCDC

Hepatitis C

Based on available data, Georgia is among the countries with high hepatitis C (HCV) Prevalence, however, the reasons of the high burden of the disease has not been studied sufficiently. Collapse of the health care system in early 1990s, sub-optimal quality standards of health

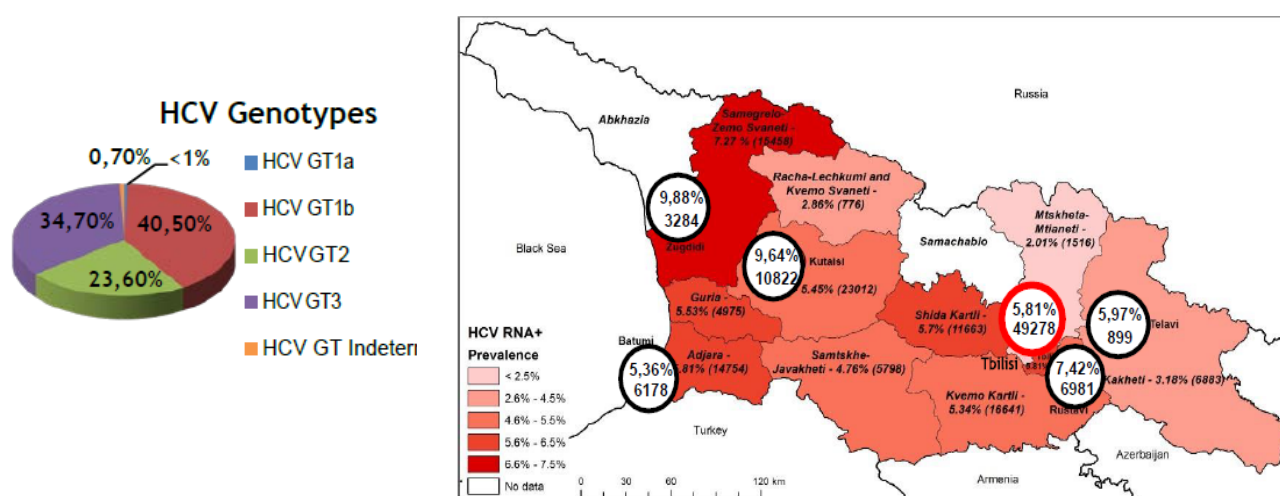
services had negative influence on safe injection practices, infection control and blood safety in health care settings over the years. All these conditions along with the widespread practice of needle sharing among people who inject drugs (PWID) contributed to the spread of HCV in the general population.

According to the latest population-based seroprevalence survey, conducted by the National Center for Disease Control and Public Health (NCDC) and US Centers for Disease Control and Prevention (CDC) in 2015, estimated national seroprevalence of hepatitis C is 7.7% and the prevalence of active disease is 5.4%.

Survey data:

Characteristic	Number	Weighted %	Estimated number of adults ≥ 18
Anti-HCV+	425	7.7%	215 000
HCV RNA+	311	5.4%	150 300

Prevalence and Estimated Number of HCV RNA+ Individuals by regions and cities



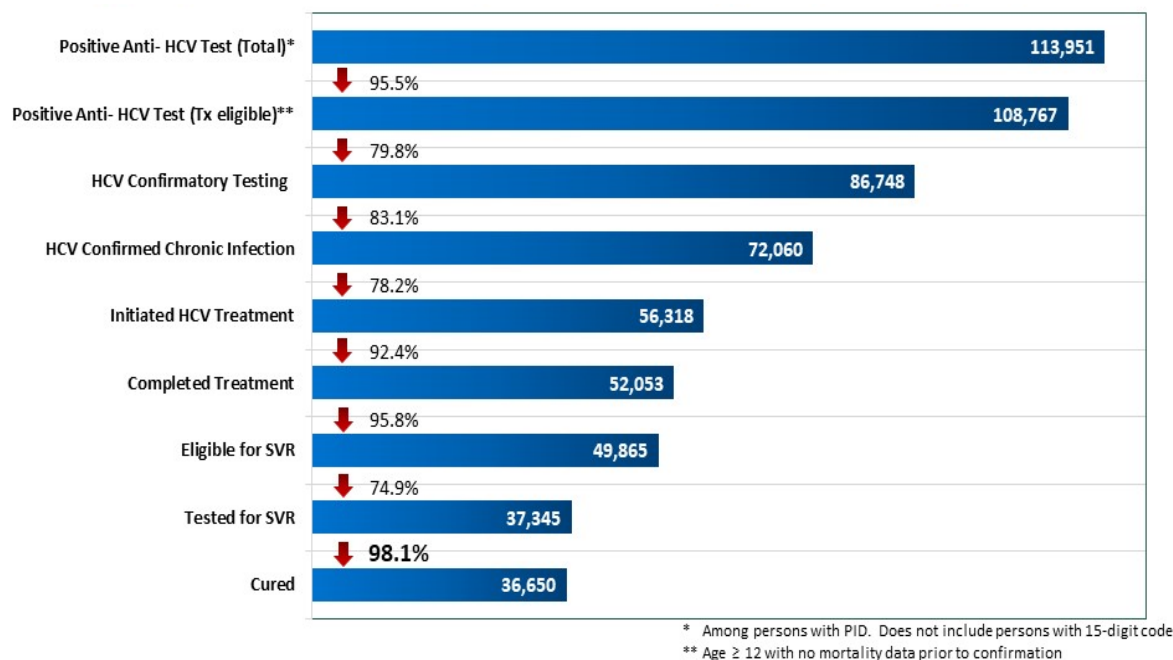
The Government of Georgia declared strong intention to eliminate hepatitis C in Georgia and substantially stepped up its efforts against hepatitis C. In February 2014, MoLHSA initiated discussion regarding strengthening Hepatitis C response in the country with US partners and after the successful negotiations Memorandum of Understanding between the Government of Georgia and US pharmaceutical company Gilead was signed on April 21, 2015.

As a result, Georgia started unprecedented National Hepatitis C Elimination Program. All Georgian citizens infected with hepatitis C are covered by the program and can receive treatment regardless the degree of hepatic fibrosis. National Screening Protocol was developed and subsequently approved by the Government. More than 600 sites, including inpatient and outpatient facilities, prisons, Georgian Harm Reduction Network (GHRN) centers, pharmacies, etc., provide HCV screening across the country. A unified electronic screening registry was created which captures data from all national and local HCV screening programs across the country. Data from the screening and treatment programs are linked by a unique identifier.

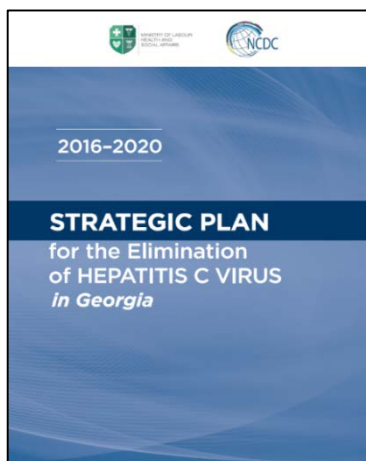
Starting with 4 sites in 2015, currently 39 service centers in different cities, including 1 center in penitentiary system, are providing diagnostic and treatment services to the elimination program beneficiaries. Since the launch of the program in April 2015 through April 2019, 49865 patients completed the treatment, with overall cure rate – 98.1%.

A unified electronic HCV screening module was created to capture data from all national HCV screening programs. Screening providers enter the data into the module on-site. The module is using personal IDs based on a link with Public Registry that allows to synchronize HCV-related data from different databases, such as HCV treatment database, unified electronic blood donor module, hospitalized patient's electronic module and birth registry.

Georgia Hepatitis C elimination program care cascade, April 28, 2015 – April 30, 2019



Source: NCDC



A long-term strategy for elimination of hepatitis C (2016-2020), which covered various directions, such as awareness raising, surveillance, prevention, screening, diagnostics, and treatment, was developed together with CDC based on WHO guidelines to achieve the ultimate goal of eliminating the hepatitis C. Strategy sets forth the following targets, to be reached by 2020:

- 90% of HCV infected persons have been tested for their infection
- 95% of people with chronic infection have received treatment, and
- 95% of persons who receive treatment are cured of their HCV.
- By 2016, any citizen of Georgia was provided with free screening and medicines, covered by the program.

In August 2016, the Clinical and Scientific Committees were established with the aim of providing the volunteer leadership for the transparency and coordination of the research activities within Hepatitis C Elimination Program in Georgia. Clinical guideline for management of hepatitis C infection was elaborated by the Clinical Committee.

The Georgian HCV treatment protocol and guidelines developed based on the WHO, EASL and AASLD guidelines as well as the Georgian version of BMJ best practice of HCV diagnostics and treatment are available on Georgian BMJ portal.

Sanford Guide to Hepatitis Therapy app was modified and translated into Georgian, and is now available for download free of charge for Android mobile devices.

Georgia was awarded the title of NOhep Visionary for the European Region at the World Hepatitis Summit in Sao Paulo, Brazil, on November 1st, 2017. The NOhep Visionaries Programme is a global campaign, which engages governments to scale-up successful approaches to elimination and share key learnings, accelerating progress towards eliminating viral hepatitis by 2030.



Since 2015, 2 811 561 screenings were registered in the database. 1 719 830 individuals were tested with positivity rate 7.86%.

"Association of Patients Cured from Hepatitis C" founded with the support of the National Center for Disease Control and Public Health.

An electronic module has been created to gather data on hepatitis C screening, where the information is supplied by each institution, which is conducting the hepatitis C screening.

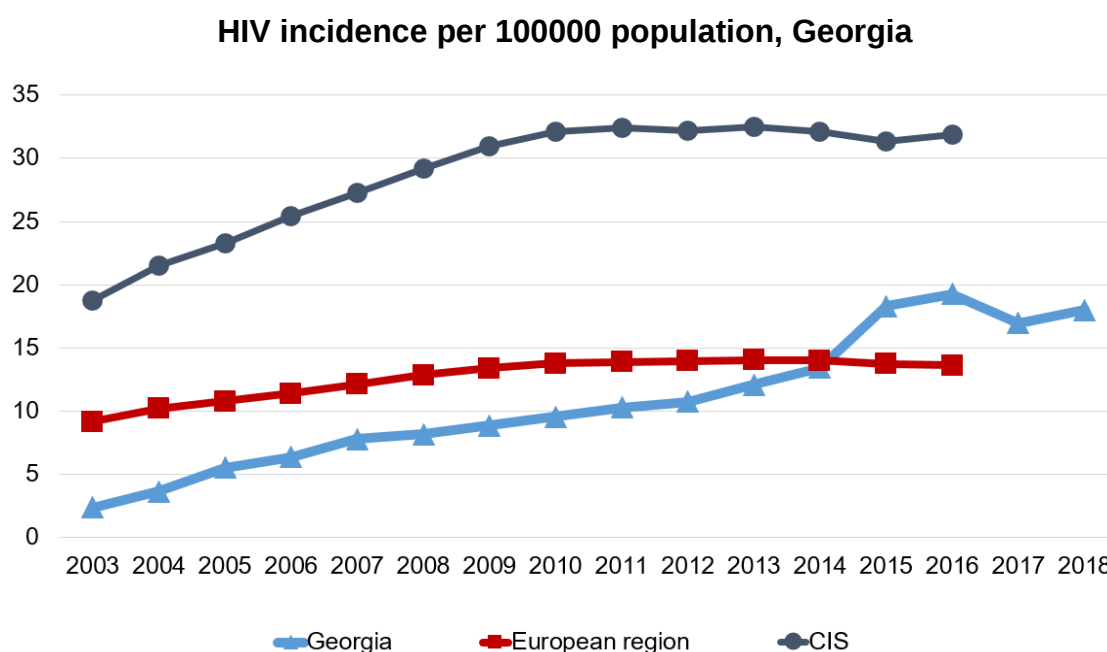
On February 11-13, 2019, the World Health Organization conducted the first regional consultation meeting on the virus hepatitis in the WHO region of Europe - "Achievements on the Way of Elimination", which is dedicated to review the progress and challenges achieved by countries in the process of overcoming the spread of viral hepatitis.

At the World Heritage Congress, in 2019, Georgia has been awarded the status of the first "Harmonious Country of Fight against Hepatitis".

HIV/AIDS

Georgia is considered as a country with low prevalence of HIV/AIDS. However, in recent years incidence of HIV/AIDS is characterized by the growing trend. In 2018, 672 new cases of HIV were registered (incidence per 100 000 population – 18.0) in Georgia, which shows around 6.3% decline compared to previous year.

This decline in registered cases shows a true decline in morbidity, as the number of tested under the State program and the Global Fund HIV Program in 2018 has been increased and constituted more than 188142 tests (in 2017 - 77800 tests) including 3315 tests for children. The HIV testing within the State Programs is conducted among pregnant women, blood donors, and behavioral high-risk and other groups, including prisoners of the penitentiary system (accused / convicted), patients with clinical signs of the diseases and patients with viral hepatitis infection. Also, within the framework of the Global Fund Program (GFTAM). Key affected population groups (IDUs, CSWs, MSM) receive HIV prevention services defined by the standard HIV prevention package, including HIV voluntary counseling and testing.

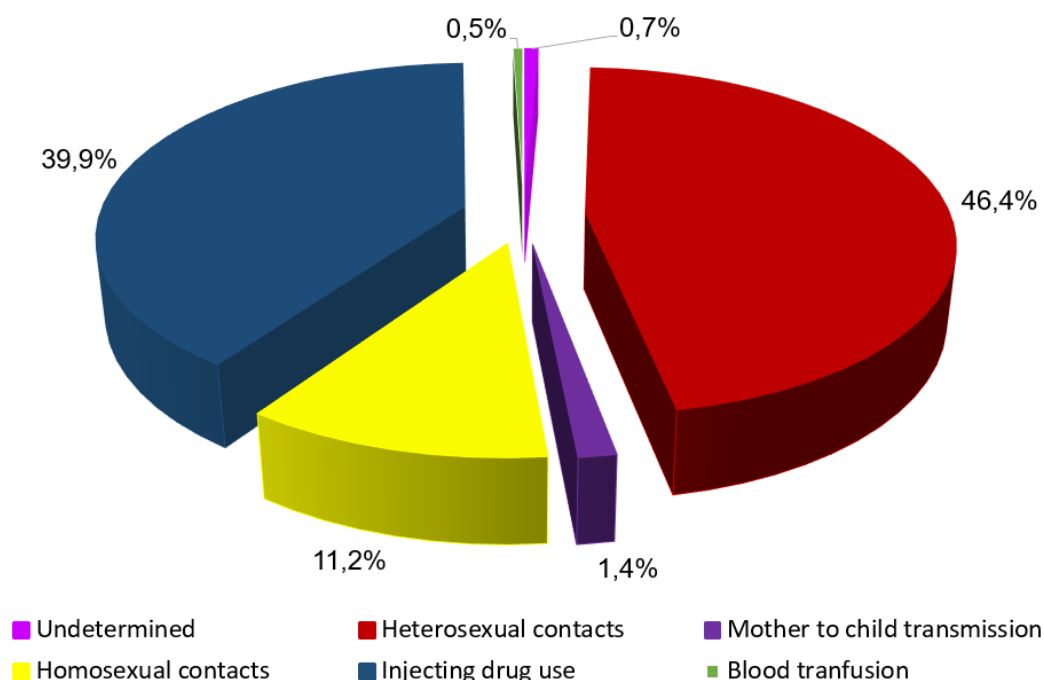


Source: World Health Organization HFA DB

With respect to the first “90” target from the UN three 90s targets (90-90-90) – timely diagnosis of people living with HIV is problematically low in the country. Accordingly, 40.6% of the new HIV cases were diagnosed at the AIDS stage in 2018.

In comparison with other countries of the region, Georgia has reached high performance levels in achieving the second and the third UN 90s targets: enrolment of HIV patients in antiretroviral treatment, and achieving viral suppression.

Distribution of Newly Diagnosed HIV Cases by Routs of Transmission, 2018



Source: Center for infectious pathology, AIDS and clinical immunology

The universal access to ART is guaranteed for all PLHIV living in Georgia including patients living in Abkhazia (conflict zone) since 2005. The Georgian ART Program is recognised as one of the best in EECA region due to high coverage, good retention data and high quality of the services provided to PLHIV countrywide. Georgia has moved to implementation of the WHO Treat All strategy as early as in December, 2015 offering ART to all registered PLHIV despite their CD4 count.

In 2016, with GFATM support the country was able to largely scale up the Needle and Syringe Program coverage up to 61% of the estimated 49,700 IDUs through operation of 14 drop-in Centres and 8 mobile ambulatories covering up to 55 cities/municipalities of Georgia.

Georgia was one of the first also to start OST program in the region in 2005, including two long term methadone detoxification programs in prisons. In 2017 total 5 603 IDUs were enrolled in the State Methadone Substitution Therapy, from which 37 were women. The number of HIV positive IDUs enrolled in OST was 70.

On-going and future activities include:

- National HIV Strategic Plan (NSP) of Action 2016 -2018 was endorsed by the Government in July 2016. The Plan is supported with relevant M&E framework.
- In 2016, the country has developed TGF programs' Sustainability and Transition Plan for 2017 - 2021 to ensure smooth and effective transition from the TGF funding to the domestic funding of HIV program activities by 2022.
- NSP for 2019-2022 has been developed in 2018.

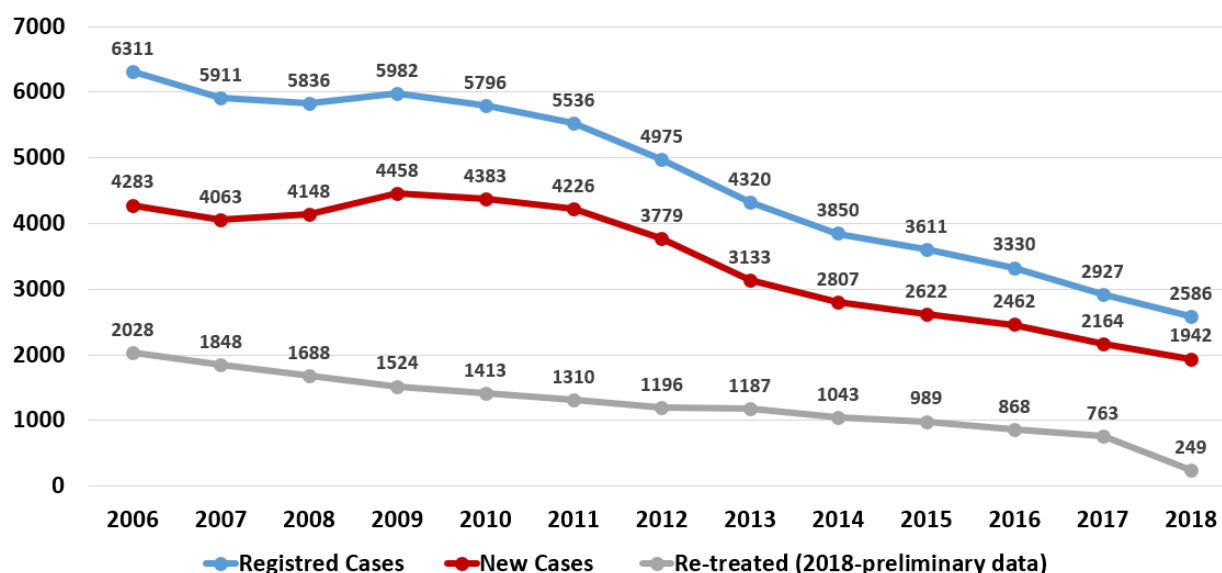
- WHO SPECTRUM modelling tool has been applied for estimation of HIV and STI burdens in Georgia.
- Georgia in planning the elimination of mother to child transmission of HIV and syphilis by 2020.

Tuberculosis

According to the World Health Organization estimates, there is a trend for decrease of tuberculosis morbidity in Georgia, although, indicators are high, compared to the European region and the EU countries.

Georgia has achieved remarkable progress in fight against Tuberculosis. During the last several years prevalence of TB has been decreasing on average by 9% annually and based on a robust and sustainable surveillance system, this trend seems to reflect a genuine reduction in incidence. According to the NTP data, a total of 2586 TB cases, all forms, were registered in the country in 2018 (including penitentiary sector), or 69.4 per 100,000 population; out of these, 1942 were new cases (52.1 per 100,000).

TB case notification in absolute numbers, Georgia



Source: National TB Program

2.0% of new cases and relapses were registered in penitentiary system. The share of pulmonary tuberculosis constituted 78.6% of all new cases.

Tuberculosis incidence rate per 100000 population, Georgia



Source: <http://www.thelancet.com/lancet/visualisations/gbd-SDGs>

The “successful treatment” of the new and relapse cases of bacteriologically confirmed pulmonary tuberculosis represents a good assessment characteristic of the tuberculosis control and management. In 2005, “successful treatment” of new and relapse cases of bacteriologically confirmed pulmonary tuberculosis showed only 64.1%. In 2014 and 2015, this indicator increased up to 81% (cohort of 2013), in 2016 – up to 85.9% (cohort of 2015), in 2017 – 84%. 2018 data of “successful treatment” will be available at the end of June 2020.

With GFATM support Georgia was able to implement effective anti-TB treatment for both, sensitive and MDR TB patients. The country ensured universal access to the first and the second line drugs. New TB drugs (Delamanid and Bedaquiline) are available within the National TB program.

The Georgian national TB program has achieved remarkable successes in the uptake and implementation of contemporary international strategies and guidance in TB control. In order to improve geographical access for out-patient treatment the Video Observed Therapy (VOT) pilot program was initiated in the capital city. The country introduced modern diagnostic methods approved by the WHO: culture on liquid media, GeneXpert MTB/RIF systems for rapid diagnosis of TB and MDR-TB.

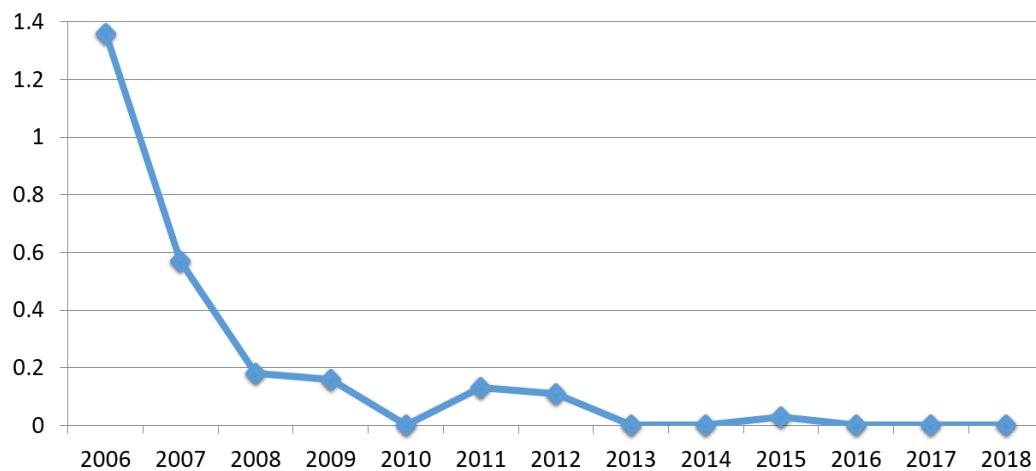
National Strategic Plan for Tuberculosis Control in Georgia 2016-2020 and Transition Plan developed through multilateral dialogue are endorsed by the government.

Georgia has established strong collaboration with international partners and local stakeholders to ensure TB program effectiveness and sustainability. Georgia has been part of multi-central research projects such as: FIND, EXPAND TB, STREAM, STAND, END-TB, Nix-TB.

Malaria

Since 2002, malaria incidence has been substantially reduced, reaching zero point in 2013 – 2014. From 2013, no local (endemic) cases of malaria was recorded in Georgia. In 2018, the surveillance system has identified 11 suspicious cases, of which 9 cases have been confirmed (all of them were imported from the endemic countries). Among confirmed cases 3 were foreign citizens and 6 were Georgian employed abroad. In 2018, totally 9 261 030 m² outdoor and indoor territory was processed for vector control by Ministry of Agriculture and Ministry of Labour Health and Social Affairs (2016 – 7.5 mln m², 2017 – 9 mln m²).

Malaria incidence per 100000 population, Georgia



Source: NCDC

Antimicrobial Resistance (AMR)



The national AMR strategy plan in line with the One Health approach, developed by the national experts with the participation of the World Health Organization (WHO) consultants and approved by Government of Georgia in January 11, 2017 and successfully implemented since then.

The national antimicrobial resistance committee held regular meetings to discuss progress on national AMR strategy plan implementations; had been establishes three sub-committees – microbiology, epidemiology and infectious disease directions.

Georgia is continuing successful cooperation with the Global Antimicrobial Resistance Surveillance System (GLASS), the Central Asian and Eastern European Surveillance of Antimicrobial Resistance (CAESAR) and Baltic Antibiotic Resistance Collaborative Network (BARN).

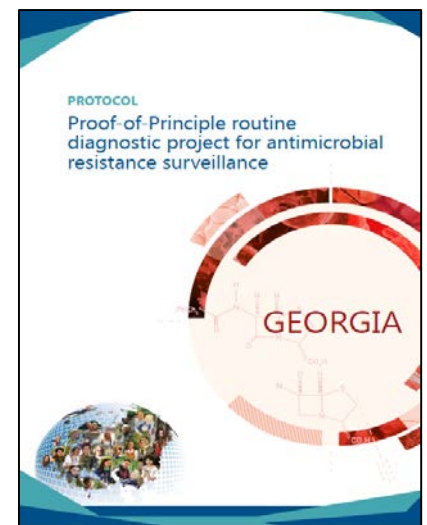
National Microbiology Laboratory Network has been extended (which now includes 23 laboratories) led by R. Lugar Center for Public Health Research, National Center for Disease Control and Public Health (NCDC). National External Quality Assessment (EQA) Program “GEOMICQUA” has been established on the bases of Lugar Center, NCDC and provides PT panels for Bacteriology and AST 4 times a year across the country.

WHO is supporting AMR related activities - workshops, trainings, meetings since 2014.

The European Committee on Antimicrobial Susceptibility Testing (EUCAST) standards were implemented and extended in microbiology laboratories.

The country performed following activities:

- National AMR reference laboratory capacity at Lugar Center has been strengthened in terms of antimicrobial resistance surveillance capability and implemented phenotypic and molecular confirmatory tools of AMR mechanism.
- Since 2016 Georgian AMR data is shared to the Central Asian and Eastern European Surveillance of Antimicrobial Resistance (CAESAR) and Global Antimicrobial Resistance Surveillance System (GLASS).
- Since 2014, 14 different laboratories including NCDC are involved in WHO EQA AMR network.
- Point Prevalence Survey (PPS) on antibiotic usage and antimicrobial resistance was conducted in 14 intensive care units (ICU) of the 10 hospitals across the country.
- Postgraduate training module on infection prevention and control (IPC) have been elaborated.
- The national guideline on IPC was developed.
- The Sanford Guide to Antimicrobial Therapy (2018) has been translated and published into Georgian language.
- Informative meeting was conducted with private and state veterinarians regarding awareness of rational use of antimicrobials. Based on governmental decree # 22 residue monitoring was conducted in live animals (farm level) and products of animal origin (food chain). Legislation changes were conducted in governmental decree 327 for cancelation of state registration of Veterinary Medicinal Products forbidden to use in farm animals. Veterinary AMR Strategy under One Health AMR strategy (# 29 governmental Decree) was drafted and is ready for adoption and implication.



Non-traditional healthcare settings:

- Currently, compliance with the existing IPC regulations is controlled by the local public health centers. Violators are being penalized.
- IPC monitoring tool was developed.
- IPC was monitored in beauty parlors, tattoo salons, and other non-healthcare facilities using the tool

- State regulations/policies for IPC during aesthetic and cosmetic procedures were developed and enforced.
- Trainings were conducted for non-medical facility staff on IPC-related topics.

International Health Regulations and Global Health Security Agenda



Georgia reached the full compliance with the core IHR requirements by the June 2012 deadline set by the World Health Organization (WHO). Only 16% of countries reported reaching full compliance with the core IHR requirements by the June 2012 - first deadline set by the World Health Organization (WHO) and Georgia was among them.

The National Center for Disease Control and Public Health (NCDC) is designated as the National Focal Point (NFP). NCDC is accessible at all times for communications with the WHO IHR Contact Point, has a

24/7 duty officer system, is able to receive notifications from national surveillance system and from other stakeholders, conduct risk assessment and notify WHO contact point of IHR within 48 hours.

The Global Health Security Agenda (GHSA) was launched in February 2014 to advance a world safe and secure from infectious disease threats, to bring together nations from all over the world to make new, concrete commitments, and to elevate global health security as a national leaders-level priority. GHSA has become a new vision for Georgia since its launch, when first external assessment of baseline GHSA capabilities was conducted and since Georgia took a path to contribute to Zoonotic Disease and National Laboratory System Action Packages and lead an Action Package of Real-Time Surveillance.

Bio-surveillance Network of the Silk Road (BNSR) as a regional partnership, which consists of Human and Animal Health professionals from Georgia, Azerbaijan, Kazakhstan, and Ukraine, works to create sustainable, integrated disease surveillance network, thereby contributing to One Health perspective and supporting the implementation of global health security agenda within the region.

Richard Lugar Center for Public Health Research

R. Lugar Center for Public Health Research is a brand new facility under the National Center for Disease Control and Public Health (NCDC), which became operational in August 2013.

The Lugar Center is top-tiered institution in NCDC's system. Establishment of the Lugar Center took start in 2004, after USA – Georgia Agreements were signed (in 1997 and in 2002) on cooperation in the area of prevention of proliferation of technology, pathogens and expertise related to the development of biological weapons.



The Lugar Center consists of modern BSL-2 and BSL-3 laboratories, with emphasis to timely detection and identification of human and animal pathogens based on the One Health concept. This Biosafety Level 3 (BSL-3) facility houses bacteriology and virology laboratories, and the National Repository of human and animal especially dangerous pathogens (EDPs). The BSL-3 facility is unique not only in Georgia but also in the entire Caucasus and Central Asia Region. The Center also includes the well-equipped genomic center, which makes the center a unique sequencing facility in the region.

The quality control activities of NCDC's Polio, Influenza and Measles/Rubella Laboratories are accredited by the World Health Organization (WHO). Four Labs are connected to WHO Lab Network: Rota, Invasive Meningitis, Malaria, and Salmonellosis. The center participate on WHO Laboratory Networks: CAESAR AMR network, Global Antimicrobial Resistance Surveillance system (GLASS); antimicrobial resistance determination is based on European Committee on antimicrobial Susceptibility Testing (EUCAST) guidelines.

On the basis of the Lugar Center, the following scientific achievements were made the first time in the World:

- New species of Orthopox virus discovered (so called Akhmeta virus).
- Brucellosis and leptospirosis pathogens were found in bats.
- Bartonella taylorii was detected as a human pathogen in patients with HIV / AIDS; Janibacter hoylei PVAS-1 was separated from endocarditis clinical sample.



In addition, the first time in Georgia:

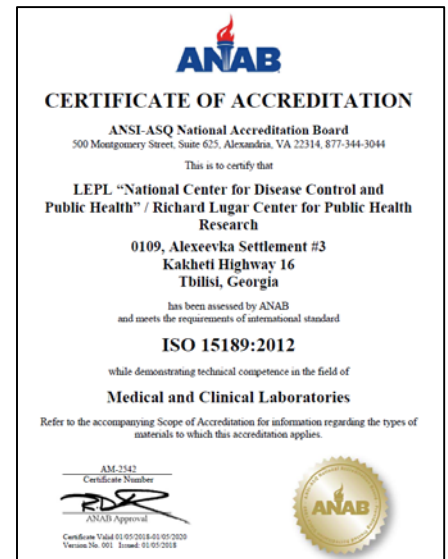
Cowpox detected in Samegrelo

- The Results of the suspected but unconfirmed samples 41% of Anthrax turned out to be caused by the viral infection of Parapox
- Information on AMR was processed and published on the CAESAR network
- Gram-negative bacteria was detected as high resistant (ESBL)
- First time it was introduced bacterial isolates of carbapenem for monitoring
- The mechanism of resistance was developed and resistant strains of Neisseria gonorrhea
- Viral pneumonia cases, bacterial research / molecular method found to be positive for bacterial etiology on Streptococcus pneumonia
- Anthrax in soil active foci detection increased to 15% (10% historically). Correspondently, increased the risk of disease in animals, as well as in humans
- Tularemia new foci was detected in Kvemo Kartli
- Cl. Difficile was isolated from clinical samples
- Leptospirosis species were identified in the country
- Escherichia coli (STEC) toxical markers (stx1/stx2/eae/Ehly) were identified
- Salmonella spp., Shigellosis spp. And inner toxins were identified producing Escherichia coli (STEC) of the genetic profiles of the pulsing field gel electrophoresis (PFGE), which is the source of an outbreak detection and identification
- Sequencing of measles / rubella was introduced. Cases revealed measles genotype - D8
- New serotypes of Salmonella and Shigella have been found
- Through GARP (Genetic Algorithm for Rule-set Production) it became possible to forecast and ecologically model of vectors; GIS database started to be developed
- Established Global Hepatitis Outbreak and Surveillance Technology (GHOST) center for Hepatitis C surveillance Next Generation Sequence based Clinical applications has been implemented

NCDC was awarded "Quality Management System" (in the area of laboratory examinations) International Standard ISO 9001:2008 certification in 2015.

Lugar Center has been assessed by ANAB according to the requirements of international standard ISO 15189:2012 while demonstrating technical competence in the field of Medical and Clinical Laboratories and received the Certificate of Accreditation in Clinical Bacteriology and Serology.

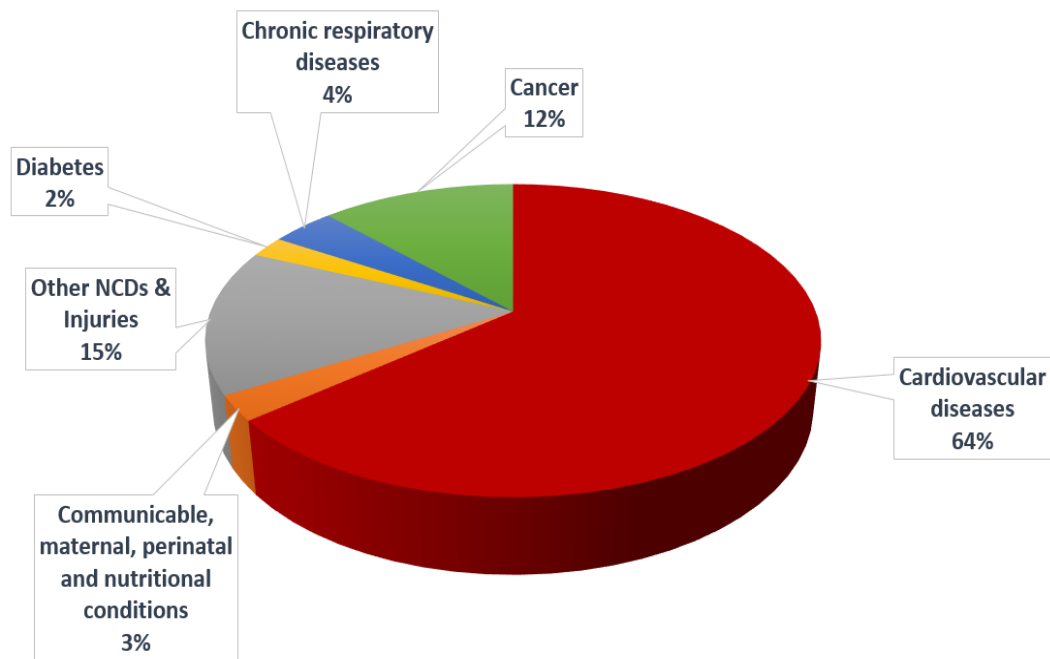
As the country's NPHRL, Lugar Center established a National EQA Program. In 2017, Lugar Center launched national EQA program by sending PT panels and required documents to all laboratories listed in the Hepatitis C registry.



Noncommunicable diseases

Noncommunicable diseases make the greatest proportion of the total burden of disease and injuries in Georgia affecting the most productive years of life, they make influence not only on health but also on sustainable development of the country.

Mortality structure, Georgia, 2018



Source: WHO

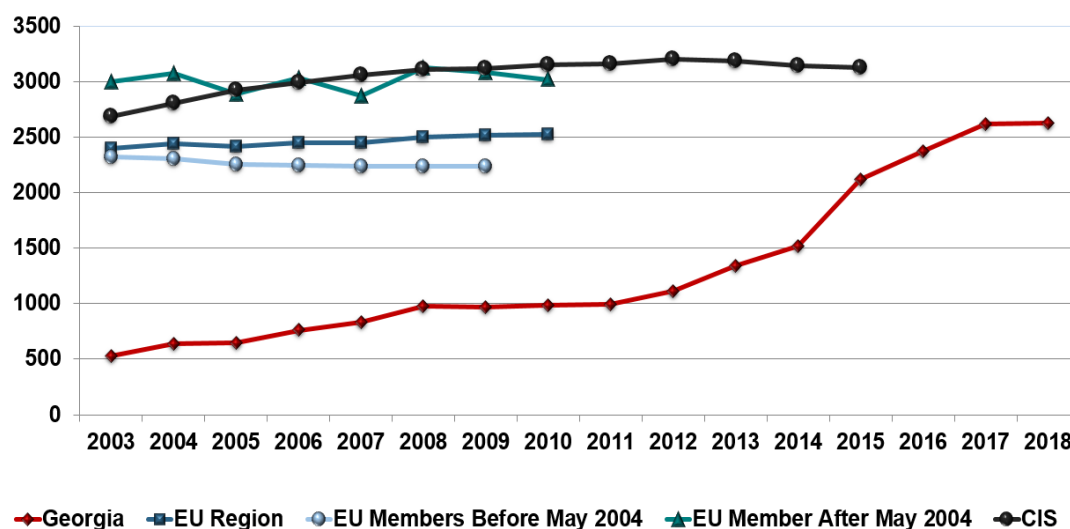
For the effective prevention and control of NCDs, it is essential to have timely access to precise and reliable information, to monitor and interpret health indicators, to monitor and evaluate the impact of interventions. For the effective NCD surveillance Georgia implemented The WHO STEPs wise approach; 2 rounds of STEPS surveys were conducted in 2010 and 2016 with technical and financial assistance of the WHO-Euro and WHO-HQ and giving us the unique possibility to compare the data not only with other countries but to monitor and evaluate patterns and trends of NCDs and risk-factors in Georgia. These are the first steps to contribute to building sustainable surveillance systems, which improved national capacity and provided the better health information and thus better opportunities necessary for effective NCD prevention and control to improve the health of our citizens.

In 2017, the State launched a program for socially vulnerable population, which considered provision of medicines for chronic noncommunicable diseases (ischemic heart disease, hypertension, heart failure, asthma, diabetes type 2, and thyroid gland diseases).

Diseases of the circulatory system

Diseases of the circulatory system constitute 15.3% of all registered and 7.4% of all new cases of diseases in the country. Hypertension, ischaemic heart diseases, and cerebrovascular diseases are characterised with high morbidity and mortality. In 2000–2018, in Georgia, the prevalence of diseases of circulatory system had an increasing trend.

Diseases of the circulatory system, hospitalization rate per 100000 population

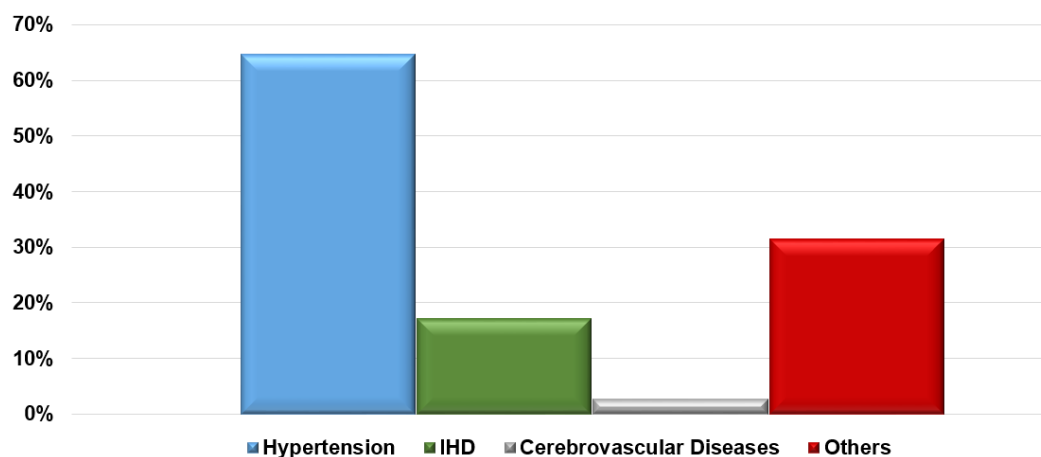


Source: World Health Organization HFA DB

Hypertension

The share of hypertension new cases constitutes about 48.1% of all cardiovascular diseases in Georgia (2018). According to the noncommunicable diseases risk-factors survey (STEPS-2016), 37.7% of the population suffers from hypertension. While, according to the previous similar survey data (2010), this share was 33.4%.

Diseases of the circulatory system, structure of new cases (%), Georgia, 2018



Source: NCDC

Ischaemic heart diseases

In 2018, ischaemic heart diseases constitute about 16.3% of all new cases of diseases of the circulatory system: angina pectoris – 4.9%; acute myocardial infarction – 2.2%, other acute ischaemic diseases – 1.5%.

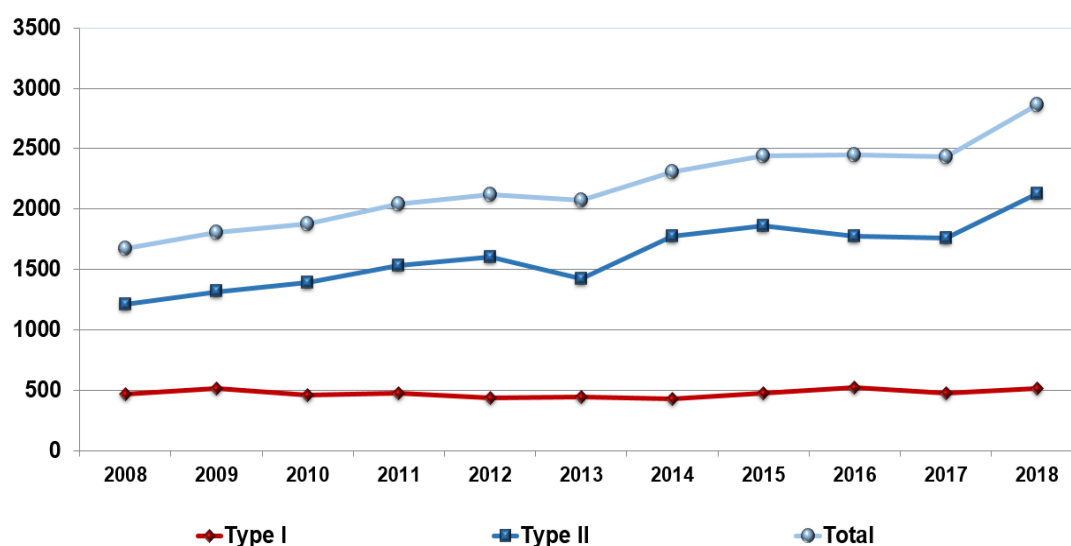
Cardio-surgical interventions

After introduction of the Universal Healthcare Program in the country accessibility to the cardiosurgical interventions is substantially increased. In 2018, 19483 cardio-surgical operations has been conducted, among them 3977 - by Universal Health Care Program. In 2018, 2131 bypass operations, 232 operations of Implantation of permanent cardioverter-defibrillator, 516 operations for excision or ablation of aberrant pathway or focus of heart and 540 valve replacement were performed.

Diabetes Mellitus

An upward trend of diabetes mellitus has been registered in recent years in Georgia, mainly caused by increasing the cases of diabetes type II. In 2018, 1.01% of new cases of diabetes type I were registered in children under 15. There were 3 cases of diabetes type 2 registered in children. According to the STEPS-2016 data, 2% of 18-69 years old population had impaired fasting glycaemia (6.1 – 7.0 mmol/l), and 4.5% - raised fasting blood glucose (>7.0 mmol/l).

Diabetes Mellitus, prevalence per 100000 population by type, Georgia



Source: NCDC

Chronic Respiratory Diseases (CRD)

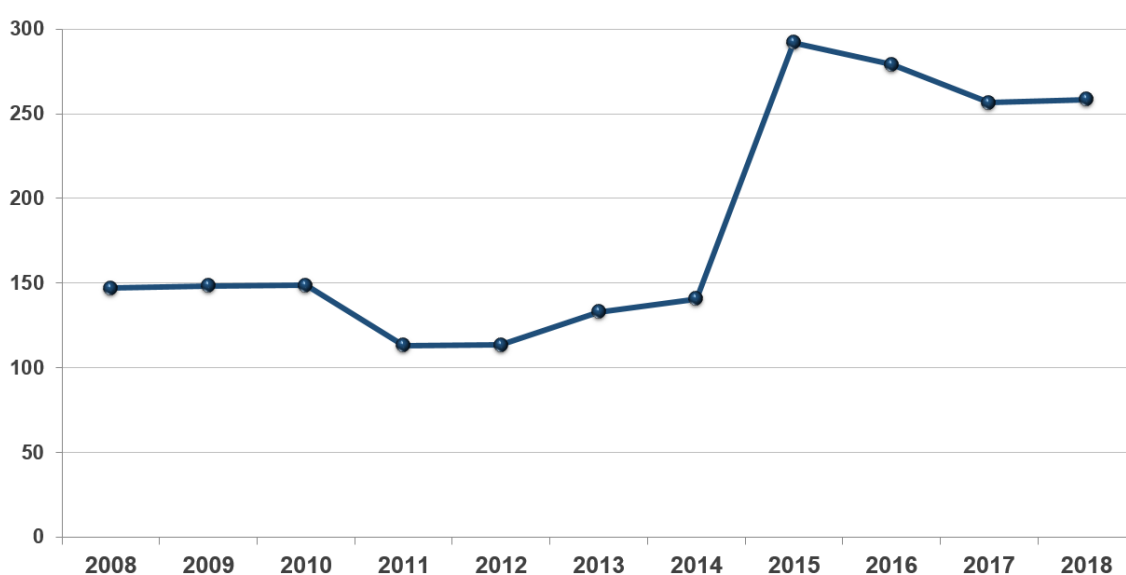
Chronic respiratory diseases (asthma, respiratory allergic diseases, chronic obstructive pulmonary diseases, occupational lung diseases, pulmonary hypertension) constitute the main share of diseases of the respiratory system.

In 2018, chronic obstructive pulmonary diseases (COPD) contributed 75.9% of all registered cases of lower respiratory diseases.

Malignant neoplasms

In Georgia, since 2015, January 1, a Population Cancer Registry (CR) has been implemented in order to improve cancer case registration and surveillance. According to the CR data, 10881 new cases of malignant neoplasms, including non-melanoma skin cancers and cancers in situ were registered in 2015 (incidence rate per 100 000 population – 291.9). In 2016, there were registered 10404 new cases (incidence rate per 100000 population – 279.1); in 2017 a drop of the number of new cases was mentioned – 9562 (incidence rate per 100000 population – 256.6). In 2018, 9635 new cases had been registered by the CR (incidence rate per 100000 population – 258.5).

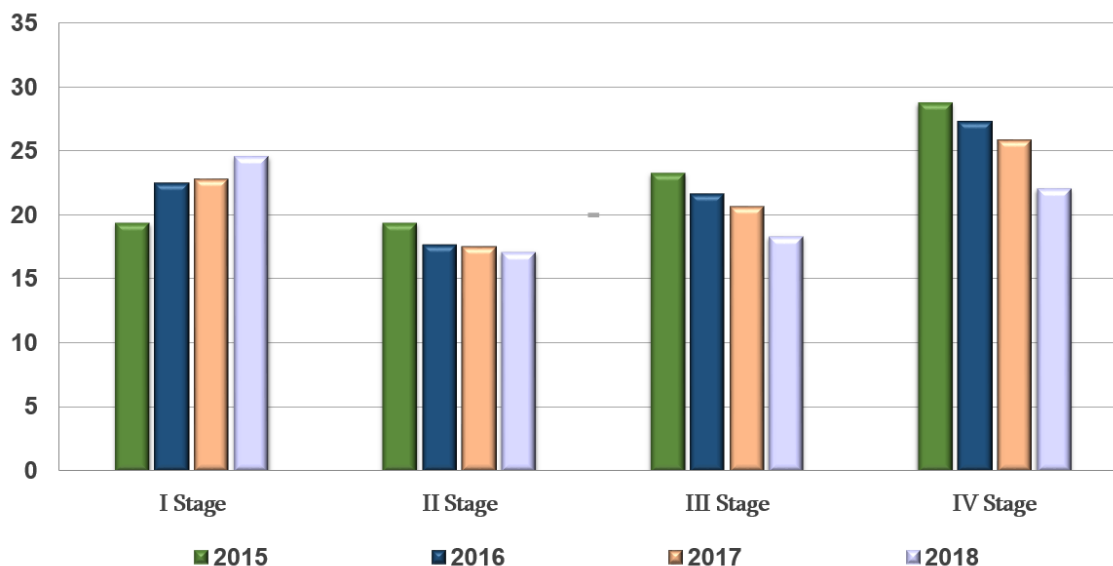
Malignant neoplasms, incidence per 100000 population, Georgia



Source: NCDC

In 2018, 56.8% of all new cases were registered in women and 43.2% - in men. 70% of all new cases are registered in the working age group (30 – 70 years); about 26.3% - in the population aged 70 years and more; 0.7% - in children (under 15 years), and 0.6% - in adolescents (15 – 19 years).

According to the cancer registry data in 2015-2018, the share of cancers, diagnosed at the I and II stages, constituted 40.0%, and the share of cases diagnosed at III and IV stage is high (in 2015 – 51.9%; in 2016 – 48.8%, in 2017 – 46.4%).

New cases of cancer by stages (%), Georgia, 2015 - 2018

Source: NCDC

5 most common sites of cancer in women, Georgia, 2018

Site	Number of new cases	Share from the total number of all new cases in women (%)
Breast	1603	29.3
Thyroid gland	934	17.0
Colorectal	332	6.1
Cervix uteri	328	6.0
Corpus uteri	276	5.0

Source: NCDC

5 most common sites of cancer in men, Georgia, 2018

Site	Number of new cases	Share from the total number of all new cases in men (%)
Trachea, bronchus, lung	580	13.9
Prostate	460	11.1
Bladder	405	9.7
Colorectal	373	9.0
larynx	230	5.5

Source: NCDC

From 2013 the Universal Healthcare Program covers chemo-, hormone, and radiotherapy of cancer patients, within the yearly limit of 12 000 GEL, as well as surgery treatment within the yearly limit of 15 000 GEL.

At present, several adequately equipped departments with appropriate personnel and quality control are operating in Georgia, which provide radiation therapy for oncological patients. The most of radiotherapy machines are gathered in Tbilisi, capital city of Georgia: seven linear accelerators, four brachytherapy, and two cobalt distance beam radiation therapy equipment. In addition, two linear accelerators are functioning in the west part of the country, in Kutaisi and Batumi – single machines in each cities, that supports regional accessibility to radiotherapy.

All kind of services within nuclear medicine are accessible for oncological patients in the country, including diagnostic procedures with technetium 99m (Tc-99m), radioactive iodine therapy, and a positron emission tomography (PET) scan. All nuclear services mentioned above are presented in Tbilisi.

**Number of oncological patients according to the provided methods of treatment,
2015-2018**

Method of treatment	Number of cases			
	2015	2016	2017	2018
Chemotherapy	3650	3208	2545	3143
Radio-therapy	2498	2443	2065	1576
Surgical	6283	6368	5754	5275
Palliative care	1533	1345	1100	978

Source: NCDC

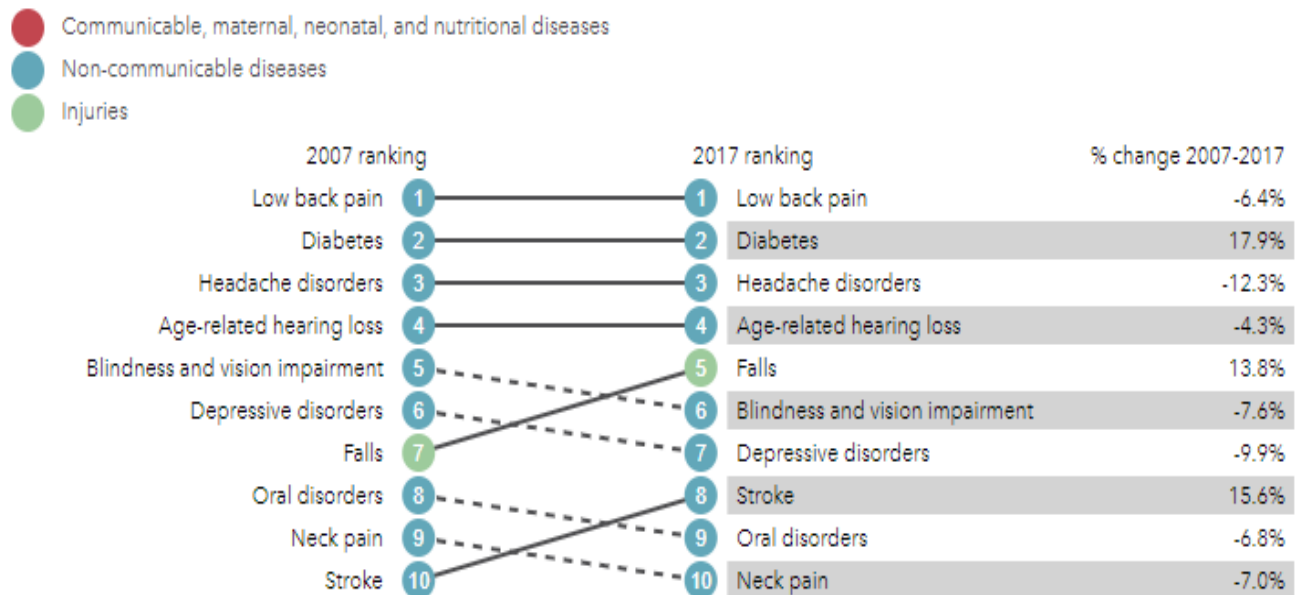
From 2016 the Ministry provides Herceptin to HER-2 positive early aggressive breast cancer patients, the aim of the program is to provide innovative, targeted treatment to Georgian women, diagnosed with the early aggressive breast cancer and increase financial affordability of the treatment.

Since 2011, the following cancer screening programs have been implemented in the country:

- Breast cancer screening for 40-70-year-old women;
- Cervical cancer screening for 25-60-year-old women;
- Prostate cancer management for 50-70-year-old men;
- Colorectal cancer screening for 50-70-year-old population.

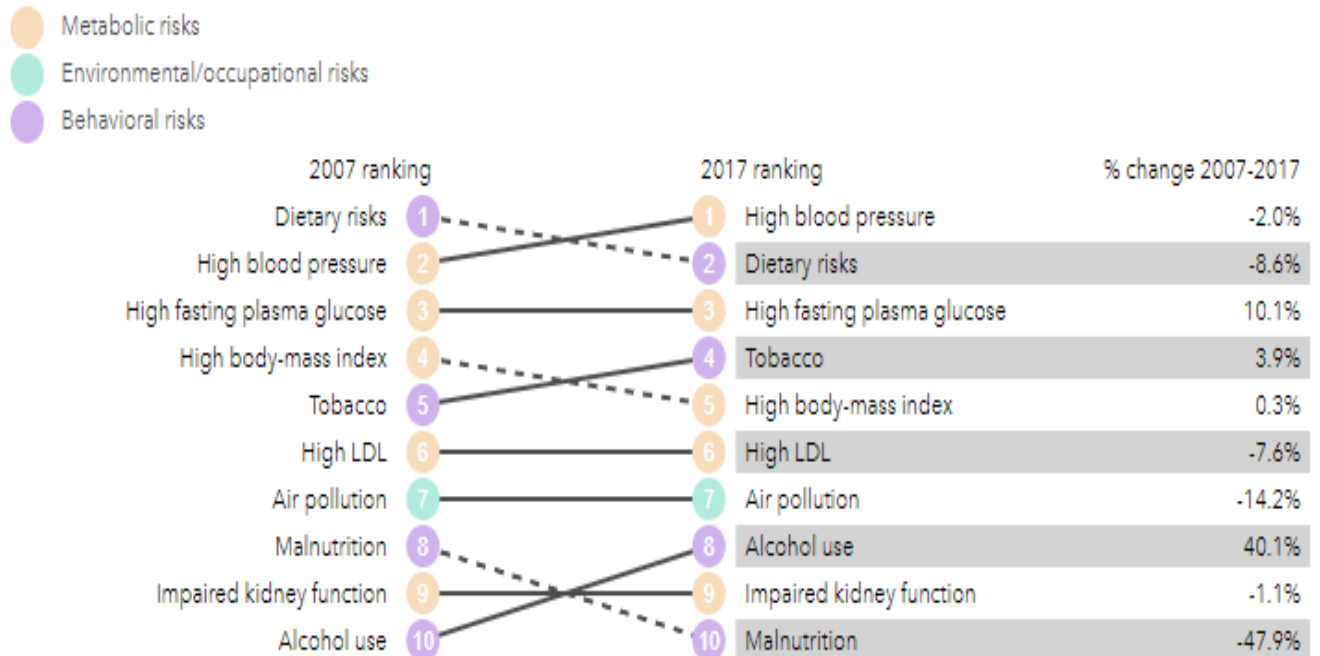
According to the data of the noncommunicable diseases risk-factors survey (STEPS-2016), the lifetime prevalence of cervical cancer screening in 30-49 years old women is just 23.9%.

Top 10 causes of years lived with disability (YLDs) in 2017 and percent change, 2007-2017, all ages



Source: <http://www.healthdata.org/georgia>

Top 10 causes of disability-adjusted life years (DALYs) in 2017 and percent change, 2007-2017, all ages



Source: <http://www.healthdata.org/georgia>

Risk factors

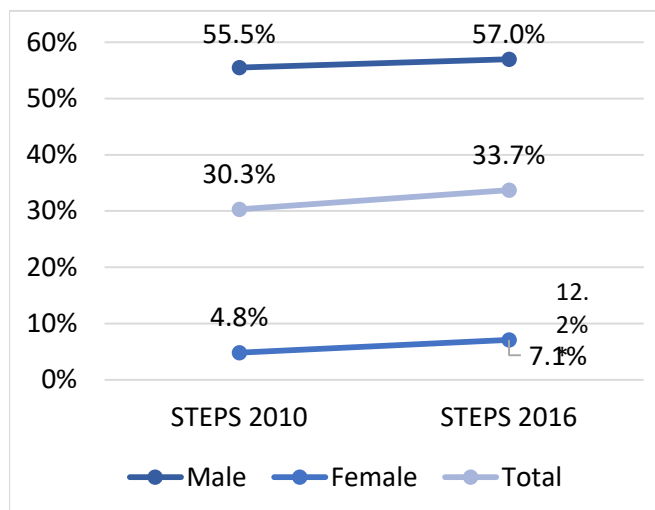
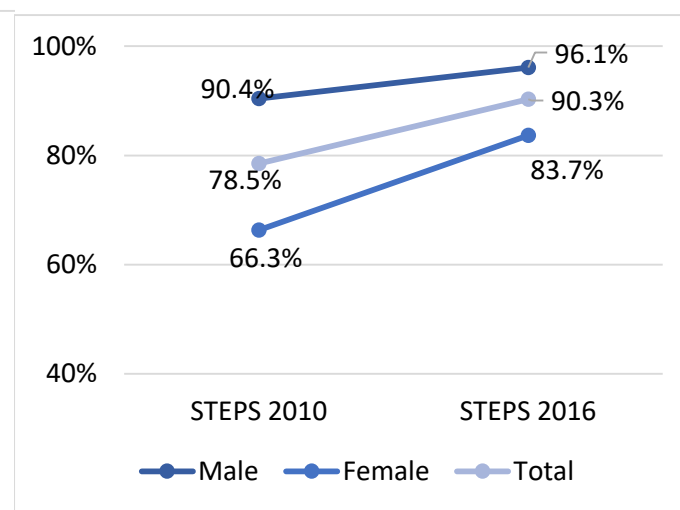
According to the data of the noncommunicable diseases risk factors survey (STEPS-2016):

Standardized rates in 18-69 population	Both sexes	Males	Females
Tobacco consumption			
Percentage who currently smoke tobacco	31.0%	57.0%	7.0%
Percentage who currently smoke tobacco daily	28.0%	51.5%	6.2%
<i>For those who smoke tobacco daily</i>			
Average age started smoking (years) among current daily smokers	18.3	17.8	22.4
Percentage of daily smokers smoking manufactured cigarettes	98.6%	98.4%	100.0%
Mean number of manufactured cigarettes smoked per day (by smokers of manufactured cigarettes)	21.3	22.2	14.4
Alcohol consumption			
Percentage who are lifetime abstainers	10.4%	3.9%	16.4%
Percentage who are past 12 month abstainers	20.1%	11.4%	28.1%
Percentage who currently drink (drank alcohol in the past 30 days)	39.1%	58.9%	20.8%
Percentage who engage in heavy episodic drinking (6 or more drinks on any occasion in the past 30 days)	18.3%	35.3%	2.6%
Diet			
Mean number of days fruit consumed in a typical week	5.3	5.1	5.4
Mean number of servings of fruit consumed on average per day	2.0	2.0	2.1
Mean number of days vegetables consumed in a typical week	6.0	5.9	6.1
Mean number of servings of vegetables consumed on average per day	2.4	2.4	2.4
Percentage who ate less than 5 servings of fruit and/or vegetables on average per day	63.0%	63.8%	62.4%
Percentage who always or often add salt or salty sauce to their food before eating or as they are eating	26.7%	33.4%	20.6%
Percentage who always or often eat processed foods high in salt	14.3%	18.9%	10.1%

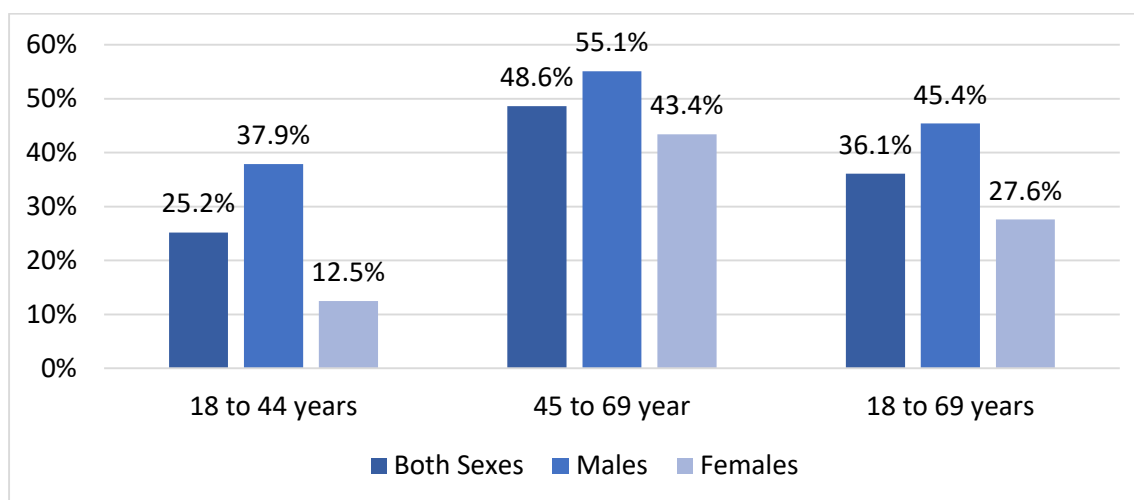
Physical activity			
Percentage with insufficient physical activity (defined as < 150 minutes of moderate-intensity activity per week, or equivalent)*	17.4%	16.2%	18.4%
Median time spent in physical activity on average per day (minutes) (presented with inter-quartile range)	137.1	158.6	173.8
Percentage not engaging in vigorous activity	82.4%	72.2%	91.8%
Cervical cancer screening			
Percentage of women aged 30-49 years who have ever had a screening test for cervical cancer	-	-	23.9%
Physical measurements			
Mean body mass index - BMI (kg/m ²)	28.1	27.9	28.3
Percentage who are overweight (BMI ≥ 25 kg/m ²)	64.6%	65.5%	63.8%
Percentage who are obese (BMI ≥ 30 kg/m ²)	33.2%	30.2%	36.0%
Average waist circumference (cm)	129.4	132.6	126.5
Mean systolic blood pressure - SBP (mmHg), including those currently on medication for raised BP	82.2	83.0	81.4
Mean diastolic blood pressure - DBP (mmHg), including those currently on medication for raised BP	37.7%	38.6%	36.9%
Percentage with raised BP (SBP ≥ 140 and/or DBP ≥ 90 mmHg or currently on medication for raised BP)	55.4%	64.2%	47.2%
Biochemical Measurement			
Mean fasting blood glucose, including those currently on medication for raised blood glucose [mmol/L]	4.4	4.4	4.4
Percentage with impaired fasting glycaemia as defined below plasma venous value ≥6.1 mmol/L and <7.0 mmol/L	2.0%	2.0%	1.9%
Percentage with raised fasting blood glucose as defined below or currently on medication for raised blood glucose plasma venous value ≥ 7.0 mmol/L	4.5%	4.7%	4.3%
Mean total blood cholesterol, including those currently on medication for raised cholesterol [mmol/L]	4.3	4.1	4.5
Percentage with raised total cholesterol (≥ 5.0 mmol/L or currently on medication for raised cholesterol)	27.7%	21.9%	33.0%
Mean intake of salt per day (in grams)	8.5	9.7	7.4
Cardiovascular disease (CVD) risk			

Percentage aged 40-69 years with a 10-year CVD risk $\geq$ 30%, or with existing CVD**	28.8%	30.8%	27.1%
Summary of combined risk factors			
Percentage with none of the above risk factors	7.6%	5.7%	9.3%
Percentage with three or more of the above risk factors, aged 18 to 44 years	25.2%	37.9%	12.5%
Percentage with three or more of the above risk factors, aged 45 to 69 years	48.6%	55.1%	43.4%
Percentage with three or more of the above risk factors, aged 18 to 69 years	36.1%	45.4%	27.6%

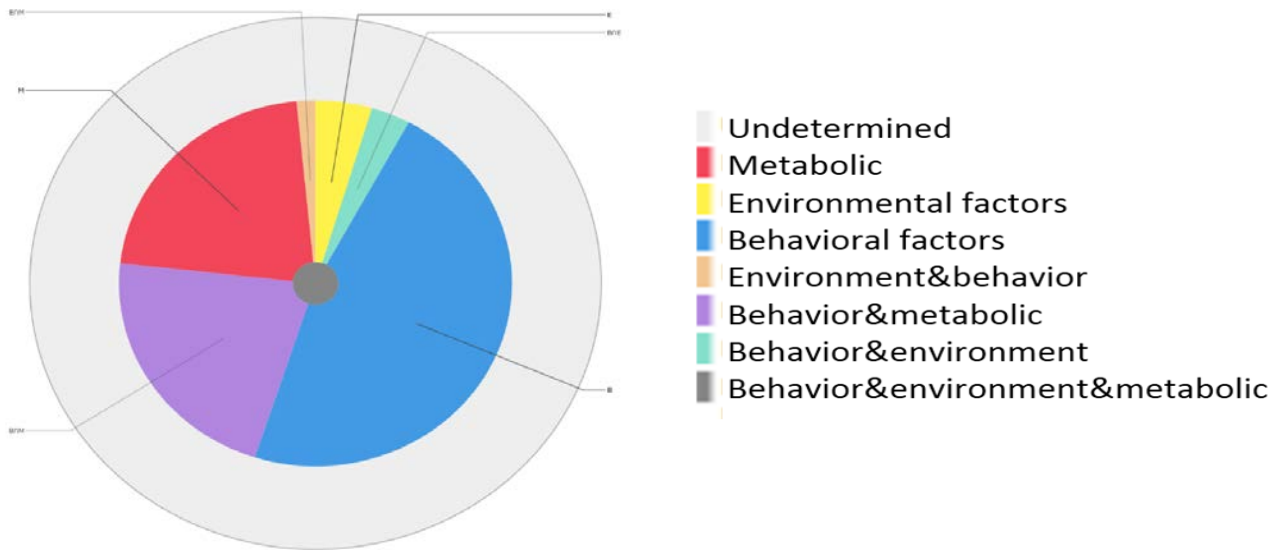
Source: NCDC

Current tobacco use % STEPS 2010-2016**Lifetime alcohol use (%); STEPS 2010-2016**

Source: NCDC

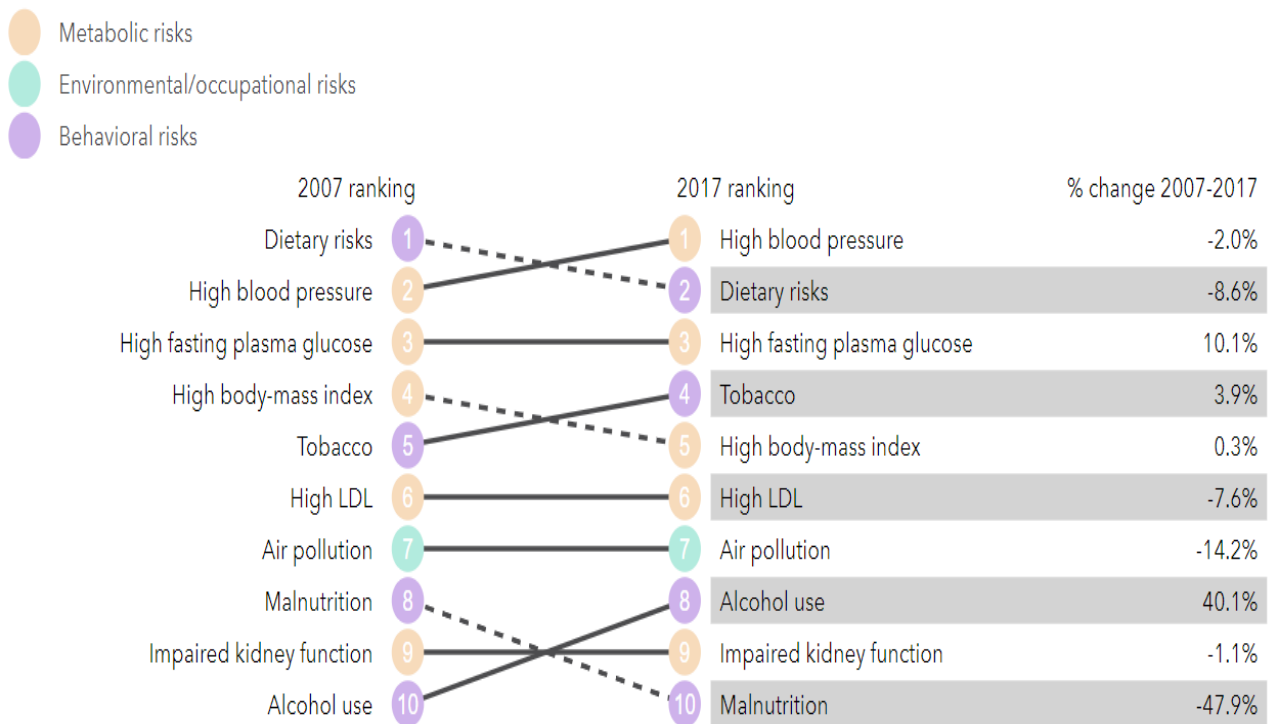
% with 3 or more risk factors; STEPS 2016

Loss of healthy life (DALYs) attributable to all risk factors, Georgia, 2017



Source: IHME

Main risk factors for death and disability, Georgia



Source: Global, regional, and national under-5 mortality, adult mortality, age-specific mortality, and life expectancy, 1970-2016: a systematic analysis for the Global Burden of Disease Study 2016

Strengthening of tobacco control in Georgia

On May 17, 2017 a legislative package on Tobacco Control was approved by the Parliament of Georgia as the amendments to the following laws: "On Tobacco Control", "On Advertising", "On Organizing Lotteries, Games of Chance and Other Prize Games", "On Broadcasting" and in the Administrative Offenses Code of Georgia.

Main amendments:

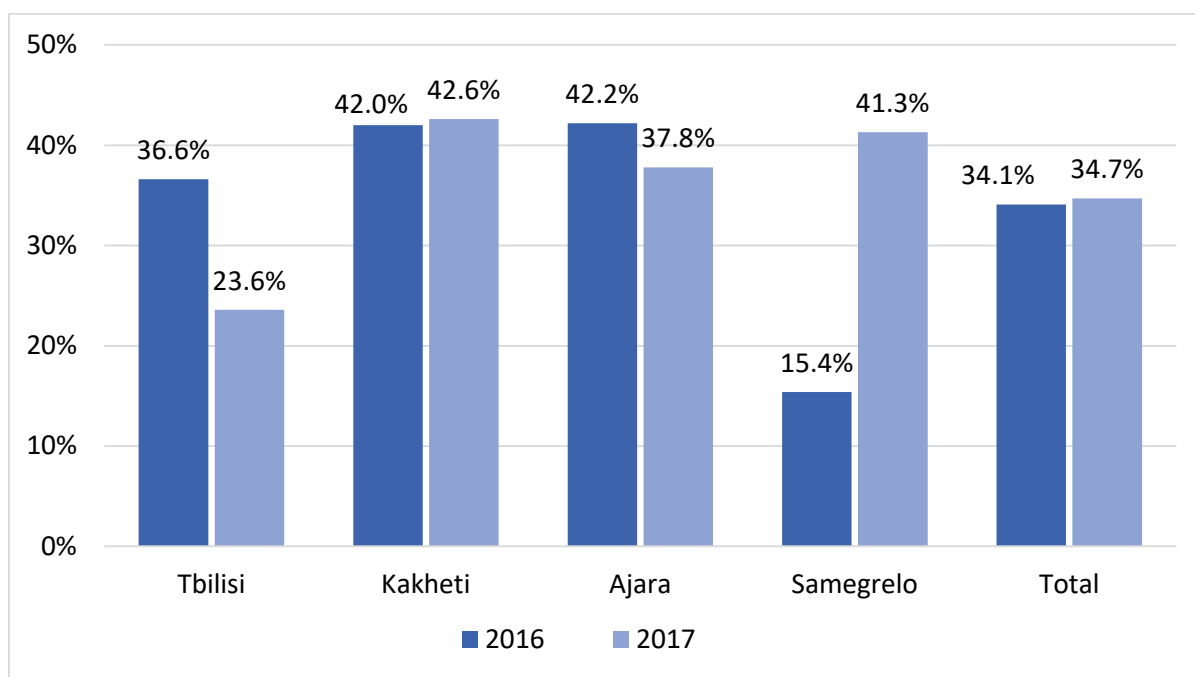
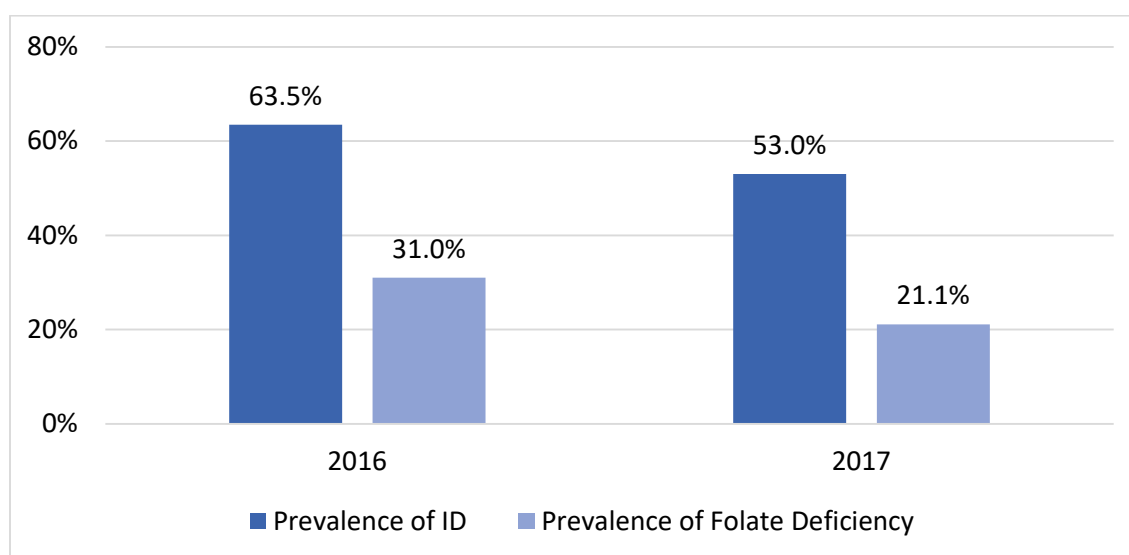
- Exclusion of the interests of tobacco industry and transparency in relationship between tobacco industry and public organizations/individuals in the process of preparation, adoption and establishment of health care decisions
- Increasing size of health warnings to 65% and obligatory pictorial warnings on front side of the packages of smoking tobacco
- Smoke-free public places (except casinos, cigar bars, and airport) - from May 1, 2018
- Complete prohibition of all types of advertisement (including through Internet) of tobacco products and accessories, promotion and sponsorship - from May 1, 2018
- Ban on placement of tobacco products, its accessories and consumption devices display on outer vitrines and windows of the store - from September 1, 2018
- Smoke-free stadiums - from May 1, 2020
- Ban on placement of tobacco products, its accessories and consumption devices display on internal vitrines - from January 1, 2021.

Collaboration project "Strengthening of micronutrients deficiency surveillance systems"

Since 2015, CDC/Atlanta and NCDC Georgia have started development and strengthening of nutritional surveillance under the collaborative project "Strengthening of micronutrients deficiency surveillance systems".

The surveillance system includes blood and urine laboratory component to detect iron, folate and iodine deficiency in children and pregnant women. During the project period quite interesting results have been got on nutritional status of the population, namely on the prevalence of micronutrients deficiencies. According to the data, about 34% of children aged 12-23 months have anemia, about 80% of children aged 12-23 months and 60% of pregnant women suffer from iron deficiency; 26% of pregnant women are affected by folic acid deficiency. At the same time, it should be mentioned, that according to the State program data, in 2017 rate of iron and folic acid deficiency in pregnant women had decreasing tendency. The prevalence rate of neural tube defects is high (2.7 per 1000 live births). No iodine deficiency cases were revealed in the studied population, also no significant malnutrition problems were observed in children.

From 2018 the surveillance system also includes vitamin D and calcium deficiency. From 2019 it is planned to add surveillance of blood lead level (BLL).

Anemia prevalence in children 12 – 23 months by regions**Prevalence of iron deficiency and folate deficiency in 1st trimester pregnant women; all sentinels by year****National assessment of iodine nutrition status and iodized salt use in Georgia**

Iodine deficiency disorders are endemic in Georgia. They are caused by low iodine levels in water and soil and, therefore, in locally produced food products. A survey conducted in 1998 showed various degrees of iodine deficiency in 55-58% of the population.

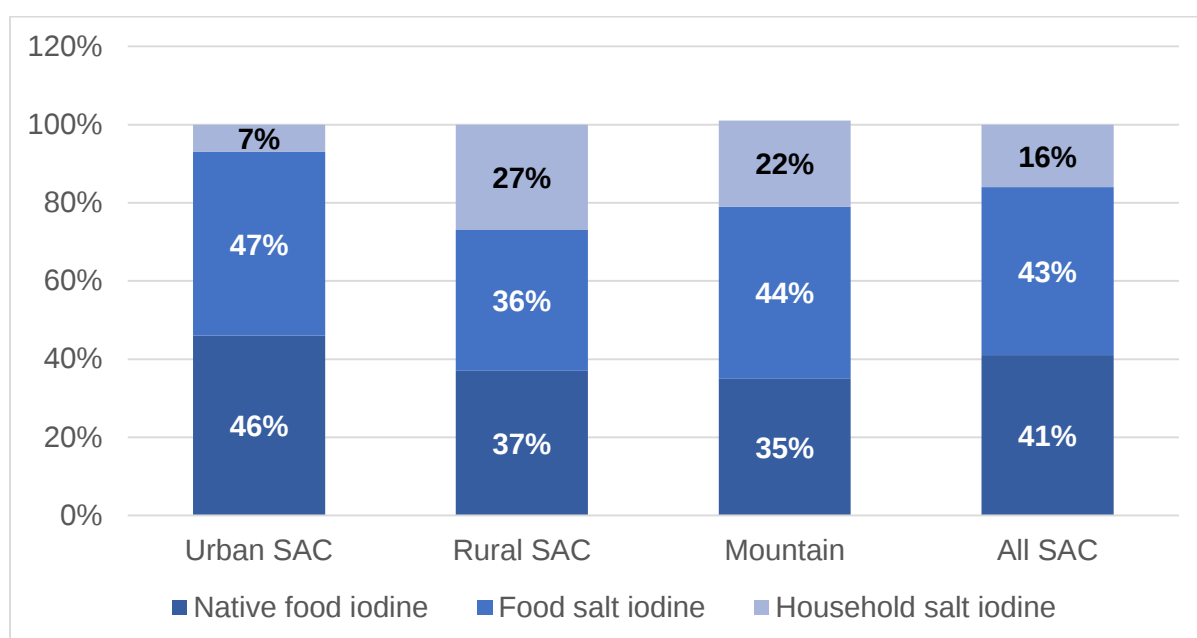
In 2005, the new law on “Prevention of Disorders Caused by Iodine, Micronutrients and Vitamins Deficiency” was adopted by the Georgian Parliament mandating universal salt iodization (USI) - to ban the import and trade of non-iodized salt. The law is the result of joint efforts by the Government of Georgia and UNICEF. The salt standard of 40 ± 15 mg iodine/kg salt was set.

To provide information on coverage of population with iodized salt and on adequacy of iodine content in salt, to determine status of iodine nutrition of the population in Georgia nationwide, to develop recommendations for revision of present normative values of iodine in salt the national iodine survey has been conducted by the NCDC in collaboration with the UNICEF-Georgia.

The results of the survey confirmed that Georgia has a sustained, effective USI program with more than 90% coverage of the population with qualitative iodized salt. Optimal iodine nutrition status has been achieved and sustained for the general population (based on assessments of school-aged children (SAC) and pregnant women. Analysis of iodine intakes in SAC showed no evidence of excess iodine consumption in any group (urban, rural, mountain).

According both surveys iodine deficiency has been eliminated as a public health burden in Georgia due to effective iodization of salt.

Iodine intake sources by child cohort in Georgia



The National Iodine survey confirmed optimal iodine status of the population of Georgia, due to sustained, effective USI program with more than 90% coverage of the population with quality iodized salt.

Environment and Health

Burden of disease caused by adverse environmental impacts is quite high (17%) in Georgia. In order to reduce and prevent the environmentally related diseases' burden and reduce people's exposure to ecological risks, the National Environmental and Health Action Plan has been developed based on requirements set by the Association Agreement between Georgia and the EU. Country has initiated the implementation of the commitments set in the National

Environment and Health Action Plan (NEHAP) through utilization of the twinning mechanism supported by the EU.

5 Strategic objectives are set forth in the newly elaborated NEHAP:

1. Ensure public health through improvement of access to safe and sustainable water supply and sanitation. Ensure access of each child to safe water supply and sanitation by 2021.
2. Improved children accessibility to healthy and safe environments and settings of daily life, promoting their increased physical activity by 2021.
3. The impact of ambient and indoor air pollution on human health assessed and implemented measures to reduce the harmful effects.
4. Prevention of morbidity caused by exposure to chemical substances.
5. Integration of health issues in climate change adaptation and mitigation policies.

The project Twining-GE22-"Strengthening Environmental Health System in Georgia" carried out by consortium of Italy, Poland and the UK, support by EU was started in 2017. The project purpose is to strengthen the legal framework on environmental health in Georgia through harmonization with European requirements, improving environmental health management, ensuring long-lasting environmental policy development and strengthening intersectorial collaboration.

In the framework of German Federal Ministry for Environment, Nature Conservation, Building and Nuclear Safety Advisory Assistance Programme (AAP), a project "Development of a framework for the collection and sharing of information on Chemicals", was carried out in 2015-2017.



National experts in cooperation with the international project manager and international experts have developed the register model of hazardous chemicals, its demo-version and operational framework.

WASH activity - Georgia Co-leader with Hungary - Georgia is involved in strengthening Water, Sanitation and Hygiene (WASH) in Schools in European Region.

Universal Healthcare and other State Programs

Universal Health Coverage (UHC) of the population is the major Global Health priority and means that all people have access to health services they need without the risk of financial hardship when paying for them. This requires an efficient health system that provides the entire population with access to high quality services, health workers, medicines and technologies. It also requires a financing system to protect people from financial hardship and impoverishment from health care costs.

After general elections of October 2012, a new Government came into power with a clear determination to improving social and health status of the Georgian population. The strong political will pledged in the election platform was translated into an unprecedented, almost 2,5-fold expansion of budgetary allocation for health in 2013.

The second major step towards securing enjoyment of health rights in the country was the launch of a Universal Health Care Program in February 2013. Georgia now has a foundation of universal entitlements within its health system, representing a major step towards improving access to health services for the entire population.

All citizens are provided with medical care among them 204 thousand individual has only private or corporate insurance, while the rest of the population is covered by the universal health care program or health insurance financed by state budget (military, soldiers, etc.).

From February 28 to July 1, 2013, the first phase of the UHC program provided the primary healthcare services by the family physician and emergency outpatient and inpatient care.

The second phase of UHC program launched in July 1, 2013 extended the services covered and include planned ambulatory care, urgent outpatient and inpatient care, elective surgery, chemotherapy, hormonotherapy and radiotherapy, obstetrics and cesarean sections, basic drugs for target groups of the population.

In May 2017, to further reform the program, elaboration of new criteria for differentiation of beneficiaries (according to beneficiaries' revenue) has been implemented for provision of more needs oriented services and development of "social justice" approach.

In July 2017, the Ministry has launched the State Program for providing drugs to individuals with most common chronic conditions such as cardiovascular and obstructive pulmonary diseases, diabetes (type 2), thyroid disorders, epilepsy and parkinson's disease. Beneficiaries of this program are socially vulnerable with the rating score below 100000, pensioners and persons with disabilities (including children).

According to the WHO European Health Report, 2015, Universal Healthcare Program was recognized as successful. Survey conducted by the US Agency for International Development in 2014 showed that 80.3% of the surveyed beneficiaries were satisfied with the outpatient service and 96.4% expressed satisfaction with hospital level emergency care within the universal health care program.

According to the WHO latest available data, the average number of out-patient encounters in the European Region is about 6 per capita. In Georgia, during last 2 decades, this indicator did not exceed 2.2. In the frame of the UHC programme the numbers of out- and in-patient encounters continued to grow due to increased accessibility of healthcare services. In 2018, the number of contacts with out-patient facilities per capita was 3.0.

According to the survey conducted by the World Bank, WHO and the USAID, the main achievements of the Universal Healthcare Program are: increased accessibility to the medical services; increased utilization of the medical services; reduced financial barriers and increased coverage

In order to ensure quality medical services, from March 1, 2017 has been started selective contracting of service providers for deliveries and caesarian sections as well as neonatal intensive care; from July – 2nd and 3rd level intensive treatment/care providers and from January 2018 – selection of emergency in-patient care and antenatal services service providers has been started.

“Vertical” State Health Programs

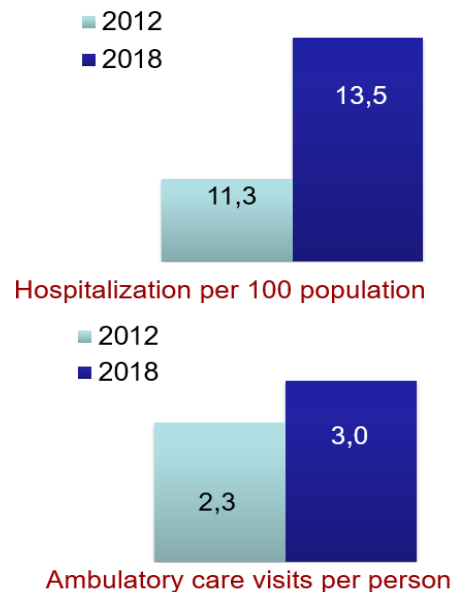
In addition to the universal health care program, the state's obligations to the population are carried out through programs providing healthcare services to the population in public health and priority areas. Public health programs include:

- Early detection of diseases and screening
- Immunization
- Epid surveillance
- Blood safety
- Facilitation of responsibilities connected to health problems in Occupational diseases, Public Health, Environment
- Prevention of occupational diseases
- TB management
- HIV/AIDS management
- Maternal and child health
- Health promotion
- Hep C management

State health program in priority area include:

- Management of the Infectious diseases
- Mental Health
- Management of Diabetes
- Treatment patients with drug abuse

Services utilization



- Child onco-hematology
- Dialysis and kidney transplantation
- Palliative care of incurable patients
- Treatment of rare diseases
- Ambulance and emergency care
- Rural doctors
- Medical screening for army recruits
- Referral (individual care)

State Health programs Expenditure, mill GEL

	2013	2014	2015	2016	2017	2018
Universal health care	70	338	574	681	710	760
Public health programs	31	53	69	73	73	92
Programs in priority areas	95	124	140	149	158	179
Total	436	583	783	903	941	1032

Source: State Treasury

Healthcare expenditures

In Georgia, the total health care expenditures are growing each year, indicating increased demand for health services and the growth of the population's solvency. The share of the total health expenditures in GDP (%) is fairly high among other countries of the European Region. Georgia, from own economy, spends on healthcare almost as much, as the European Region's high income countries (8%-9%).

Since 2013, the Government of Georgia has laid the foundation for public health and welfare oriented health policy. Last years the state budget allocations for the health sector substantially increased (in 2012 - 450 million GEL; in 2017 - 1092 million GEL). State expenditure on health, as a share of the GDP is growing annually (in 2012 - 1.7%, in 2017 - 3%), although, this share is still lower than in the Western Europe (EU15) - 8%, EU (EU28) – 7.3%, and the average for European 53 countries – 5.7%.

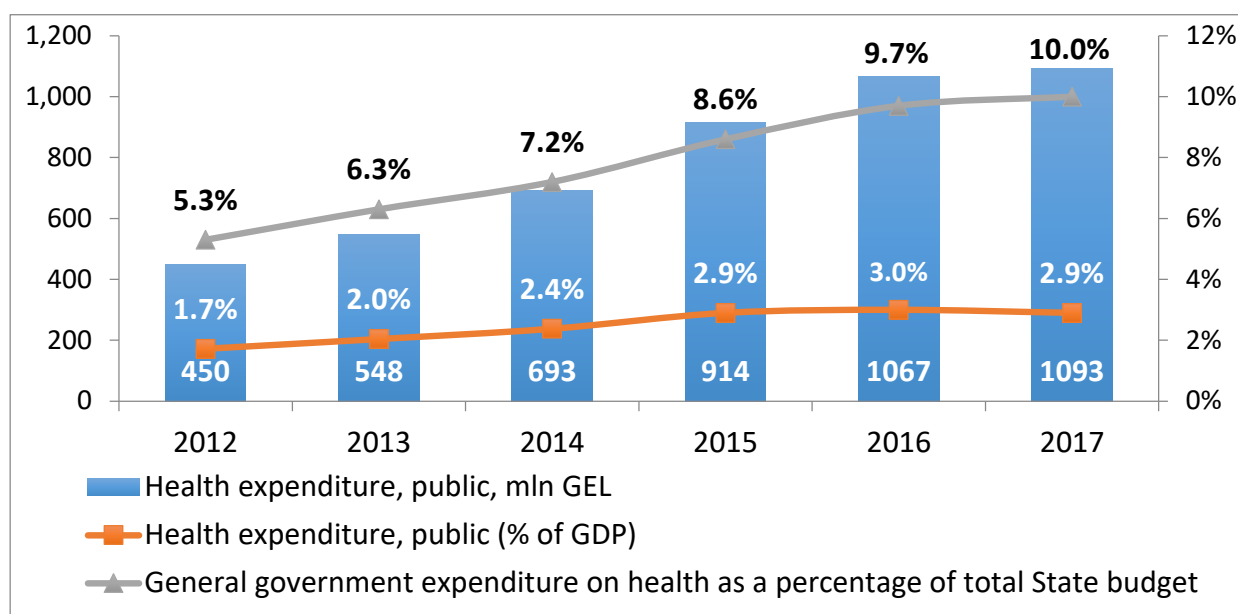
In 2014-2017, the State spending on health per capita substantially increased: in 2014 - 186 GEL; in 2017 - 293 GEL. This, on the one hand, could be explained by reduction of the number of population, registered by the general census, and, on the other hand, by the increased State funding on health. According to the WHO and the World Bank, the country has improved access to health care and provided better financial protection for the population by implementing cost-effective reforms.

In 2012-2017, the sources of healthcare financing were distributed as follows: State (in 2012 - 21%; in 2017 - 38%), private (in 2012 - 77%; in 2017 - 60%), international aid and grants (in 2012 - 2.3%; in 2016 - 1.7%). To compare the trends, a cost of hepatitis C treatment drugs provided by a pharmaceutical company Gilead to the country, (1,2 billion lari) was not included into the National Health Report.

Out-of pocket payments constituted the highest share of private expenditure, of which only 7% was spent on direct insurance payments, the rest funds were spent on healthcare services. The share of the out-of-pocket payments in total health expenditures has significantly decreased from

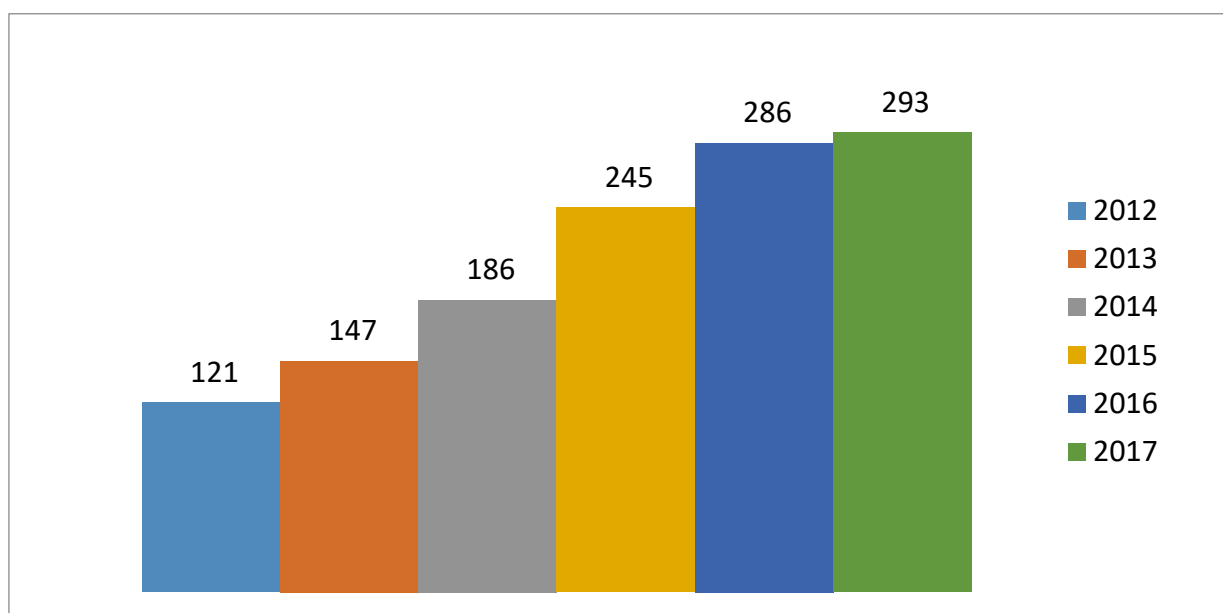
73% (2012) to 55% (2017), mainly due to the lower cost of hospitalization, which is a direct consequence of the universal healthcare program.

Dynamics of the Health Expenditures, Georgia



Source: Ministry of IDPs, Labour, Health and Social Affairs

State spending on health per capita, Georgia (GEL)



Source: Ministry of IDPs, Labour, Health and Social Affairs

Healthcare expenditures, Georgia

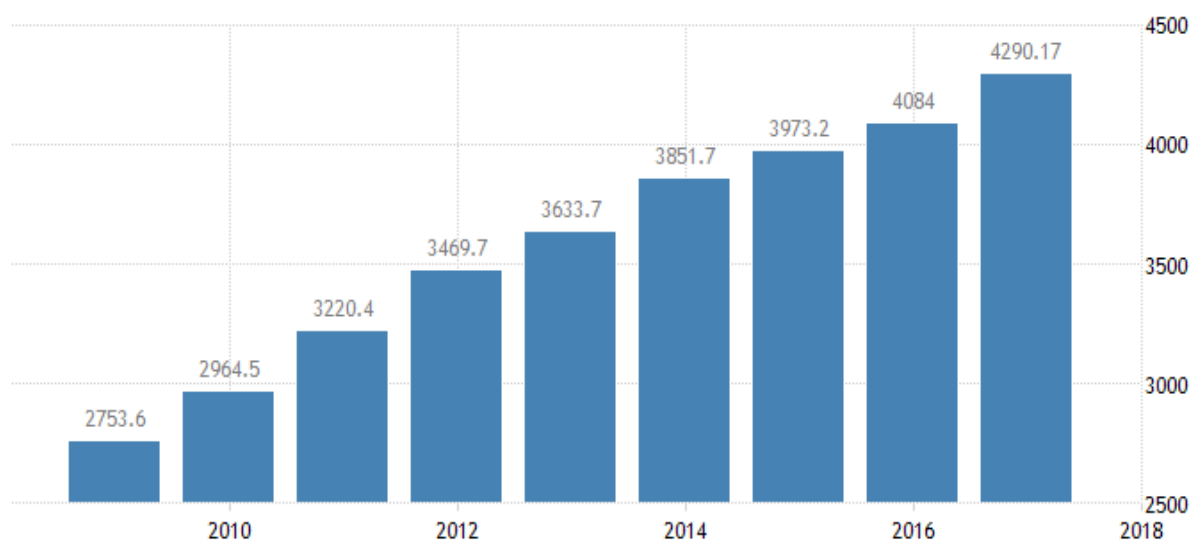
	2012	2013	2014	2015	2016	2017
GDP, mln GEL	26167.3	26847.4	29150.5	31755.6	34028.5	37846.6
Total expenditure on health, mln GEL	2190.5	2254.3	2460.2	2518.7	2864.9	2877.6
Health expenditure, total (% of GDP)	8.4%	8.5%	8.5%	8.5%	8.4%	7.6%
<i>Health expenditure, public, mln GEL</i>	450.3	547.9	693.2	914.0	1067.9	1092.2
<i>Health expenditure, public (% of total health expenditure)</i>	20.6%	24.3%	28.2%	36.3%	37.3%	38.0%
Health expenditure, public (% of GDP)	1.7%	2.0%	2.4%	2.9%	3.1%	2.9%
General government expenditure on health as a percentage of total State budget	5.3%	6.3%	7.2%	8.6%	9.7%	10.0%
Health expenditure, private, mln GEL	1689.7	1655.5	1720.4	1558.9	1750.5	1737.8
Health expenditure, private (% of total health expenditure)	77.1%	73.4%	69.9%	61.9%	61.2%	60.4%
Direct out-of-pocket health expenditure, mln GEL	1608.8	1557.0	1623.4	1443.8	1591.0	1575.5
International aid for healthcare, mln GEL	50.5	50.9	46.5	45.8	46.5	47.5
International aid for healthcare, (% of total health expenditure)	2.3%	2.3%	1.9%	1.8%	1.6%	1.7%
Total expenditures on health per capita, GEL	488	502	660	677	769	772
Total expenditures on health per capita, USD	295	302	374	298	325	308
Total expenditures on health per capita, international dollars	571	601	772	792	898	903

Public health expenditure per capita, GEL	100	122	186	245	286	293
Public health expenditure per capita, USD	61	73	105	108	121	117
Public health expenditure per capita, international dollars	117	146	218	288	335	343
Private expenditure on health per capita, GEL	376	369	462	419	470	466
Private expenditure on health per capita, USD	228	222	261	185	198	186
Private expenditure on health per capita, international dollars	440	441	540	490	549	545
International aid for health per capita, GEL	11	11	12	12	12	13
International aid for health per capita, USD	7	7	7	5	5	5
International aid per capita on health, international dollars	13	14	15	14	15	15

Source: Ministry of IDPs, Labour, Health and Social Affairs

The Gross Domestic Product per capita in Georgia was last recorded at 4290.17 US dollars in 2017. The GDP per Capita in Georgia is equivalent to 34 percent of the world's average. GDP per capita in Georgia averaged 2808.64 USD from 1965 until 2017, reaching an all-time high of 4675.80 USD in 1985 and a record low of 958.80 USD in 1994.

Gross Domestic Product per capita, Georgia



Source: <https://tradingeconomics.com/georgia/gdp-per-capita>

Healthcare resources

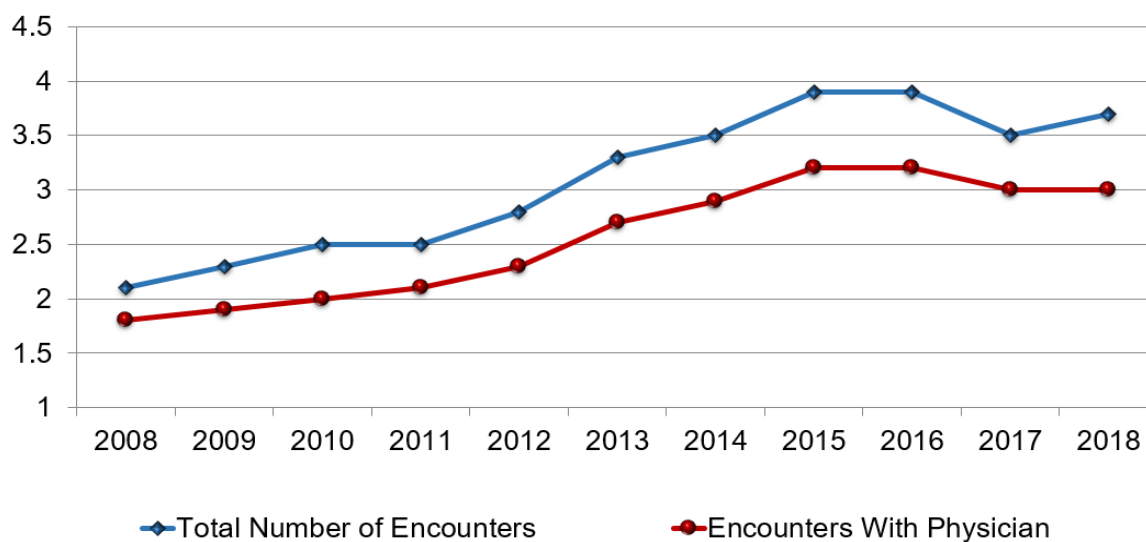
Healthcare resources, Georgia

	2017	2018
Number of physicians (including dentists)	27362	30998
Number of physicians per 100000 population	733.9	831.9
Nurses	19376	17862
Number of nurses per 100000 population	522.4	479.3
Number of hospital beds	15084	15909
Number of hospital beds per 100000 population	404.6	426.9
Encounters with physicians	12906763	12067282
Home visits of physicians	239103	190560
In-patient facilities	280	273
Out-patient facilities	2369	2283
Antenatal care centers	344	352
Ambulance stations	82	73
Blood transfusion facilities	21	9
Rural physician-entrepreneurs	1277	1267

Source: NCDC

The Health Care System of Georgia is characterized by the excess of doctors and the lack of nurses and uneven geographical distribution of health care workforce.

Annual number of out-patient encounters per capita, Georgia

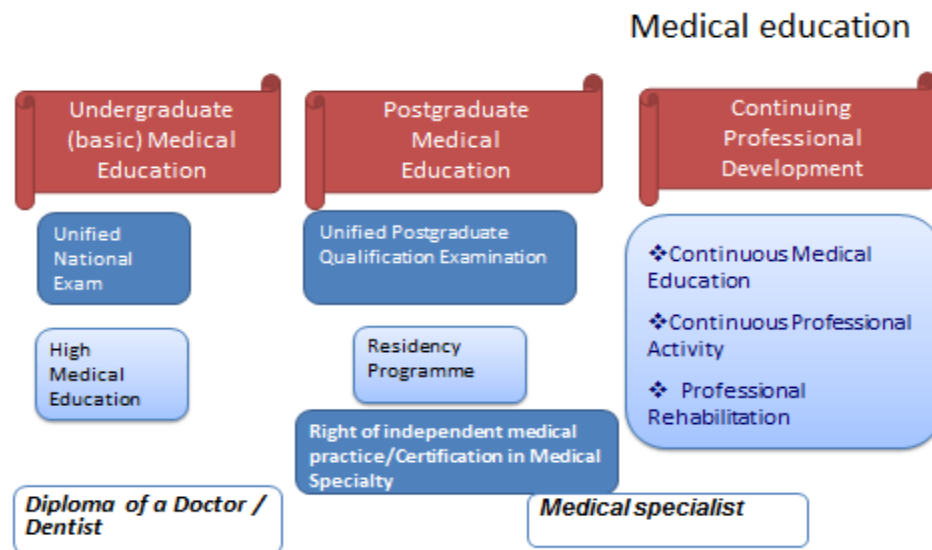


Source: NCDC

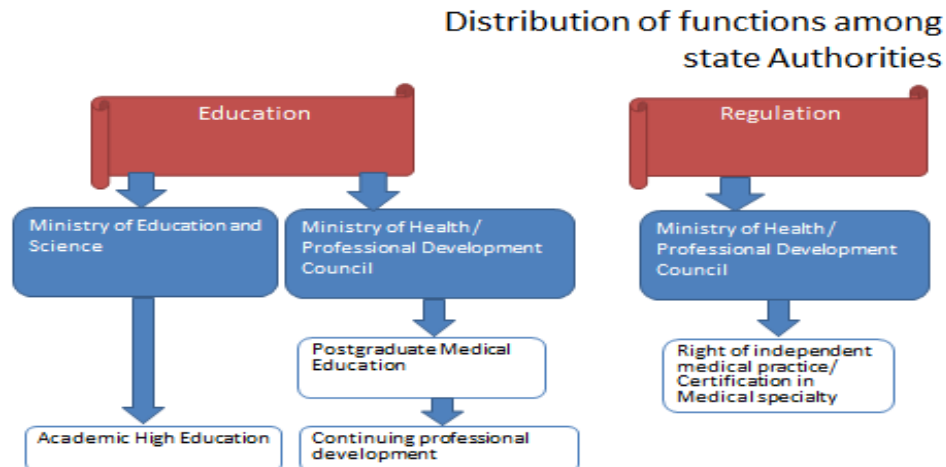
Medical education system in Georgia

In Georgia, education of doctors is carried out according to the global standards of the World Federation for Medical Education (WFME) which covers 3 stages.

In Georgia, education of doctors is carried out according to the global standards of the World Federation for Medical Education (WFME) which covers 3 stages - undergraduate education, postgraduate education and continuous professional development:



The undergraduate medical education stage is within the competence of the Ministry of Education and Science, postgraduate medical education and continuous professional development are under the competence of the Ministry of Internally displaced persons from the occupied territories, Labour, Health and Social Affairs of Georgia:



Postgraduate education

Postgraduate education (professional preparation) is required to obtain the right of independent medical practice/State Certificate in Georgia. Postgraduate education is being implemented in the framework of residency programs since 1999. After finishing residency preparation, applicants are given the opportunity to get the State Certificate and start the medical practice in medical specialty permitted by the state certificate. Duration of residency programs is similar to EU countries' programs.

Georgian postgraduate medical education system (including existing residency programs, as well as the education process and institutional accreditation environment) is in compliance with the basic standards of World Federation for Medical Education (WFME).

Postgraduate medical education is regulated by the Law of Georgia on Medical Activities and corresponding normative acts. Changes in postgraduate medical education:

- Since 2014, the residency program has been updated/prepared in 56 medical specialties;
- Since 2014, 15 programs of medical sub-specialty were updated/prepared;
- For the purpose of improving the doctor's assessment system, the certification exam tests - "closed base" (25% of tests) was prepared in 2013.

The State certification tests in 10 medical specialties were fully updated/prepared from 2013. In 2017, test for unified postgraduate qualification exams were fully renewed.

Continuous Professional Development: it is not mandatory to undergo Continuous Professional Development (CPD) in Georgia, except obstetrician gynecologists and neonatologists working in perinatal service. Continuous professional development is ethical obligations of a doctor and sometimes of an employer.

CPD activities providers are universities, medical professional organizations and medical institutions.

Accreditation of the CPD activities is obligatory, which is provided by the Professional Development Council under the Ministry of Labour, Health and Social Affairs of Georgia.

Mainly, CPD activities are financed by the doctors, employers and donor organizations.

Continuous Professional Development is regulated by the law of Georgia on Medical Activities and corresponding normative acts.

Changes in Continuous Professional Development: since 2016, with the support of Defense Threat Reduction Agency of the United States (DTRA) an implementation of online platform of the British Medical Journal (BMJ) in Georgia has been started. Respectively, Georgian doctors will be able to use BMJ Best Practice ("BMJ BP") and BMJ Learning ("BMJ-L") for 3 years.

Requirements for accreditation of continuous medical education activities were renewed in 2017. Since 2018, it became mandatory to participate in CPD programs for obstetrician-gynecologists and neonatologists working in perinatal services.

Pharmaceutical Sector in Georgia

Georgian pharmaceutical legislation and regulatory system harmonization with European Union legislation and regulatory model aims to protect public health and ensure availability of high-quality, safe and effective medicines for Georgian citizens. This is one of the important components for overall success of Health Care System Reform in Georgia.

Taking into the account an excessive liberalization of regulations that took place in 2009, implementation of the harmonized rules will face a lot of challenges. From one perspective, liberalization contributed to the rapid growth of pharmaceutical market and affordability of medicines, on the other hand it led to the formation of rather complex system that is difficult to effectively regulate. Despite the fact that key regulatory functions are in place, introduction of new rules will be painful and new regulations should be implemented step-by-step in order to mitigate this painful process.

Key achievements and developments

- The system of prescription and OTC products was elaborated and implemented in 2014. Recently, Electronic prescription system is developed and undergoes testing. From the 1st August, 2016, electronic system of Prescriptions Form became operational and from 2018 have started process of becoming obligatory Electronic production of Prescriptions Form
- After extensive consultations with experts and stakeholders, Government decree № 580 was issued in December 28, 2017, according which EU GMP guidelines are recognized as national standards. After July 1, 2019 manufacturing license will be issued only in the case of compliance with national GMP standard; January 1, 2022 is a deadline for all pharmaceutical product manufacturers to operate in accordance with national GMP rules.
- New law on medicines which is harmonized with EU legislation is drafted. Secondary legislation is under the development. Stakeholders were invited for the comments and feedback is provided. Revision of the draft is ongoing.

Public health network and State Public health programs

Public health system in Georgia is arranged by the following structures:

- The National Center for Disease Control and Public Health
- 9 regional branches of the NCDC
- PH centers in 61 municipalities.

Public Health Network of Georgia

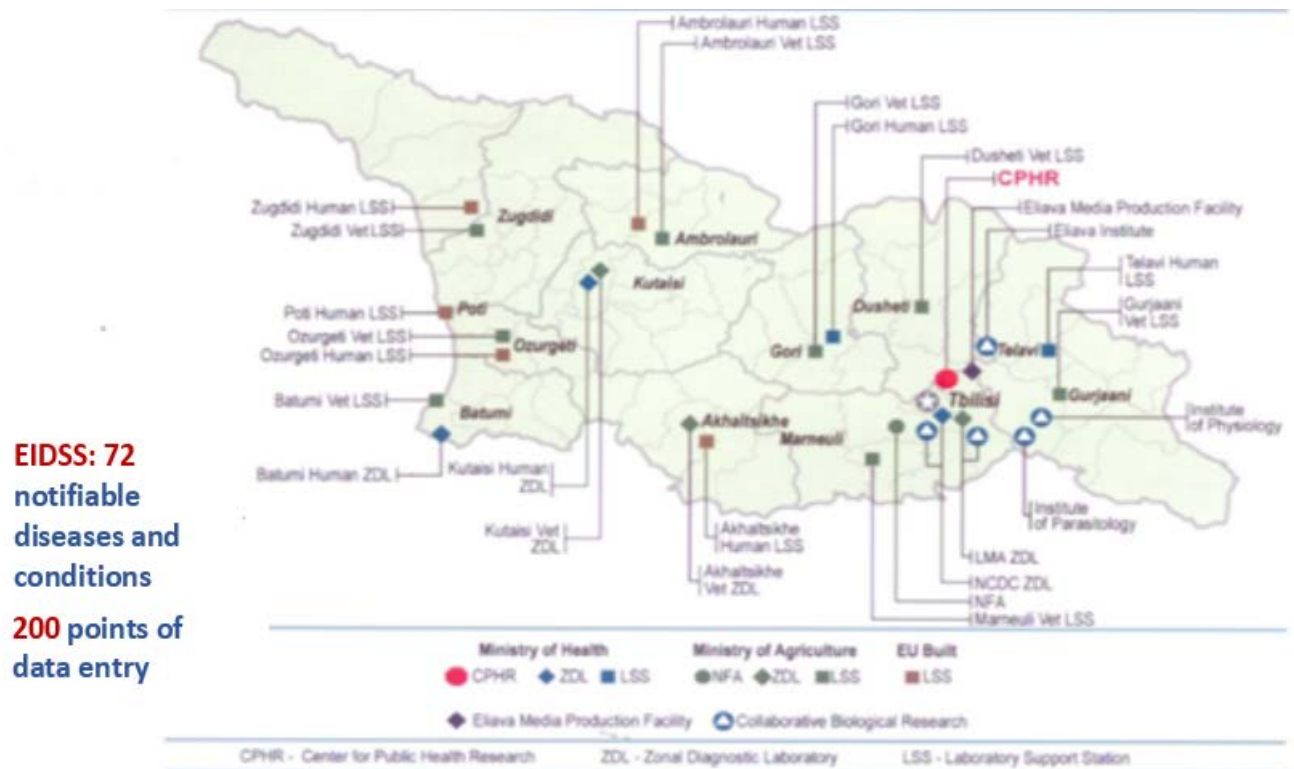


Within the framework of the Cooperative Biological Threat Reduction Program under the support of the US Government, the regional laboratory network started operation (2004-2012) which is BSL 2 level network incorporating 2 Zonal Diagnostic Laboratories (ZDL) and 7 Laboratory Support Stations (LSS - EU participated in funding as well). They represent regional part of the NCDC that provide support to municipal centers as well and act in line with “One Health” principle. They also have close cooperation with 11 veterinary labs under the Ministry of Agriculture. In this process, the R. Lugal Center for Public Health Research plays a key role, as it has a BSL 3 level lab – a unique in the South Caucasus Region.

The system accumulates operational information on 72 notifiable diseases and conditions through EIDSS (Electronic Integrated Disease Surveillance System).

61 territorial centers with 1020 staff represent local municipal offices subordinated to self-government.

“One health”



Administration of state public health programs and activities is an important function of the National Center for Disease Control and Public Health. The NCDC is carrying out 10 State public health programs directed on health promotion, healthy lifestyle establishment, and prevention of diseases, which contribute to infectious diseases, cancer prevention, and early detection, which ensures public protection and has a significant impact on the costs optimization.

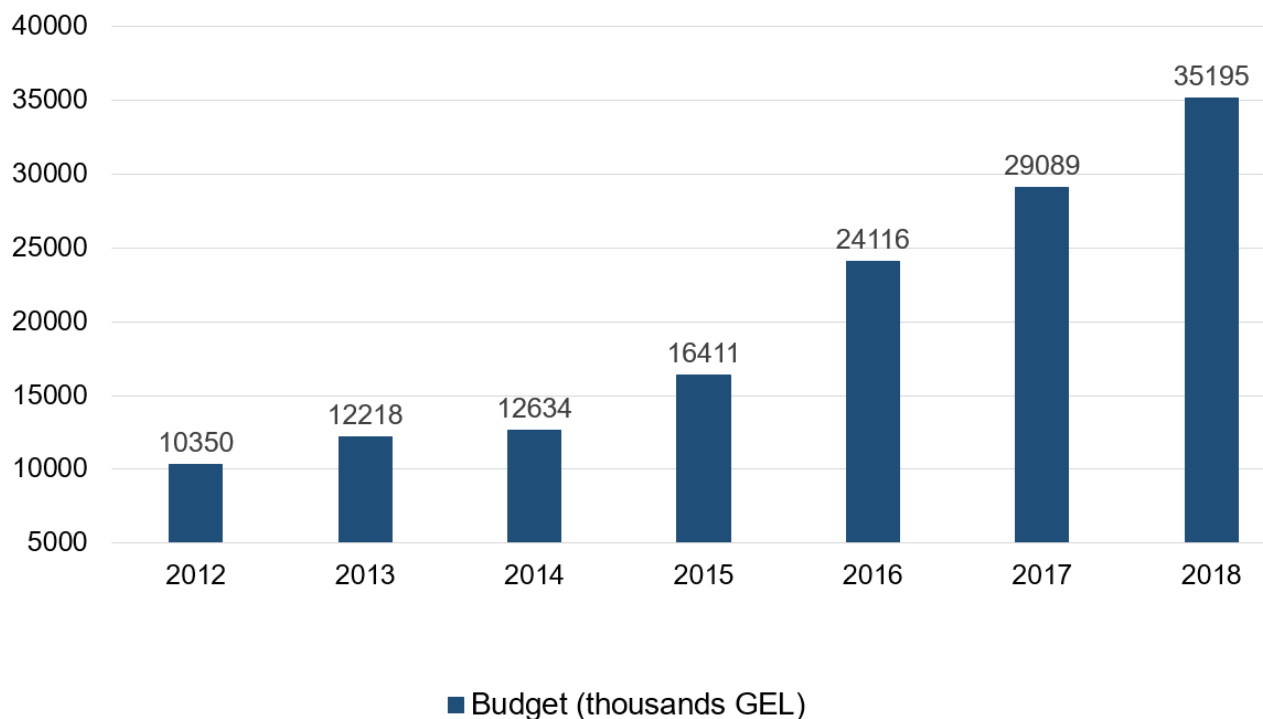
The programs / components implemented by the Center are:

- Early detection and screening of diseases
- Immunization
- Surveillance
- Safe blood
- Prevention of occupational diseases
- TB management
- HIV / AIDS management
- Mother and child health
- Health promotion
- Hepatitis C management.

State Program budget administered by the NCDC has been almost tripled from 2012 to 2017 and equaled to 35 195 GEL. As a result, transition of obligations from the international organizations (Gavi Alliance, GFTAM, US CDC) to the state, regarding vaccination, TB and AIDS first and the second line medicines, medical supplies and rea-gents, as well as introduction of

different activities within the State Health Care programs (Influenza surveillance, introduction of new vaccines, and the new types of services etc.) became possible.

Budget of the preventive public health programs, administered by the NCDC



Source: NCDC

E-Health

The rapid development of the health information systems is essential in Georgia during last years. Several important systems and electronic modules were developed to ensure informational needs of the Ministry, insurance companies, healthcare service providers, pharmaceutical establishments, patients, etc.:

- Electronic Health Record (EHR), which is at the stage of implementation, which would cover all types of healthcare provision (in-patient and out-patient).
- Georgian HIS, prior to the EHR, implemented an in-patient care inventory, which covers all hospital facilities and contains records for all discharged (died at hospital) patients.
- In 2014 and 2016 electronic, case-based information system for in-patient and out-patient care had been introduced all over the country. Since 2019, electronic annual reporting is operating countrywide.
- Specific issues, where additional information has got a crucial importance, must be covered by a special data collection mechanisms – registries.
 - In 2015, Georgia started a Population-based Cancer Registry, which collects information about new cases of malignant neoplasm. In 2019 cancer registry electronic form had been introduced.

- In 2016, in order to improve the maternal and child health surveillance in the country, an „Electronic Module for Pregnant and Newborn Health Surveillance“, so-called "birth" registry was introduced. Each pregnant woman, starting from the first antenatal visit, including childbirth, is continuously monitored through the electronic module. The system also records newborn's health status.
- The NCDC gained experience of informing the public using digital devices. A mobile application on vaccination for parents (uses iOS and Android platforms) was developed. Through the application, parents are able to receive information about the National vaccination calendar, vaccines, vaccination contraindications, and false contraindications, warnings, recommendations about vaccination, and vaccine preventable diseases. A reminder for parents about the date of the vaccination and types of the vaccines is one of the features of the application.
- A system of DRG has been under piloting. The DRG system would be implemented for cost-weights calculation process, for more patient safety and continuity of care.
- NCDC actively participates in the further developing of administrative data systems to produce reliable and robust population estimates through mortality and natality data collection.

Development of the health information systems (HIS) in the country is based on the principals of the modern healthcare practice, supported by electronic processes and communication (e-Health), as implementation of the international classifications of diseases, health interventions and services for reinforcing the data standardization in Georgia.

All the data above were used for evidence-based decision-making, such as, regionalization of maternal care services, selective contracting of the healthcare providers, which resulted in the reduction of maternal and infant mortality, etc.

Development of the health information system in the country was supported by the World Health Organization, which plays an important role in this process.

An important milestone of the collaboration was the implementation of the 10th Revision of the International Statistical Classification of Diseases and Related Health Problems throughout the whole country.

A lot of cascade trainings for different target groups have been conducted to study the morbidity and mortality registration. Georgia was the first country in the European region, having translated The World Health Organization's Web-based interactive training package for coding morbidity and mortality. In 2011-2012, it was translated into Georgian language and was uploaded on the Center's web site.





In 2017, “Georgia, Profile of health and well-being” and shorter version “Georgia, Highlights on health and well-being” were developed in collaboration with the WHO Regional Office for Europe. Georgia was one of the first among the Member States to develop these publications.

Institute for Health Metrics and Evaluation (IHME) and the NCDC aim at improving estimates of the burden of diseases, injuries, and risk factors for Georgia, using methods consistent to the overall Global Burden of Disease Study (GBD). For this to happen, the two institutions collaborate to share data, knowledge, and expertise.

Georgia is a member of the European Health Information Initiative (EHII), which is a WHO network committed to improving the information that underpins health policies. It fosters international cooperation to support the exchange of expertise, build capacity and harmonize processes in data collection and reporting. The NCDC staff actively participates in conduction of regular steering committees.

Collaboration with the International Partners in the Healthcare Field

One of the priority directions of MOLHSA is the collaboration with international, non-governmental and private organizations. The partners are: the World Health Organization, the Centers for Disease Controls (USA), The Global Fund to Fight against Malaria, Tuberculosis and AIDS, the Global Alliance for Vaccines and Immunizations, EU and UN agencies ((EU/UNICRI, UNDP, UNFPA, UNICEF), World Bank, USA Department of Defense (DOD/DTRA), United States Agency for International Development (USAID), Department of Health and Human Services (DHHS), Chez Development Agency, JICA, EHRN, EMCDDA, IOM, FIND, Global Healing, Walter Reed Army Institute of Research (WRAIR), FOA/OIE, National Institutes of Health (NIH), Institute for Health Metrics and Evaluation (IHME), Bundeswehr Institute of Microbiology, GILEAD, BMJ, Pharmaceutical Company Novartis Biotech, etc.

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In any question applications, should be made to the National Centre for Disease Control and Public Health named after L.Sakvarelidze at 99, Kakheti Highway, Tbilisi, Georgia

E-mail: pr.ncdc@ncdc.ge

Web-site: ncdc.ge

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