GEORGIA
Health Care Highlights

2017

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 Labor, Health and Social Affairs
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

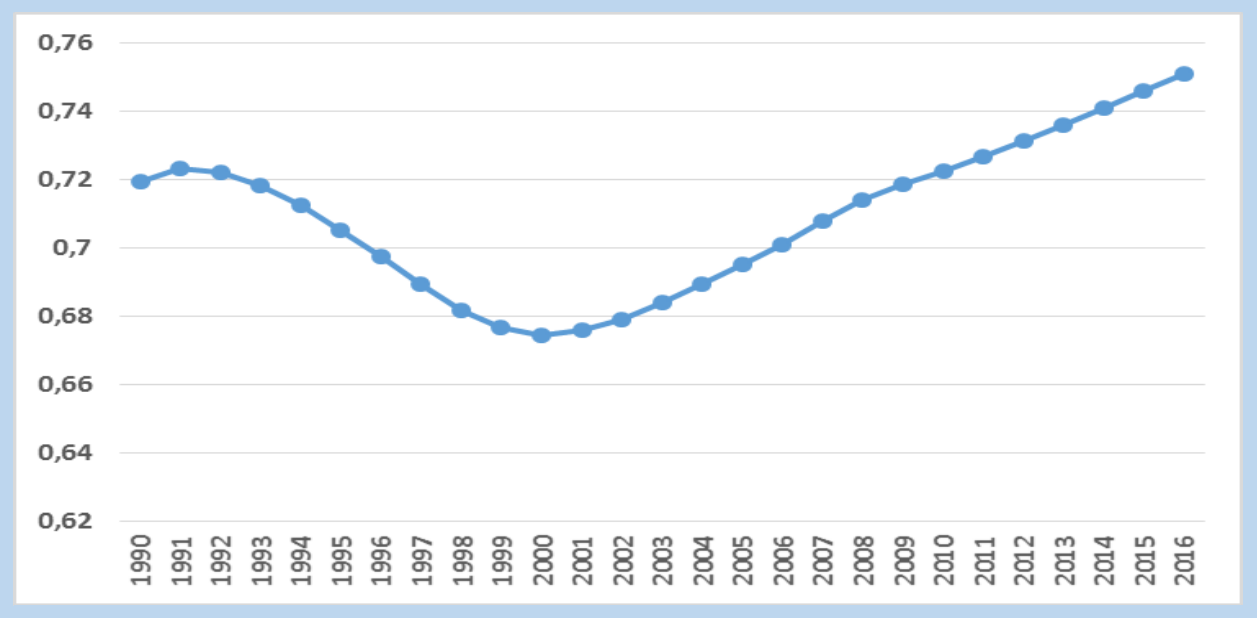
NSP	National HIV Strategic Plan
NTP	National TB Program
PCR	Population-based Cancer Registry
PFGE	Pulsing Field Gel Electrophoresis
RHS	Reproductive Health Survey
SBA	Skilled Birth Attendance
SDG	Sustainable Development Goals
STI	Sexually Transmitted Infection
TB	Tuberculosis
UHC	Universal Health Coverage
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, 2016

Area, km²
69 700
Administrative units
11 regions, 64 municipalities
Capital Tbilisi
Mid-year population 3719300
Female population 52.1%
Male population 47.9%
Urban population 57.2%
Ethnical 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.
Human development index
0.769 (2015)
Socioeconomic index[1]
0.75

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

Socioeconomic index



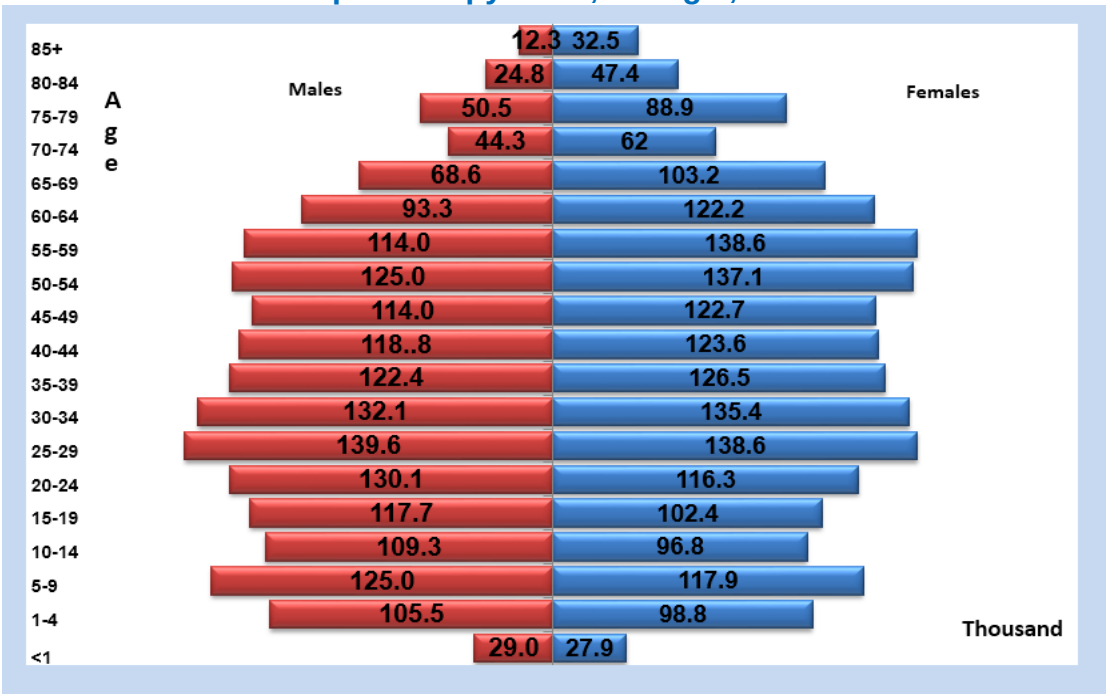
Source: Global, regional, and national under-5 mortality, adult mortality, age-specific mortality, and life expectancy, 1970-2016: a systematic analysis for the Global Burden of Disease Study 2016

Main demographic indicators, Georgia, 2016

Number of live births (birth rate per 1,000 population)	56 569 (15.2)
Natural population growth (natural population growth rate per 1,000 population)	5 798 (1.6)
Number of deaths (mortality rate per 100,000 population)	50 771 (13.7)
Number of still-births (still-birth rate per 1000 births)	558 (9.8)
Number of marriages (marriage rate per 1,000 population)	25 101 (6.7)
Number of divorces (divorce rate per 1,000 population)	9 539 (2.6)
Migration (migration rate per 1,000 population)	-8 100 (-2.2)

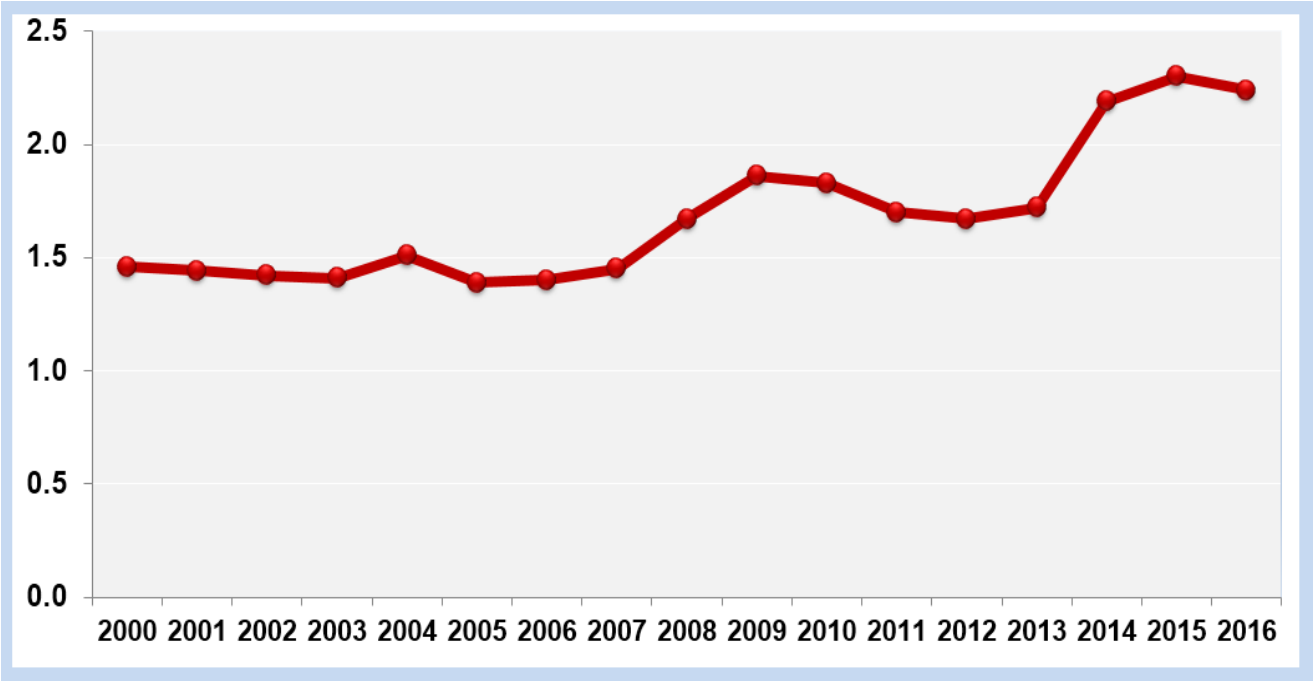
Source: NSO Georgia

Population pyramid, Georgia, 2016



Source: NSO Georgia

Total fertility rate (TFR), Georgia



Source: NSO Georgia

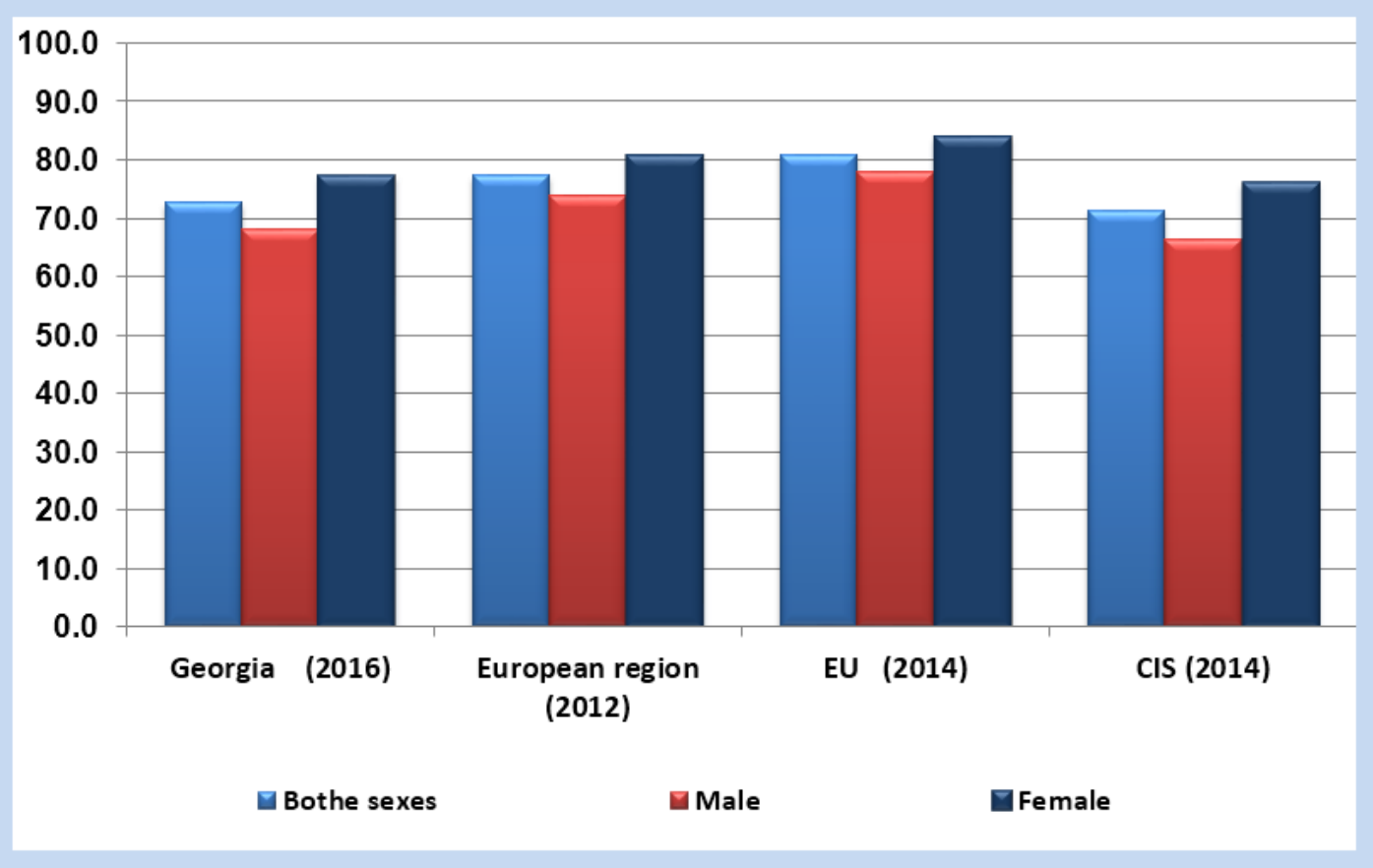
Life expectancy at birth, Georgia*

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

Source: NSO Georgia

** As a result of the 2014 census, showed a significant reduction in the country's population, the National Statistics Office of Georgia is on the process to address this challenge by retrospectively recalculating all indicators, taking into account data from 2014*

Life expectancy at birth (Last available year)



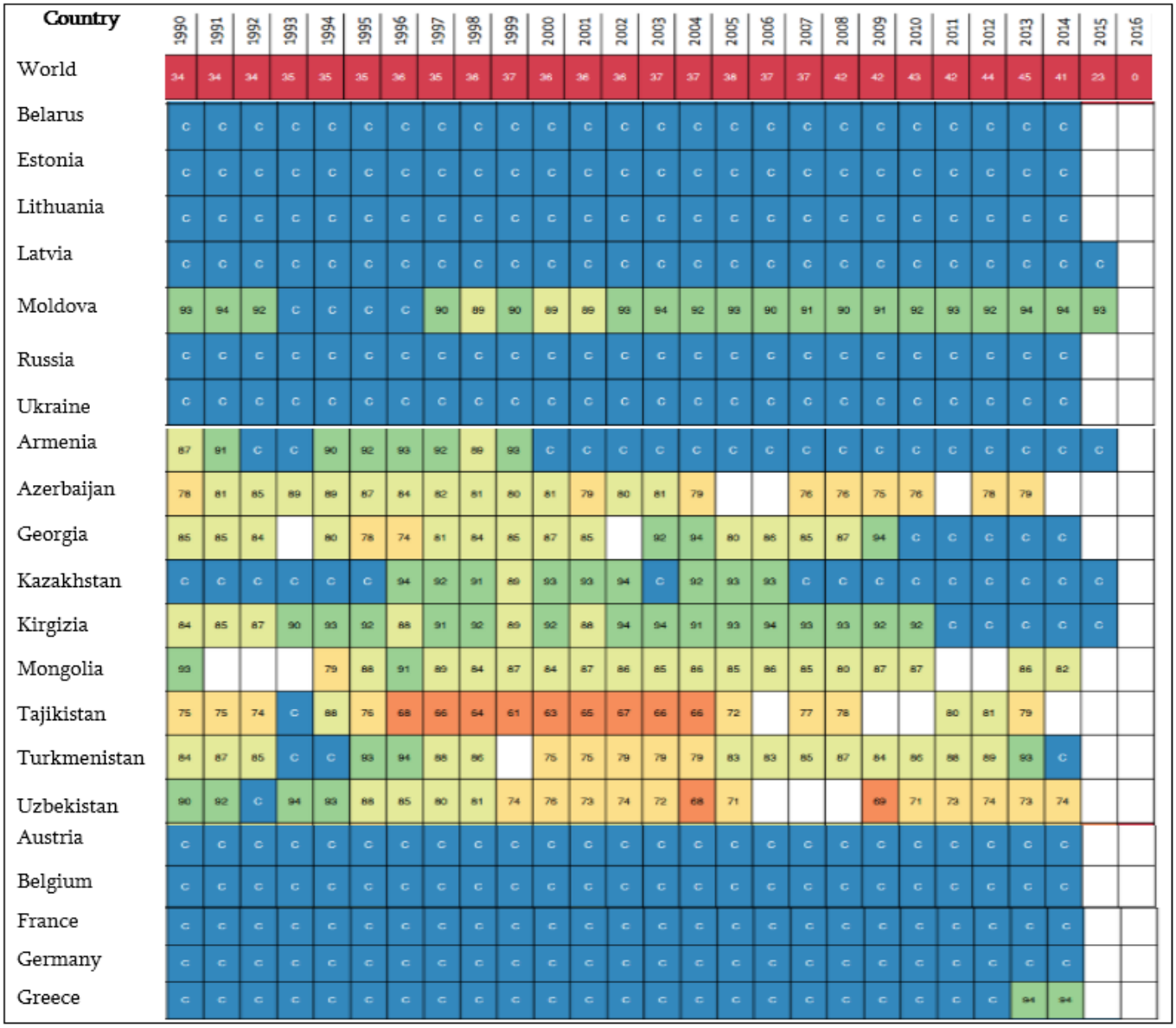
Source: HFA DB, 2016

Mortality

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 noncommunicable 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.

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. The completion of the registration in the recent years is above 95%, although, the quality of identification of the underlying causes of death still remains a challenge.

Completeness of the mortality registration, 1990–2016



Completeness of registration

- 95%
- 90 to 94%
- 80 to 89%
- 70 to 79%
- 50 to 69%
- 0 to 49%

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

According the National Statistics Office of Georgia, in the last three years, the general mortality rate has remained stable. In the last 2 years the indicator fluctuations are within the statistically acceptable range. Such changes of the mortality have already been observed several times during the previous years. At the same time, in Georgia, like in developed countries, the share of aged population is increasing, which is reflected on the mortality rate.

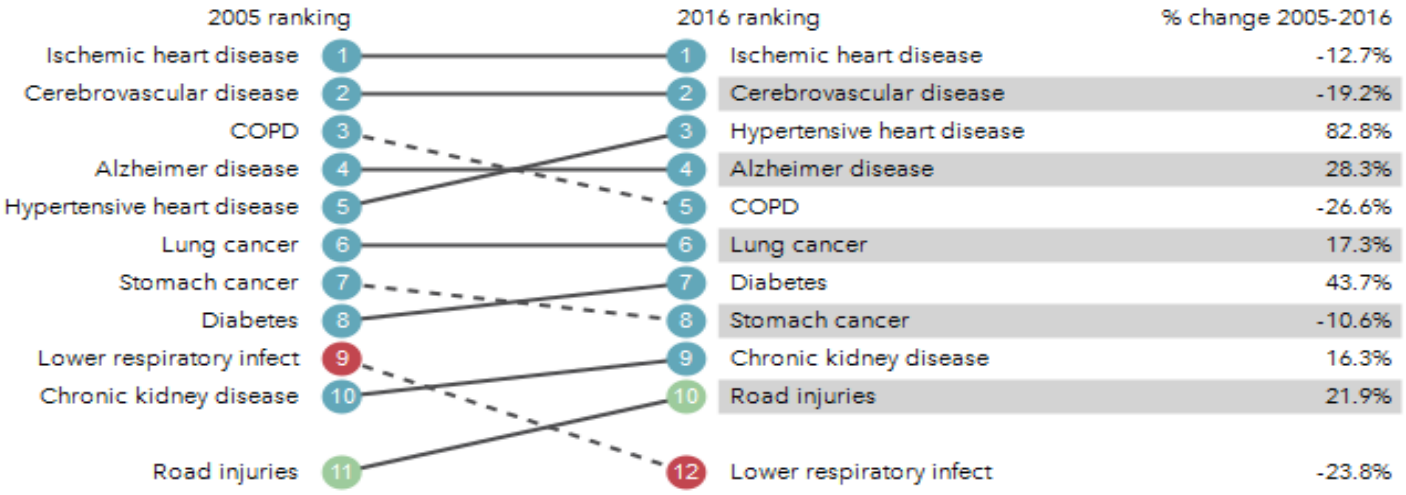
Mortality, main indicators, Georgia, 2016

	Number of deaths	Mortality rate per 1000 population	Number of deahs in children under-15	Mortality rate per 1000 children
Both sexes	50771	13.7	695	1.0
Males	26098	14.7	404	1.1
Females	24673	12.7	291	0.9

Source: NSO Georgia

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

Main causes of death, 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

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 continiously monitored through the electronic system.

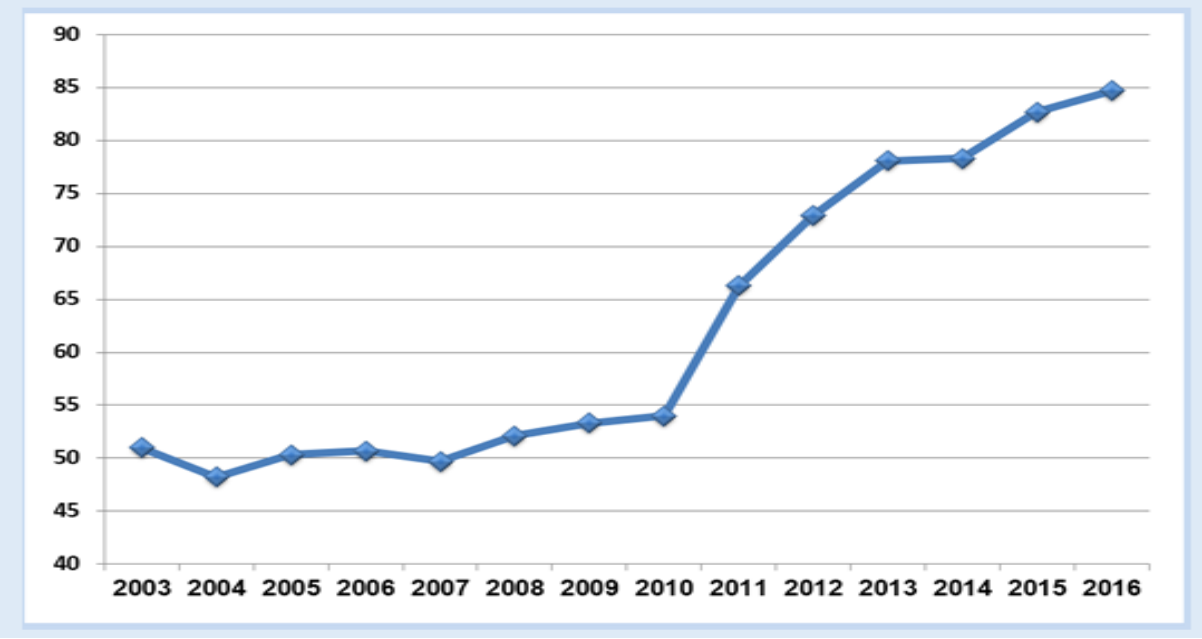
The system also records newborn's health status. For Georgia, considering the fact that globally there are only few countries, which have got „birth" registries, this initiative is a crucial step forward.

Main indicators of reproductive health

	2015	2016
Coverage with at least 4 antenatal care visits*	88.3%	81.2%
Timely initiated antenatal care	82.7%	84.7%
Number of deliveries	58 830	55 940
Full term deliveries	82.1%	81.9%
Normal deliveries	55.0%	52.7%
Pathological deliveries (caesarean sections, forceps, vacuum delivery, all delivery process complication)	45.0%	47.3%
Adolescent pregnancy rate per 1000 women aged 15-19	48.6	43.6
Proportion of births attended by skilled health personnel	99.8%	99.9%

Source: NCDC

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



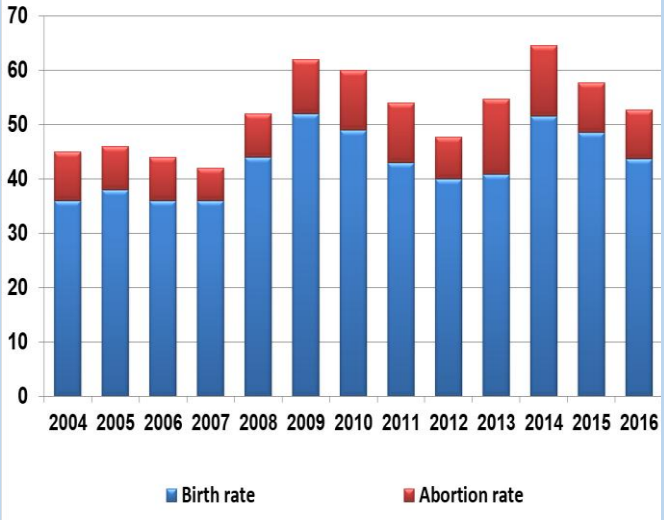
Source: NCDC

From June 2014 every pregnant woman in Georgia up to 13 weeks of pregnancy is provided with the Folic Acid and in case of diagnosis of iron deficiency anemia - with iron supplement preparation. 6-23 months children are provided with the dietary supplements containing the micronutrients.

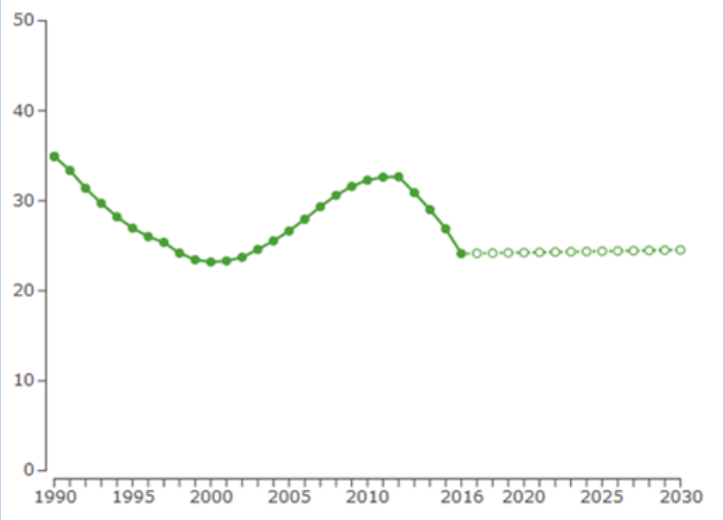
** From February, 2018 eight antenatal care visits will be fully financed by the State program*

Since 2017, as part of the EMTCT, all pregnant women have been tested for syphilis and HIV once during pregnancy and positive cases are provided with appropriate treatment. Newborns of mothers who demonstrate positive results of hep B testing, receive immunoglobulin and a vaccine against Hepatitis B.

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



Source: NCDC



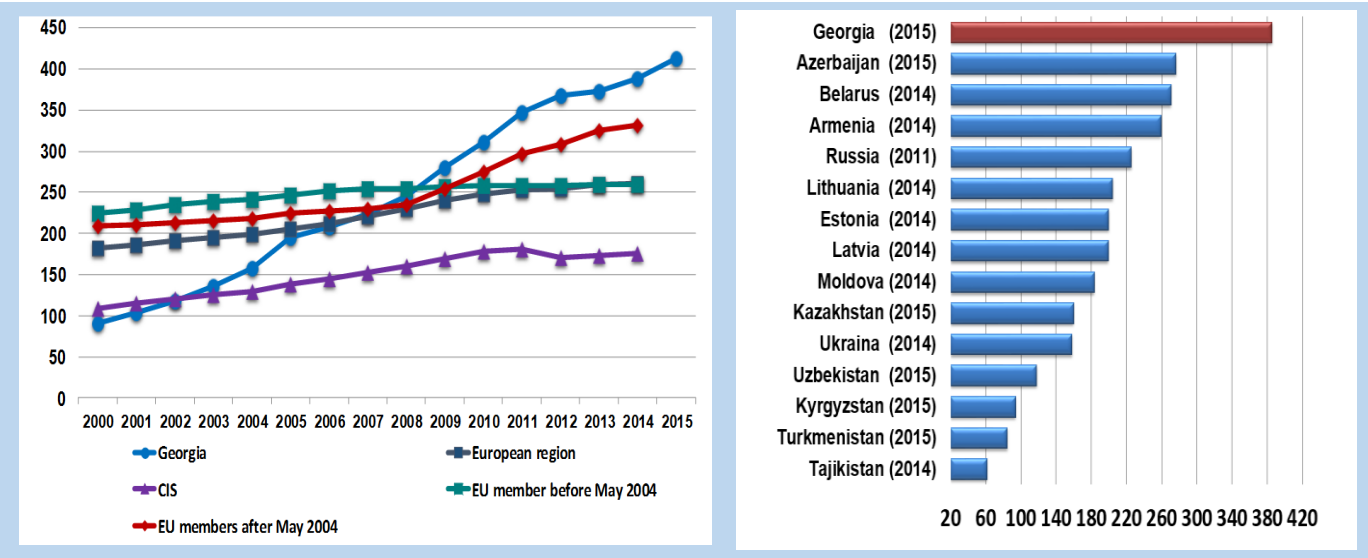
Source: http://www.thelancet.com/lancet/visualisations/gbd-SDGs

Since 2000, in Georgia, a share of caesarean section deliveries has increased 4.3 times and reached 43.7% in 2016 although, in some medical facilities this percentage significantly exceeds the country average rate. In order to reduce the number of cesarean sections, the Ministry of Health has developed a guide and protocol in which a detailed description had been provided about the indications and complications of cesarean section.

In addition, from May 2015 is starting the perinatal care regionalization process, which is a significant step forward in strengthening the maternal and newborn health care system. In 2017 the regionalization of perinatal services covered the whole country and categorization was provided to all existing providers of perinatal services, in accordance to which primary and secondary sections were protocoled and in case of need of third section was indicated as referral.

In March, 2017 MoLHSA initiated a selective contracting of facilities providing perinatal care services. Social Service Agency contracts only facilities which demonstrate required compliance with pre-defined quality criteria (decrease c-section rate). Currently 30 facilities, providing perinatal care services from three largest cities of Georgia (Tbilisi, Kutaisi and Batumi) are involved in selective contracting process. The existed contract includes 10 quality indicators, covering the critical issues related to obstetric and neonatal care in Georgia. This will help reduce the number of caesarean sections.

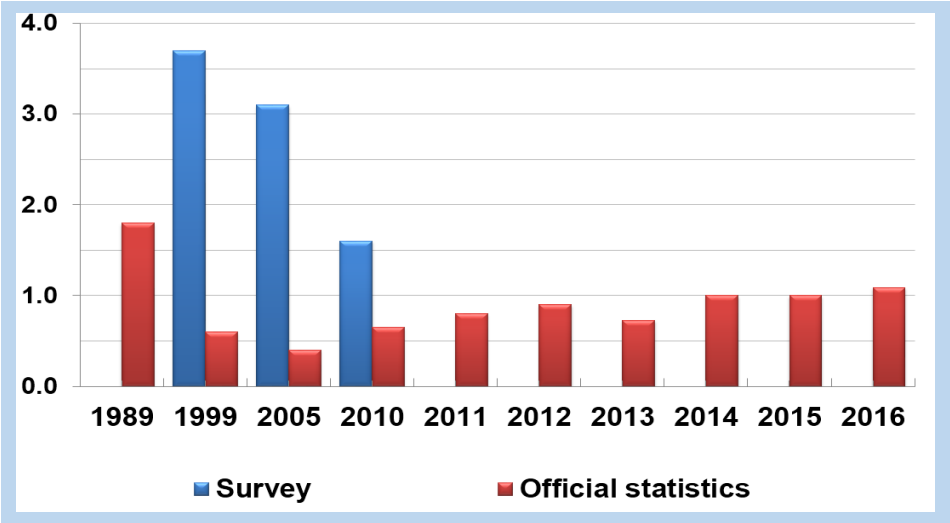
Caesarean sections (ratio per 1000 live births), last available data



Source: World Health Organization HFA DB

In 2016, 28720 abortions were registered (511.7 per 1000 live births), of which, induced abortions constituted 74%. Compared with the previous year, the total number of abortions decreased by 11% (in 2015 - 555.0 per 1000 LB). According to the 2017 preliminary data, abortions rate in the country reduced by 9%. The total induced abortion rate (TIAR) is stable (fluctuates around 1). It is important that the share of abortions in women aged under-20 has decreased and equales 3.2% of the total number of abortions. Induced abortion rates were highest 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). At the same time 122 (including Georgia) out of 195 countries have already achieved SDG 3.1 Goal (reduce maternal mortality ratio to less than 70 per 100 000 live births by 2030).

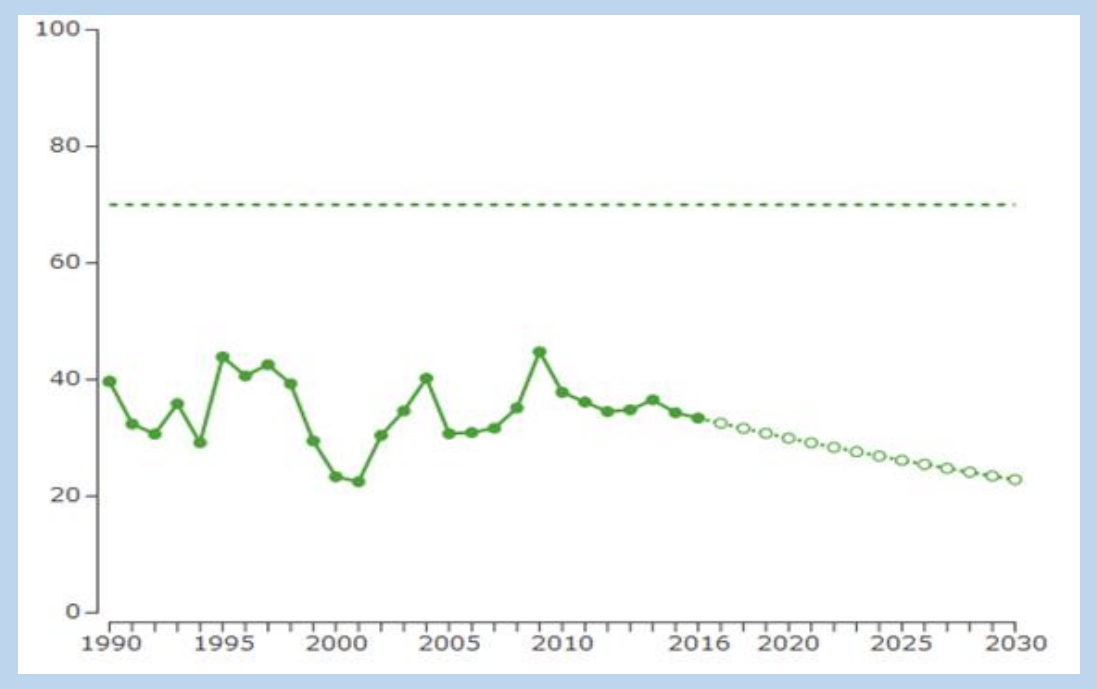
Achievement of SDG 3.1 for Georgia will require 100% of skilled birth attendance (SBA), and decrease MMR to at least 12 per 100000 live birth.

Different international organizations and agencies are producing maternal mortality estimates for different countries, e.g., the UN Maternal Mortality Estimation Interagency Group (MMEIG) and Institute for Health Metrics and Evaluation (IHME). However, all sources indicate the decrease of maternal mortality rate.

Maternal mortality ratio per 100 000 live births, Georgia

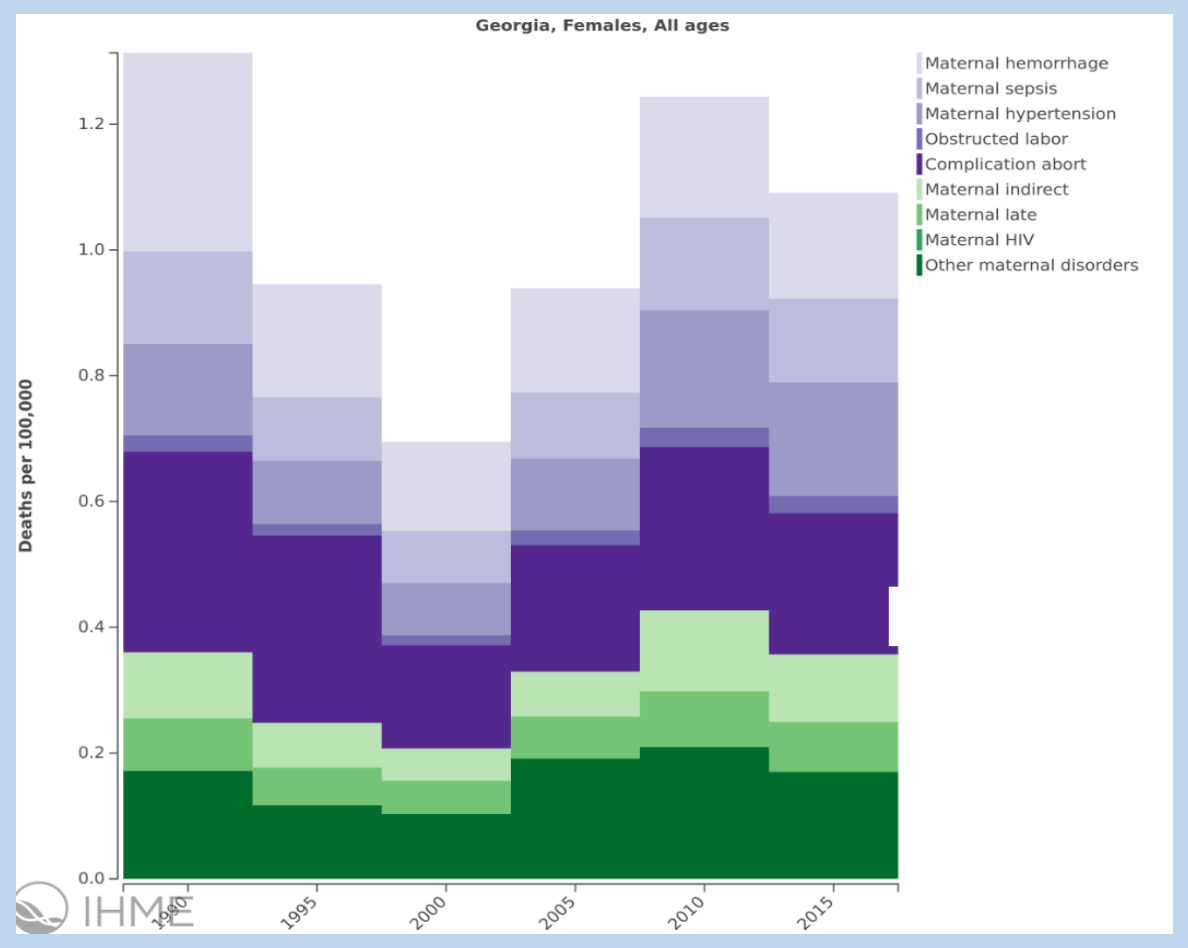
Source	1990	1995	2000	2005	2006	2010	2011	2012	2013	2014	2015	2016
Official statistics	40.9	55.1	49.2	23.4	23.0	19.4	27.6	22.8	27.7	31.5	32.1	23.0
MMEIG_2012	92	129	113	95	-	-	-	-	77	-	-	-
MMEIG_2013	50	67	60	48	-	-	-	-	41	-	-	-
MMEIG_2015	34	35	37	37	-	40	-	-	-	-	36	-
GBD	41.5	-	30.7	-	-	-	-	-	-	-	42.3	-
RAMOS	-	-	-	-	44	-	-	26	-	-	-	-

Maternal mortality ratio per 100000 LB, Georgia



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

Maternal mortality by cause of death , Georgia



Source: GBD 2015

Morbidity and mortality in children under-5

Morbidity in children under-5

Top causes of morbidity in children under-5	Incidence per 1000 children aged under-5
Diseases of the respiratory system	731.8
Infectious and parasitic diseases	120.6
Diseases of the ear and mustoid process	62.7
Diseases of the skin and subcutaneous tissue	31.7
Diseases of the digestive system	28.6
Diseases of the eye and adnexa	22.5
Diseases of the blood and blood forming organs	20.5

Source: NCDC

Under-5 mortality

Globally, 5.8 mln children under age 5 died in 2015, representing a 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.

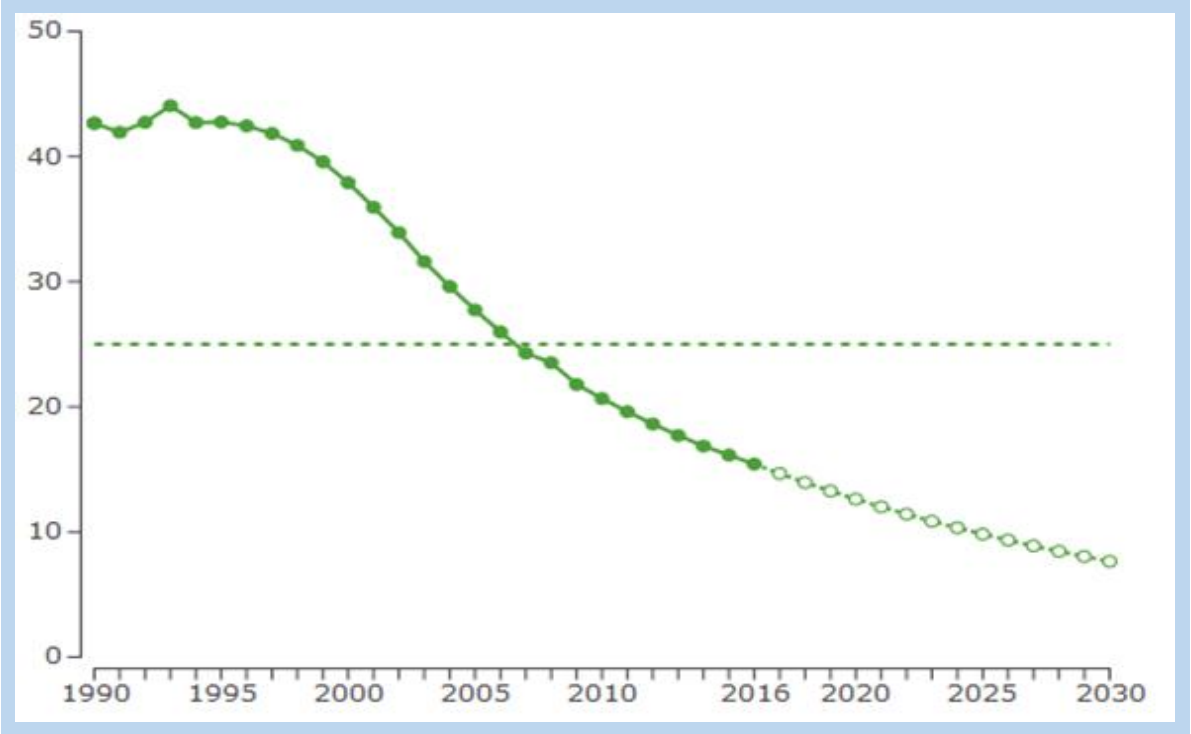
During this time, 58 countries met or exceeded the pace of progress required to meet MDG4.Yet since 2000, the time at which MDG4 was formally enacted, 28 additional countries, that did not achieve the 4.4% rate of decline of under-5 mortality from 1990, met the MDG4 goal. Georgia has been able to reach 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 (Inter-agency Group for Child Mortality Estimation - IGME) and surveys (Reproductive Health Survey - RHS) met the MDG4 Goal. It is essential, that IGME estimates for the global and regional levels are almost the same (matching level – 98%).

Under-5 mortality rate per 1000 live births, Georgia

Source	2001	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
NCDC	27.2	20.3	20.1	19.4	19.7	15.6	16.0	15.4	13.4	12.0	12.4	12.0	9.5	10.2	10.7
NSO	24.9	27.6	26.4	21.1	16.9	14.4	18.0	16.0	13.0	13.8	14.4	13.0	10.9	10.2	10.7
IGME	35.3	28.7	26.5	24.5	22.6	20.8	19.2	17.7	16.4	15.2	14.1	13.1	12.6	11.9	-
GBD	36.2	-	-	28.0	-	-	-	-	21.8	-	-	-	-	17.4	-
RHS	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 the WHO global data, almost 40% of under-5 deaths occurred in infants. In 2016, in Georgia, this share, according to the National Center for Disease Control and Public Health and National Statistics Office, was 83.9%. According to all sources, the infant mortality is declining.

Infant mortality rate per 1000 LB, Georgia

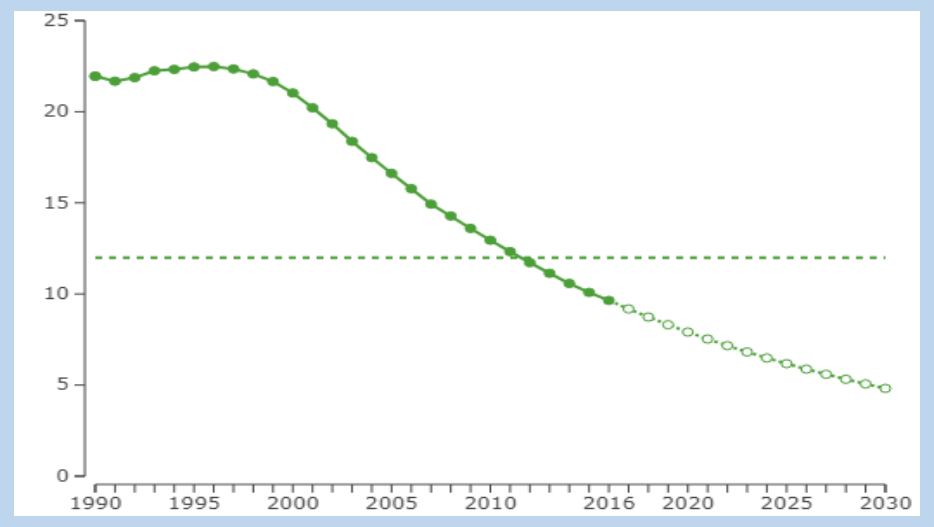
Source	2000	2005	2006	2007	2008	2009	2010	2012	2013	2014	2015	2016
NCDC	21.2	18.1	18.4	14.1	14.3	14.1	12.0	10.8	10.5	8.5	8.6	9.0
NSO	22.5	19.7	15.8	13.3	17.0	14.9	11.2	12.6	11.1	9.5	8.6	9.0
IGME	30.9	21.7	20.1	18.6	17.1	15.8	14.6	12.6	11.7	11.3	10.6	-
GERHS	41.6	21.1	-	-	-	-	14.1	-	-	-	-	-

Neonatal and perinatal mortality, Georgia

	Neonatal mortality rate per 1000 live births	Early neonatal mortality rate per 1000 live births	Late neonatal mortality rate per 1000 live births	Perinatal mortality per 1000 births
2010	9.6	6.6	3.0	17.4
2011	8.5	6.1	2.4	15.6
2012	9.2	6.6	2.7	17.7
2013	8.4	6.7	1.7	16.1
2014	7.2	5.1	2.1	15.5
2015	5.8	3.8	2.1	13.6
2016	6.3	4.1	2.2	13.8

Source: NSO

Neonatal mortality rate per 1000 live births, Georgia

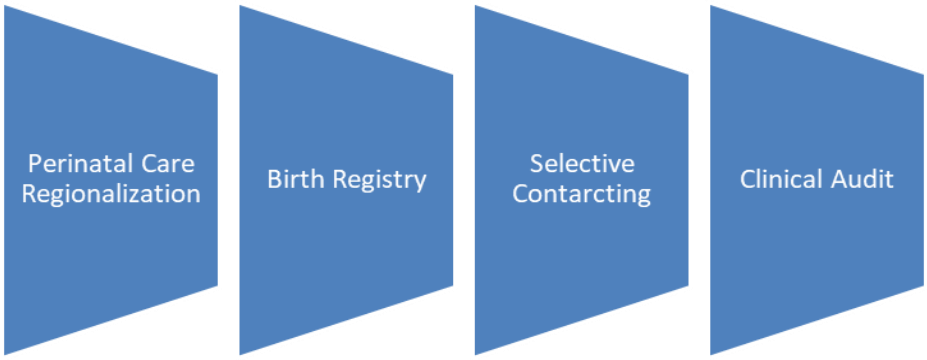


Source: http://www.thelancet.com/lancet/visualisations/gbd-SDGs

71.6% of mortal cases in infants were caused by conditions originating in the perinatal period. The largest share (70.7%) of the perinatal deaths comes from stillbirths.

In 2016, in Georgia, the stillbirth rate was 9.8 per 1,000 births (according to the latest available data: in the CIS - 9.3, in the EU - 5.3). It is planned to implement Electronic monitoring system for children aged 0-5 years (5 years inclusive), which will enable primary health care to monitor mothers and children continuously after discharge from maternity houses and will ensure timely referral to adequate service providers when needed.

National Maternal and Newborn Health Strategy 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 newborn health in Georgia. Key constituents of the strategy are:

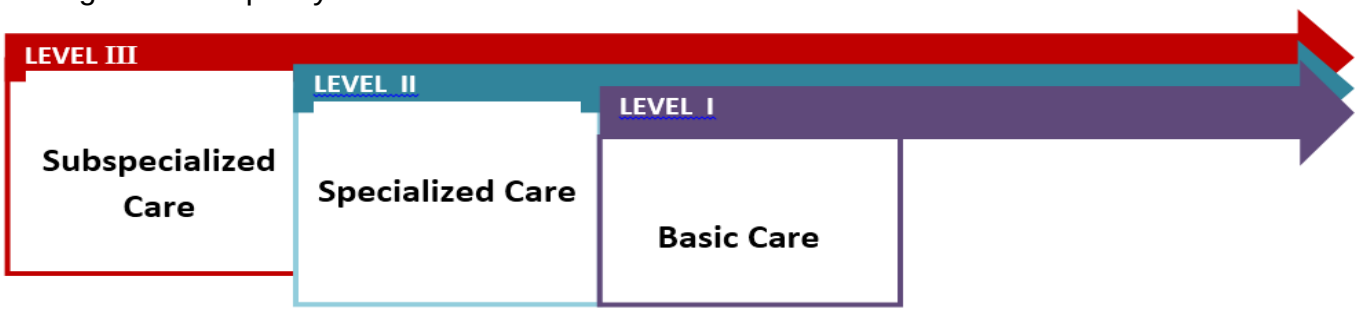


Perinatal Care Regionalization - "gold" model of maternal and newborn service

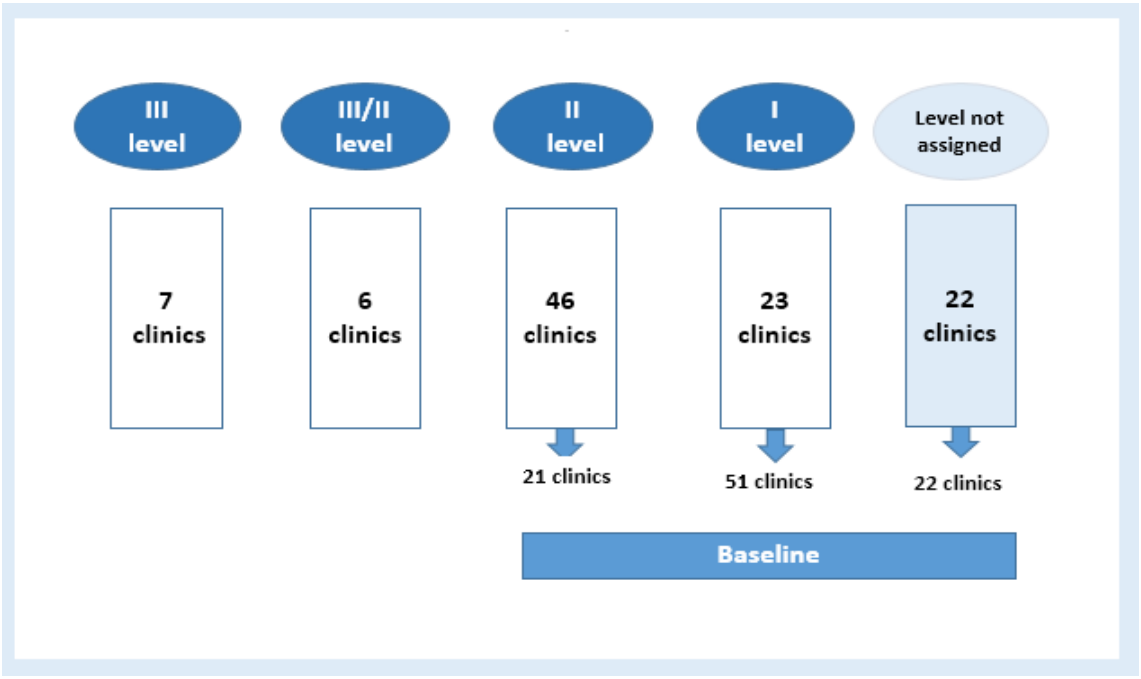
Aim: to improve the health outcomes and decrease maternal and infant morbidity and mortality through provision of risk-appropriate care.

Principle: each mother and newborn 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 assessed, 82 facilities have designated level of care. All 82 facilities strengthened their capacity, including infrastructure/equipment and competencies of service providers according to the level requirements.

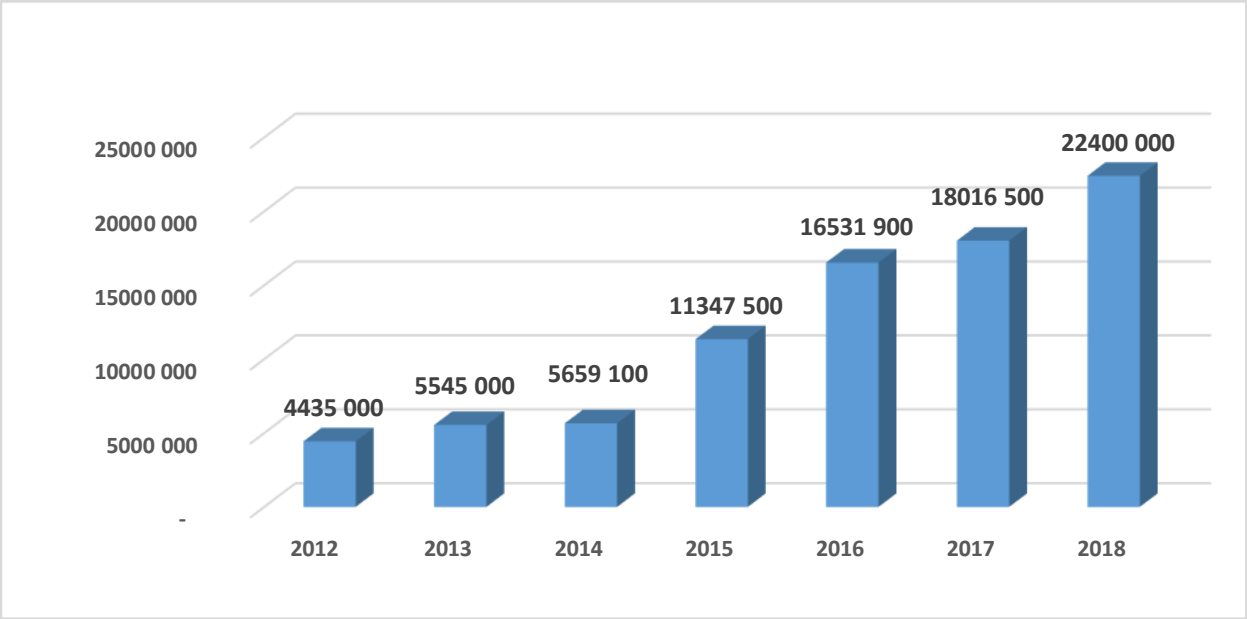


Communicable diseases

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 (2012-2018, in GEL)



Current covers vaccination against 12 infectious diseases: Tuberculosis, Hepatitis B, Diphtheria, Pertussis, Tetanus, Poliomyelitis, Measles, Mumps, Rubella, Hib, Rota, and Pneumococcal.

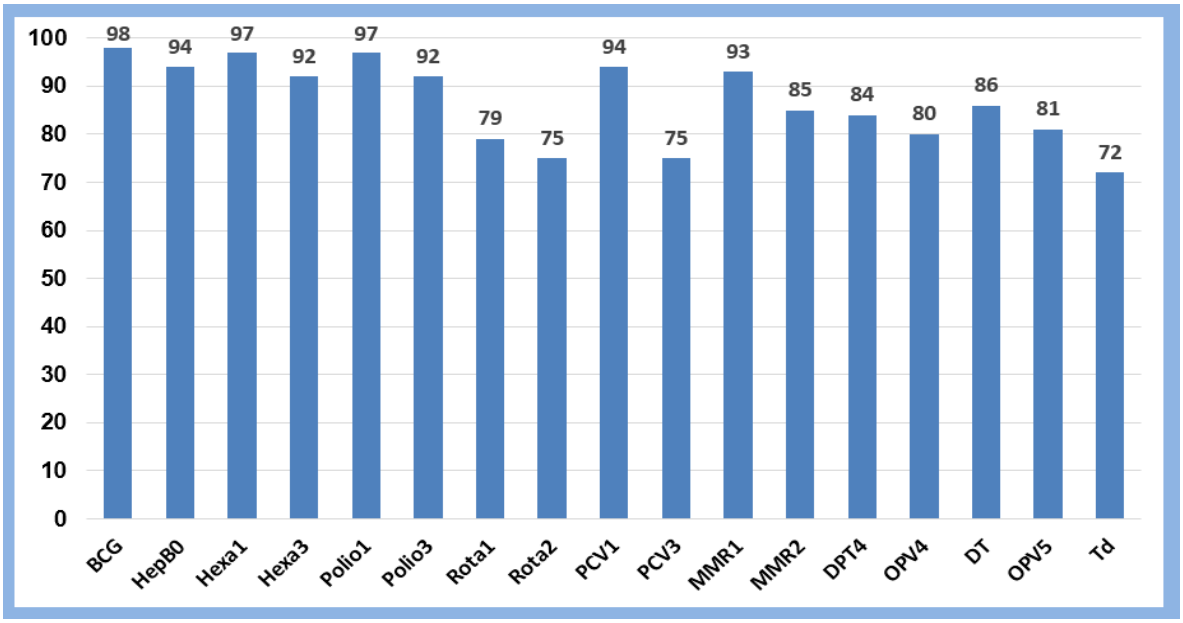
Immunization Calendar

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

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). 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.

In 2016, compared to 2015, in the frame of the State immunization program, the vaccination coverage rates for most antigens are higher, athough, coverage rates for all vaccines have not yet reached 95%.

Immunization coverage (%), Georgia



Source: NCDC

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

Since April 18, 2016, Georgia, following the action plan of Global Polio Eradication Initiative, successfully replaced the oral trivalent polio vaccine with the bivalent.

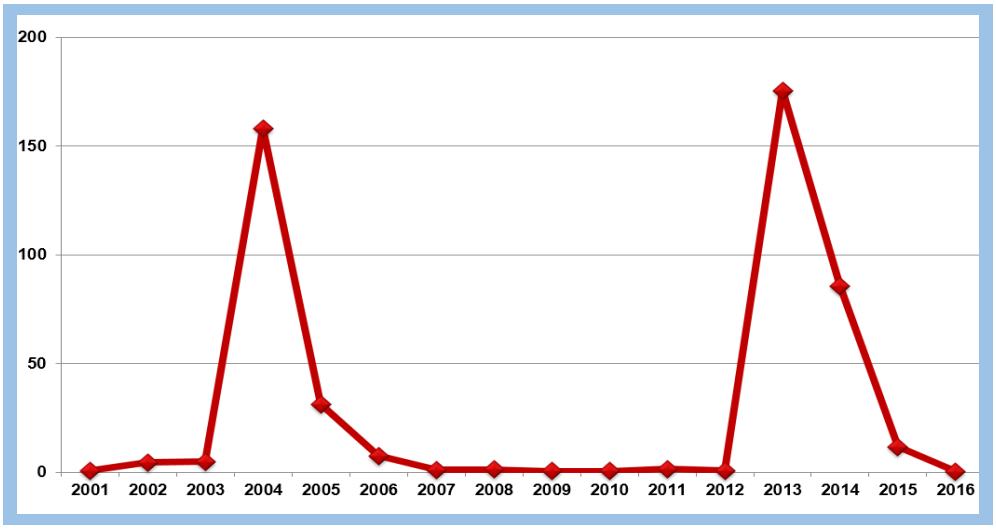
A mobile application on vaccination for parents (uses iOS and Android platforms) was developed. Thanks to the application, parents are able to receive information about the National vaccination calendar, vaccines, vaccination contraindications, and false contraindications, warnings, recommendations about 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. As a result, the number of cases of measles in the country significantly decreased: in 2015 there were registered 431 cases of measles; in 2016 - 14 cases.

Measles, incidence per 100000 population



Source: NCDC

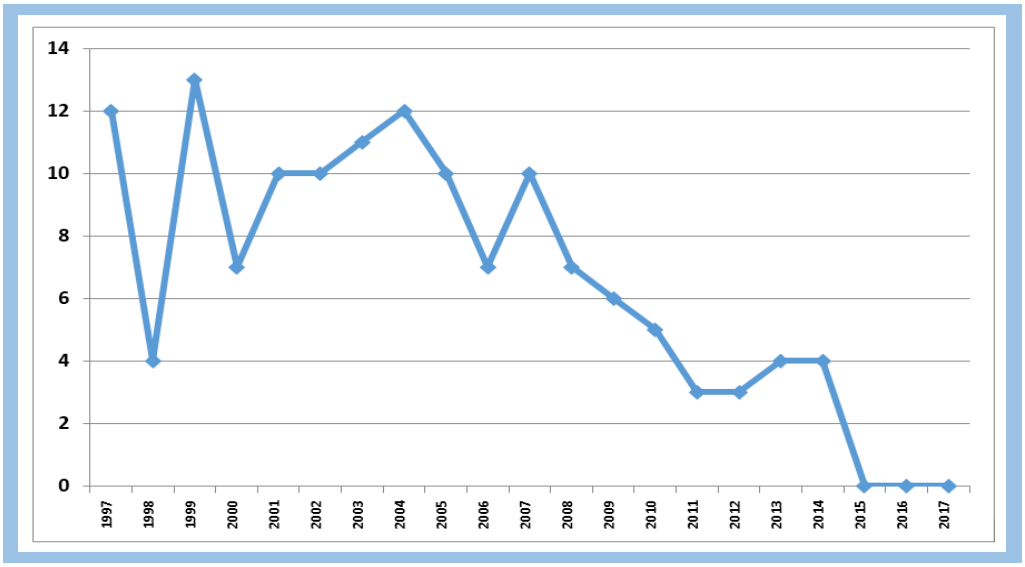
Rabies

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 35 000-49 000 over the years. 48 786 injured persons received the rabies prophylaxis in 2016. Among them combined prophylaxis against the rabies (vaccine + immunoglobulin) was provided to the 19,2% of injured. Above mentioned medical service is provided under the State program.

Continious 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.

Number of cases of rabies, Georgia

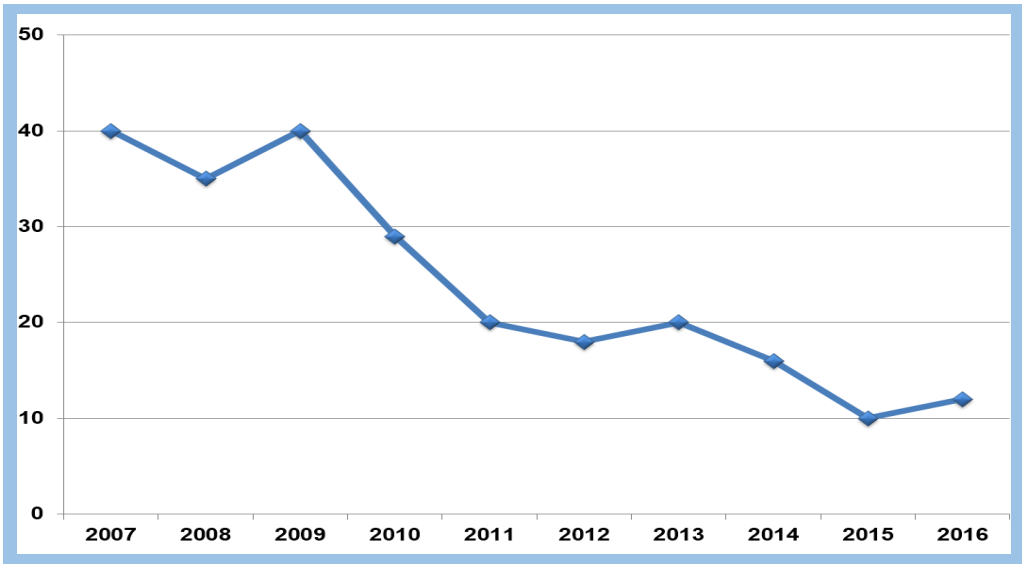


Source: NCDC

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 2013, coverage with two doses of rotavirus vaccine was 56%, in 2014 - 69%, in 2015 - 72%, and in 2016 - 75%. In the tested patients, during this period, the share of rotaviral diarrhea has reduced 2-fold.

Share of rotaviral diarrhea In the tested patients in %, Georgia, sentinel surveillance data



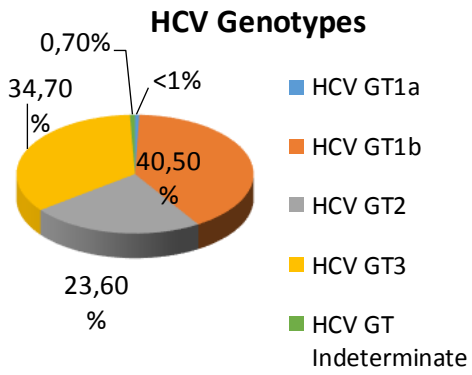
Source: NCDC

Hepatitis C

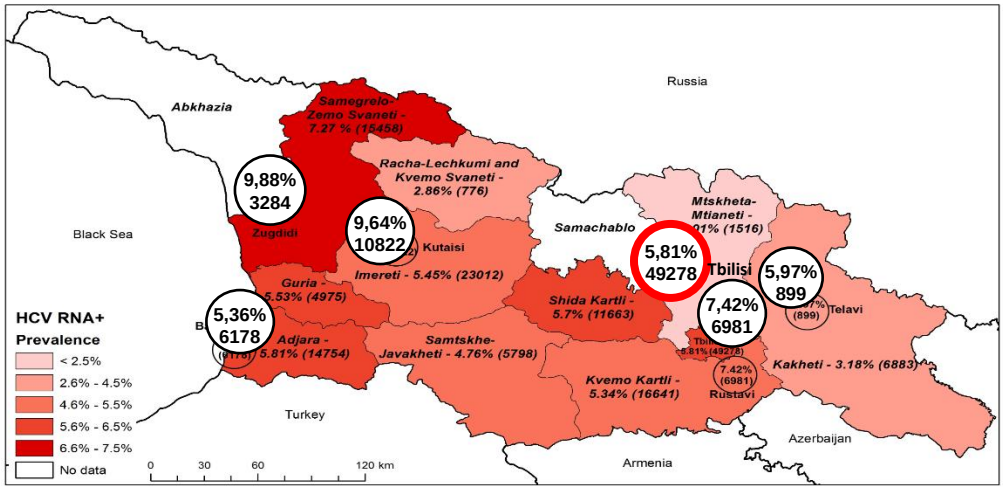
Based on available data, Georgia is among the countries with high hepatitis C (HCV) prevalence. However, the reasons of the high burden of the disease have not been studied sufficiently.

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%.

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



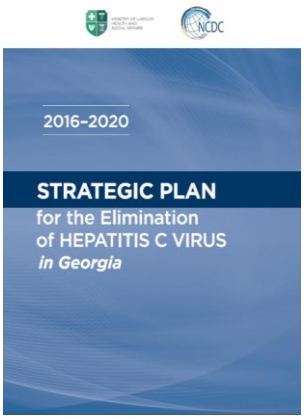
Prevalence and Estimated Number of HCV RNA+ Individuals by Regions and Cities



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 (Minister Dr. David Sergeenko) initiated discussion regarding strengthening Hepatitis C response in the country with US partners and after the succesful 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. As of January 2018, more than 1.4 million screenings were registered in the database, among which ~896,000 were unique individuals with positivity rate 11.1%. Starting with 4 sites in 2014, currently 32 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 2015 through December, 2017, 38506 patients completed the treatment. Cure rate reached 98.2%.



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. In total, 39 proposals were reviewed and 31 were approved by the Scientific Committee by the end of October, 2017. Clinical guideline for management of hepatitis C infection was elaborated by the Clinical Committee.

The Georgian HCV treatment protocol and guidelines developed on the basis of 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.

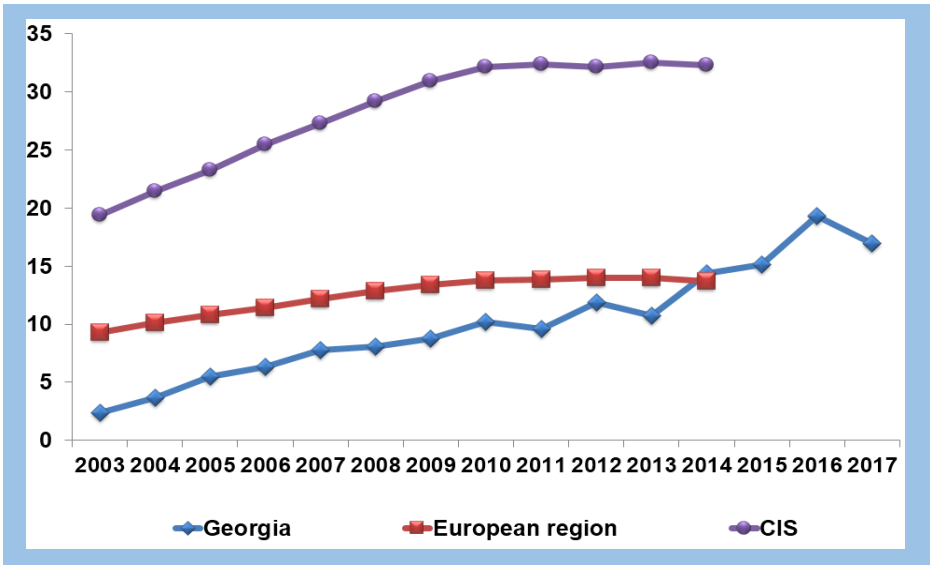
Georgia was awarded the title of NOhep Visionary for the European Region at the World Hepatitis Summit in Sao Paulo, Brazil, on November 1st, 2017. The NOhep Visionaries Programme is a global campaign which engages governments to scale-up successful approaches to elimination and share key learnings,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

HIV/AIDS

Georgia is considered as a country with low prevalence of HIV/AIDS. However, in recent years incidence of HIV/AIDS is charactirized by the growing trend. In 2017 632 new cases of HIV were registered (incidence per 100,000 population – 17.0) in Georgia, which shows 12% decline compared to the HIV registered cases in 2015 (717 cases) and 2016 (719 cases).

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 2017 has been increased and constituted more than 77,800 tests. The HIV testing within the State Programs is conducted among pregnant women, blood donors, behavioral high-risk and other groups, including prisoners of the penitentiary system (accused / convicted), patients with clinical signes of the diseases and patients with viral hepatitis infecion. Also, within the framework of the Global Fund Program (GFTAM). Key affected population groups (IDUs, CSWs, MSM) receive HIV prevention servicies defined by the standard HIV prevention package, including HIV voluntary counseling and testing.

HIV incidence per 100000 population

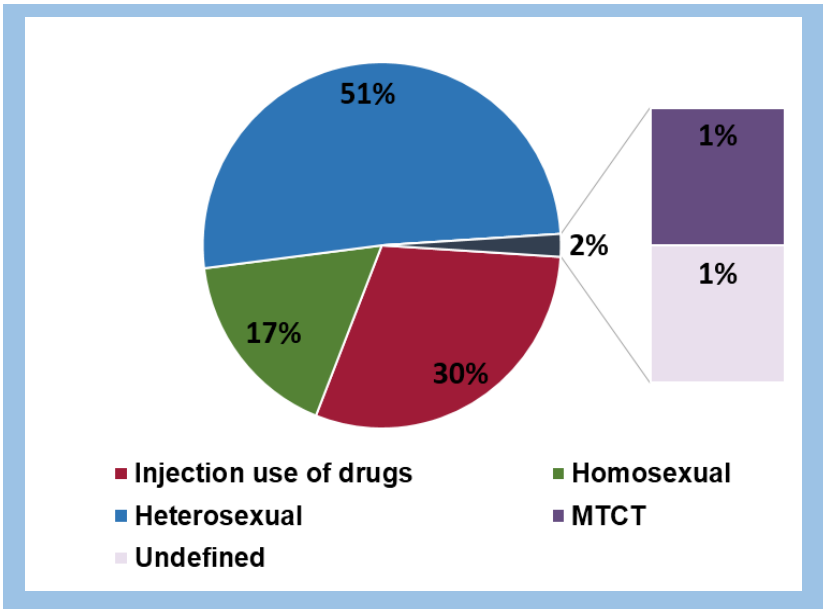


Source: World Health Organization HFA DB

Following trends have been observed in 2016, compared to 2015:

- 1.3% increase of the number of heterosexually transmitted new cases;
- 3% decrease of the homosexually transmitted new cases;
- 2.3% increase of the number of new cases transmitted by injected drug use;
- 0.2% decrease of the number of new cases transmitted vertically (from mother to child).

Distribution of Newly Diagnosed HIV Cases by Routs of Transmission, 2016



Source: Center for infectious pathology, AIDS and clinical immunology

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, 37.4% of the new HIV cases are diagnosed at the AIDS stage.

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, which constitutes 81% and 85% respectively

(percentages are calculated for 9 600 estimated cases of HIV infection for 2016).

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.

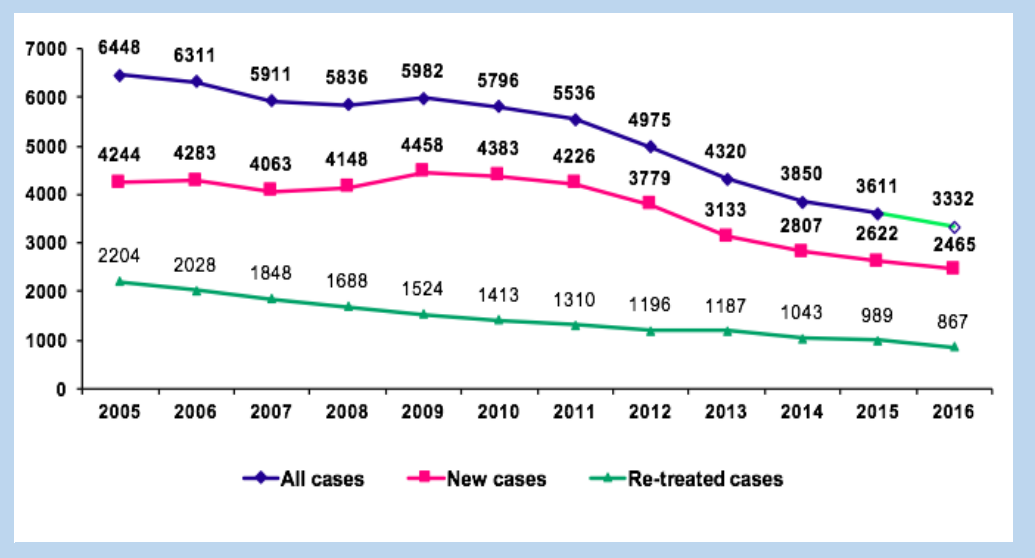
Georgia was one of the first also to start OST program in the region in 2005, including two long term methadone detoxification programs in prisons. In 2017 total 5 603 IDUs were enrolled in the State Methadone Substitution Therapy, from which 37 were women. The number of HIV positive IDUs enrolled in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

- 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 will be 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 3,332 TB cases, all forms, were registered in the country in 2016 (including penitentiary sector), or 89.6 per 100,000 population; out of these, 2,465 were new cases (66.3 per 100,000).

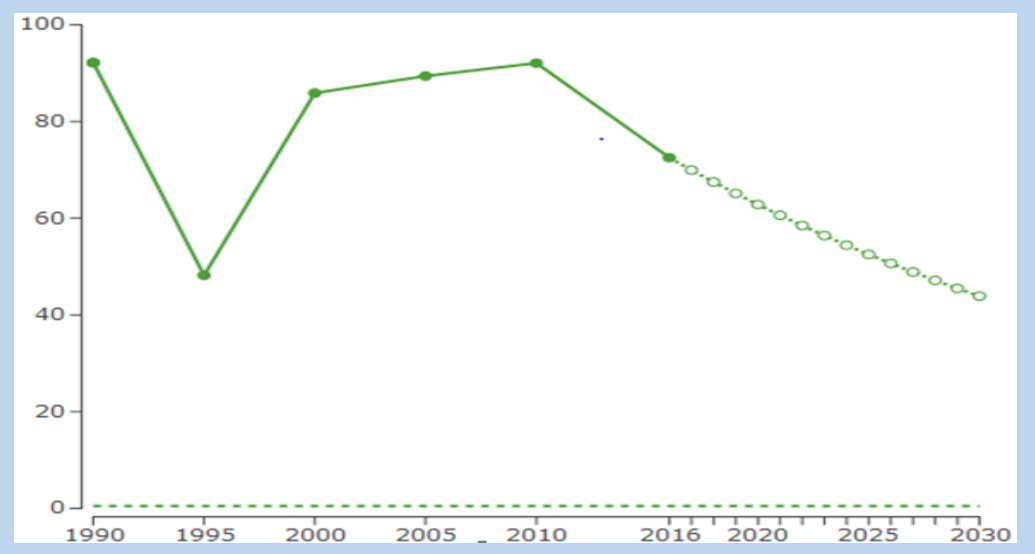


2.1% of new cases and relapses was registered in penitatiary system. The share of pulmonary tuberculosis constitued 79% of all new cases.

In 2016, the share of new and previousely treated M/XDR cases constituted 12% of the total number of tuberculosis cases. The share of extensively resistant tuberculosis (XDR-TB) among MDR-TB cases equals to 10%, but has got a growing tendency and, according to the latest data, has exceeded 15%.

The share of HIV co-infection in new MDR cases is 4.6%. According to the National Statistics Office of Georgia, mortality caused by tuberculosis was 2.2 per 100,000 population (2016).

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 repersents 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).

With GFATM support Georgia was able to implement effective anti-TB treatment for both, sensitive and MDR TB patients. By the end October 2017 more than 20,000 patients received anti TB treatment with the support of the GF. 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. As of July, 2017, overall 370 patients were enrolled in New Treatment Regimens, in parallel active drug safety monitoring system was introduced.

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.

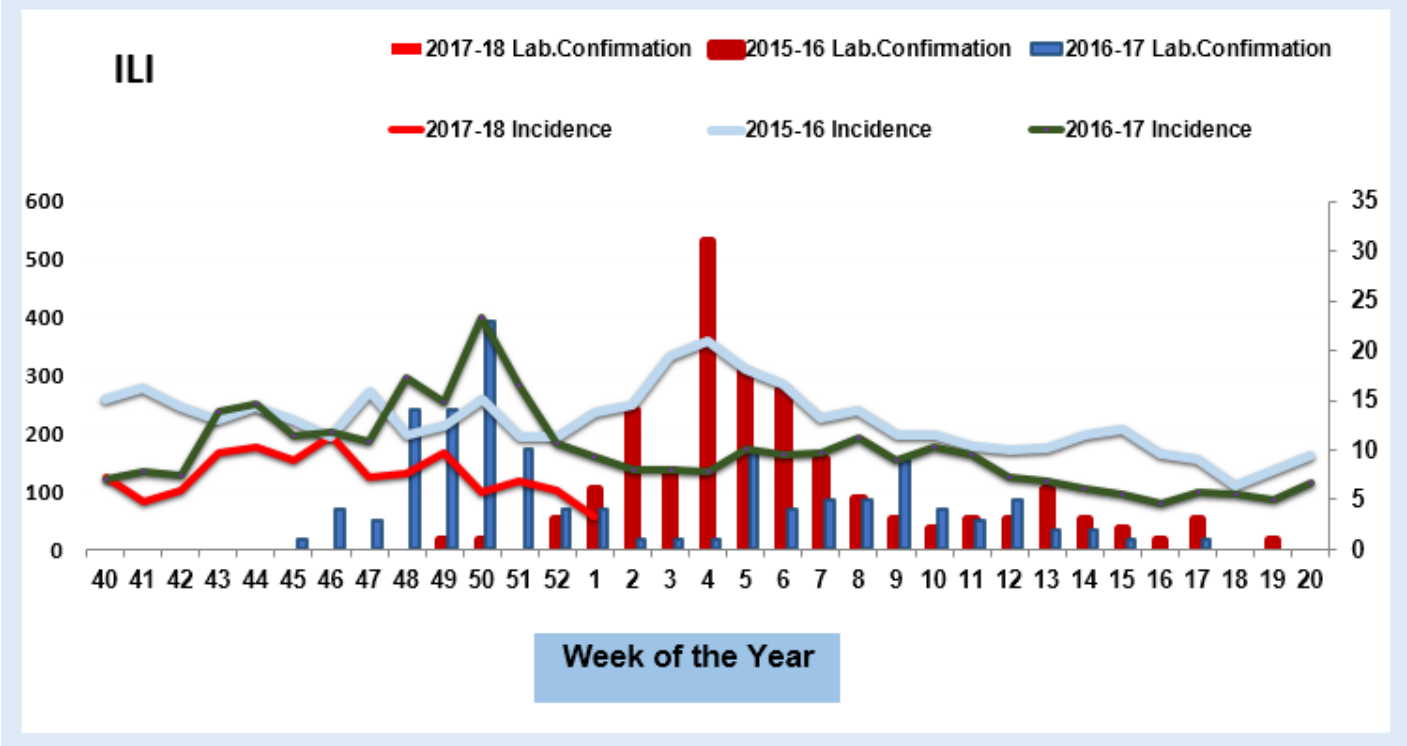
National Strategic Plan for Tuberculosis Control in Georgia 2016-2020 and Transition Plan developed through multilateral dialogue are endorsed by the government.
Georgia has established strong collaboration with international partners and local stakeholders to ensure TB program effectiveness and sustainability. Georgia has been part of multi-central research projects such as: FIND, EXPAND TB, STREAM, STAND, END-TB, Nix-TB.

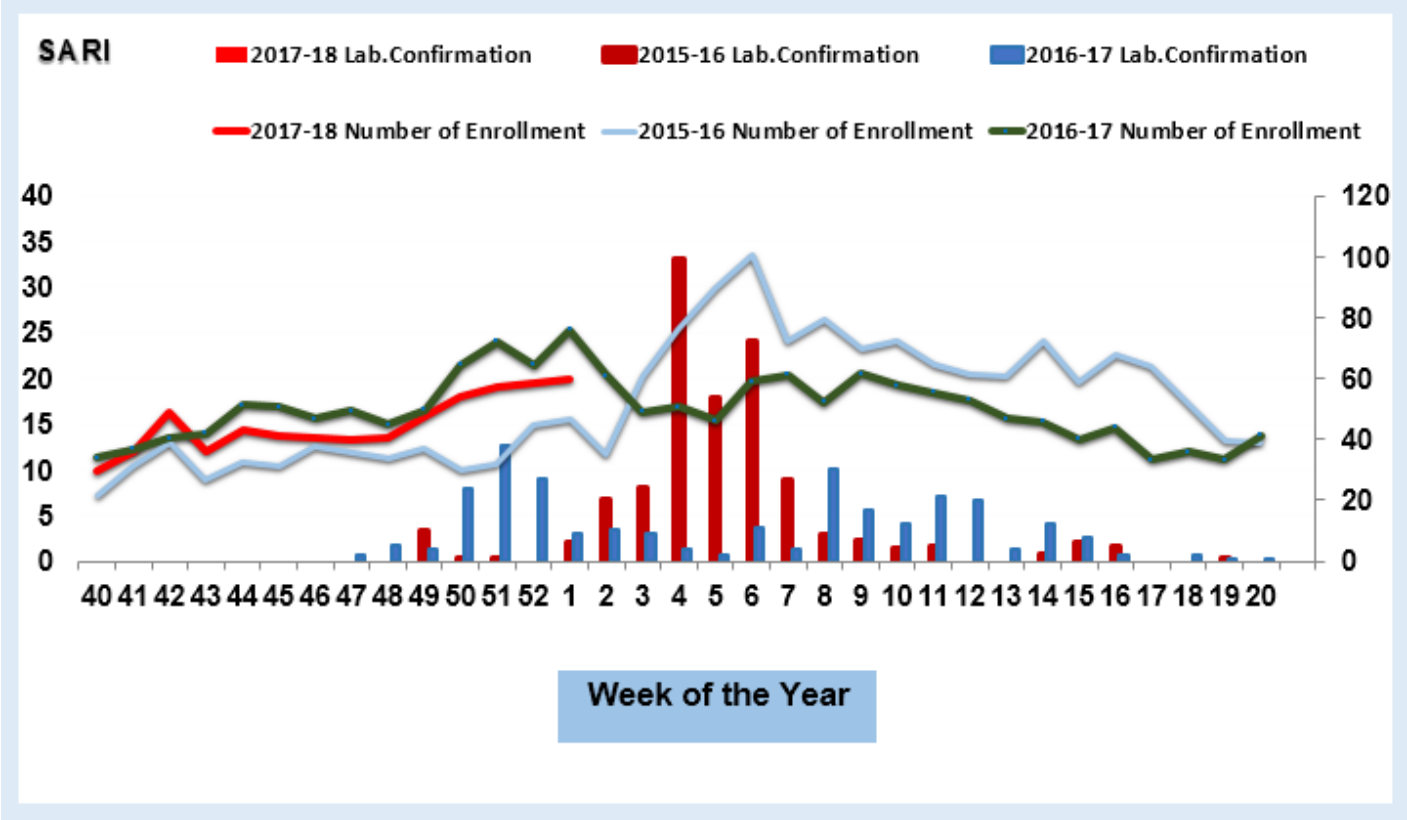
Surveillance on Influenza and Other Respiratory Viruses

In 2006, influenza laboratory diagnostics has been established at the NCDC, which was recognized by WHO as the National Influenza Center (NIC) in the next year.

The national Pandemic preparedness plan for influenza has been adopted within World Bank project. The plan was developed and reviewed by public health experts and representatives from other relevant sectors of the government. Portions of the plan have been tested through table top exercises. The preparedness plan was utilized during the 2009 H1N1 pandemic. The influenza sentinel surveillance system has been established throughout the country (5 sites for SARI, 1 site for ILI, 3 sites for virological surveillance).

ILI incidence, SARI admission rates, and number of influenza positive cases by weeks

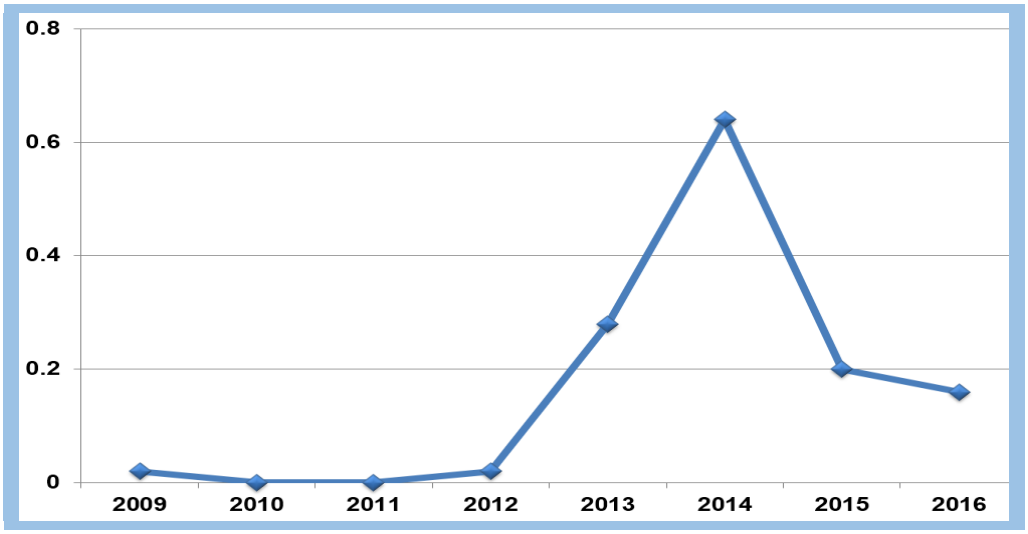




Crimean-Congo Hemoragic Fever (CCHF)

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 2016, a surveillance system revealed 41 suspicious cases of hemorrhagic fever, in 6 cases the diagnosis of the Crimean-Congo hemorrhagic fever was confirmed, 2 of which were fatal (both in a new foci - Ambrolauri and Terjola). Compared to the previous year, the number of cases has decreased (in 2015, 9 cases of Crimean-Congo hemorrhagic fever were registered, including 1 fatal), although the spread area increased.

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

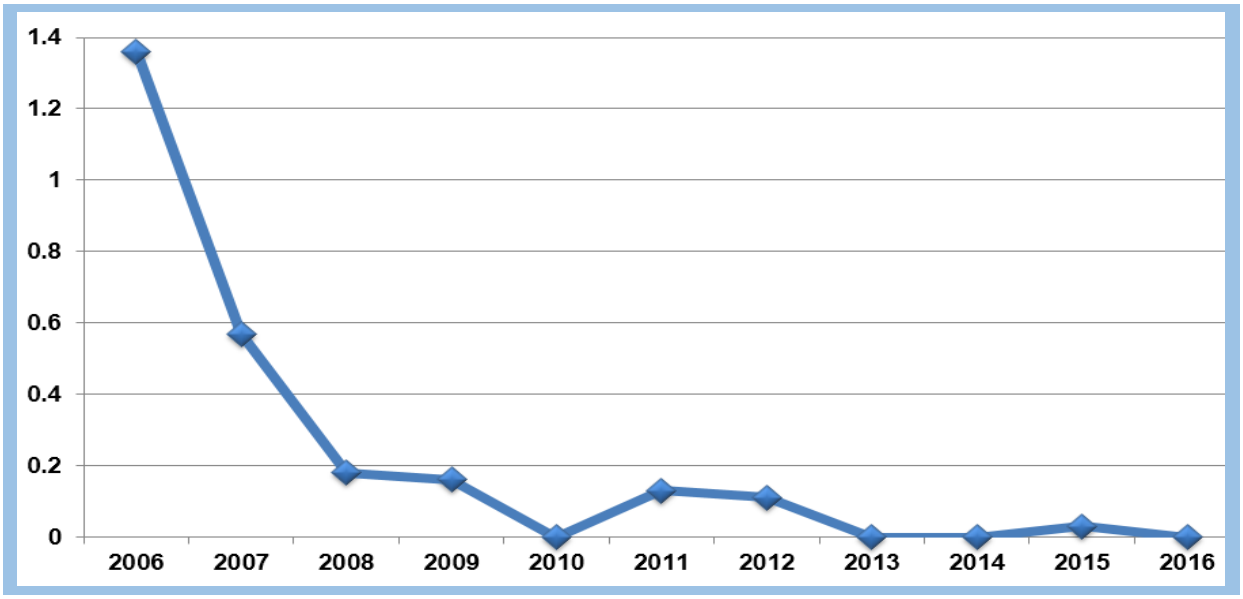


Source: NCDC

Malaria

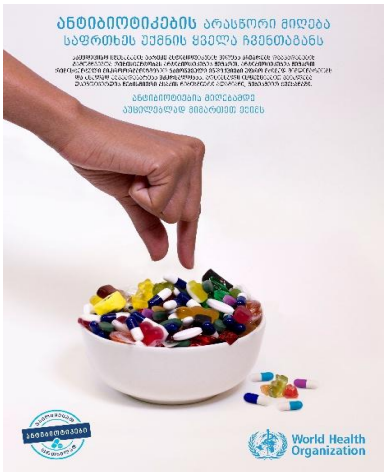
Since 2002, malaria incidence has been substantially reduced, reaching zero point in 2013 – 2014. From 2013, no local (endemic) cases of malaria was recorded in Georgia. Since 2016, the surveillance system has identified 32 suspicious cases, of which 11 cases have been confirmed (all of them were imported from the endemic countries). In 2017, totally 9 000 000 m^2 outdoor and indoor territory was processed for vector control by Ministry of Agriculture and Ministry of Labour Health and Social Affairs (2015 - 7 000 000 m^2, 2016 – 7 500 000 m^2).

Malaria incidence per 100000 population, Georgia



Source: NCDC

Implemented Activities Related to the Antimicrobial Resistance (AMR)

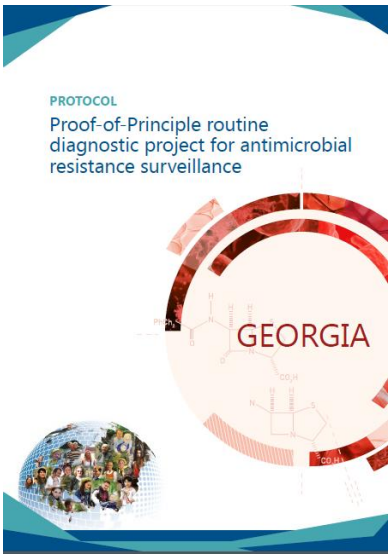


The national AMR strategy was developed by national experts with the participation of the World Health Organization (WHO*)* consultants. Government of Georgia approved national AMR strategy in January 11, 2017 in line with the One Health approach.

In 2016 Georgian AMR data were shared to the Central Asian and Eastern European Surveillance of Antimicrobial *Resistance* (CAESAR) and Global Antimicrobial Resistance Surveillance System (GLASS).

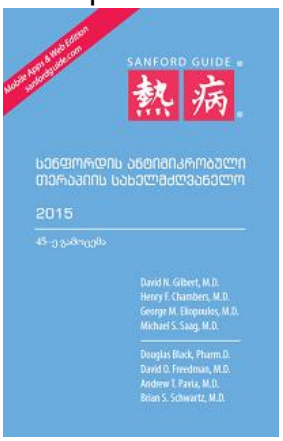
Georgia is a member of CAESAR and enrolled to GLASS since 2016. Since 2014 nine different laboratories including NCDC are involved in EQA AMR network.

WHO is supporting AMR related activities - workshops, trainings, meetings since 2014, implementation of European Committee on Antimicrobial Susceptibility Testing (EUCAST) standards, renewal of legislation on infection prevention and control (IPC).



- The national AMR committee was created
- Infection Prevention and Control (IPC) was strengthened in medical facilities
- An IPC post-graduation training curricula was developed
- Awareness on Healthcare-associated infections (HCAIs) and AMR increased
- Knowledge on IPC among healthcare workers improved
- Assessment and monitoring of IPC is being conducted in health care facilities
- IPC standard operation procedures were developed
- National IPC guideline is being updated
- IPC standard operation procedures resistance are under development
- Most of the hospitals across the country were monitored on IPC
- About 5000 dentists received trainings on IPC
- Media campaigns were organized on IPC-related topics

- Sanford Guide to Antimicrobial Therapy was translated and printed into Georgian. 3000 of its copies were disseminated to all medical facilities throughout the country. Currently, the work on updating the Sanford Guide content is on-going



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 it's 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 to Georgia but 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.

At present NCDC / Lugar Center has implemented more than 160 international scientific and public health projects within ~ 36 000 000 USD.

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.

And 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
- Anthrax in soil active foci detection increased to 15% (10% historically). Correspondently, increased the risk of disease, as in animals, as well as in humans
- Tularemia new foci was detected in Kvemo Kartli
- Modern molecular testing methods on *Clostridium difficile* infection has been implemented
- 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 found in shigella
- Through GARP (Genetic Algorithm for Rule-set Production) it became possible to forecast and ecologically model of vectors; GIS database started to be developed

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.

ANAB

CERTIFICATE OF ACCREDITATION

ANSI-ASQ National Accreditation Board
500 Montgomery Street, Suite 625, Alexandria, VA 22314, 877-344-3044

This is to certify that

LEPL "National Center for Disease Control and Public Health" / Richard Lugar Center for Public Health Research
0109, Alexeevka Settlement #3
Kakheti Highway 16
Tbilisi, Georgia

has been assessed by ANAB
and meets the requirements of international standard

ISO 15189:2012

while demonstrating technical competence in the field of

Medical and Clinical Laboratories

Refer to the accompanying Scope of Accreditation for information regarding the types of materials to which this accreditation applies.

AM-2542
Certificate Number

ANAB Approval

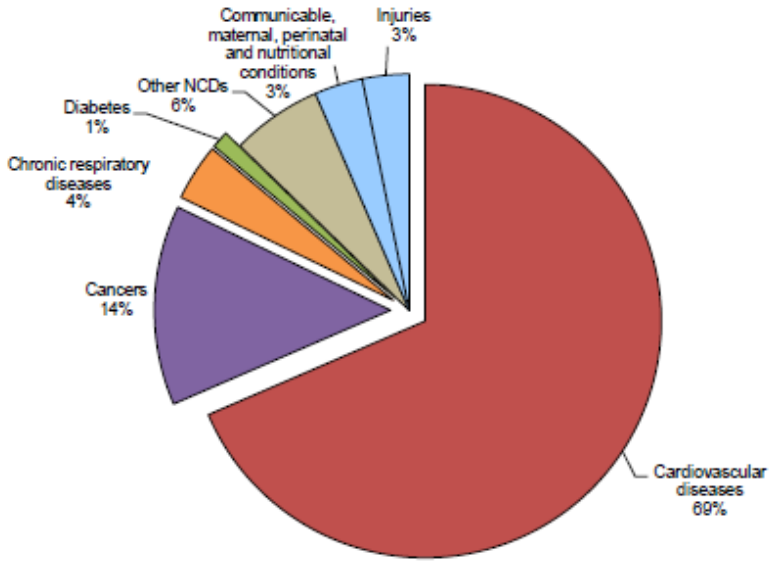
Certificate Valid 01/05/2018-01/05/2020
Version No. 001 Issued: 01/05/2018

ANAB

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. According to WHO 2014 Health Report, noncommunicable diseases account for nearly 94% of all deaths, among them 69% due to CVDs, 14% - cancer, 1% - diabetes, 4% - chronic respiratory diseases; they make influence not only on health but also on sustainable development of the country.



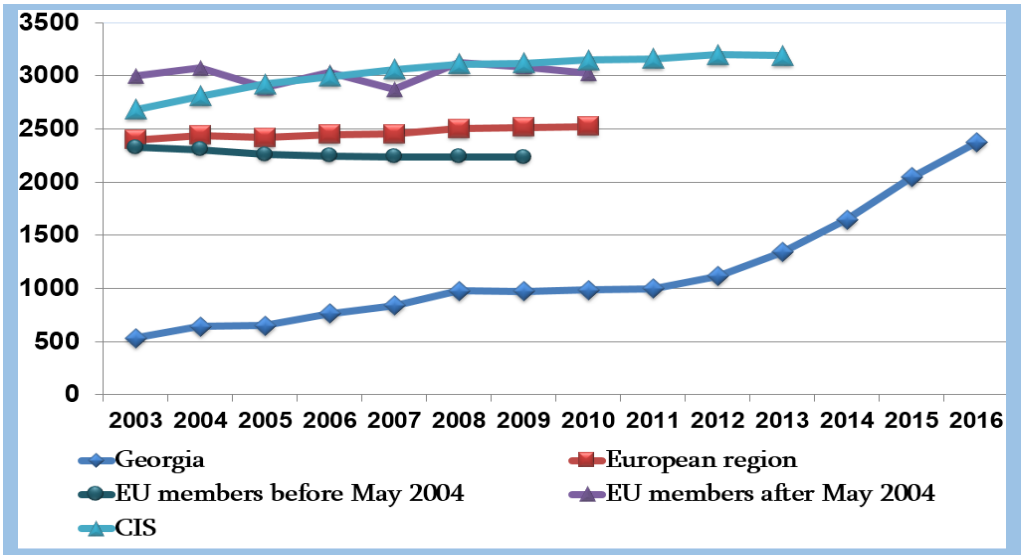
For the effective prevention and control of NCDs it is essential to have timely access to precise and reliable information, to monitor and interpret health indicators, to monitor and evaluate the impact of interventions. For the effective NCD surveillance Georgia implemented The WHO STEPwise approach; 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 15.5% of all registered and 8.6% 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 – 2016, 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 constitutes about 59% of all cardiovascular diseases in Georgia (2016). 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%.

Ischaemic heart diseases

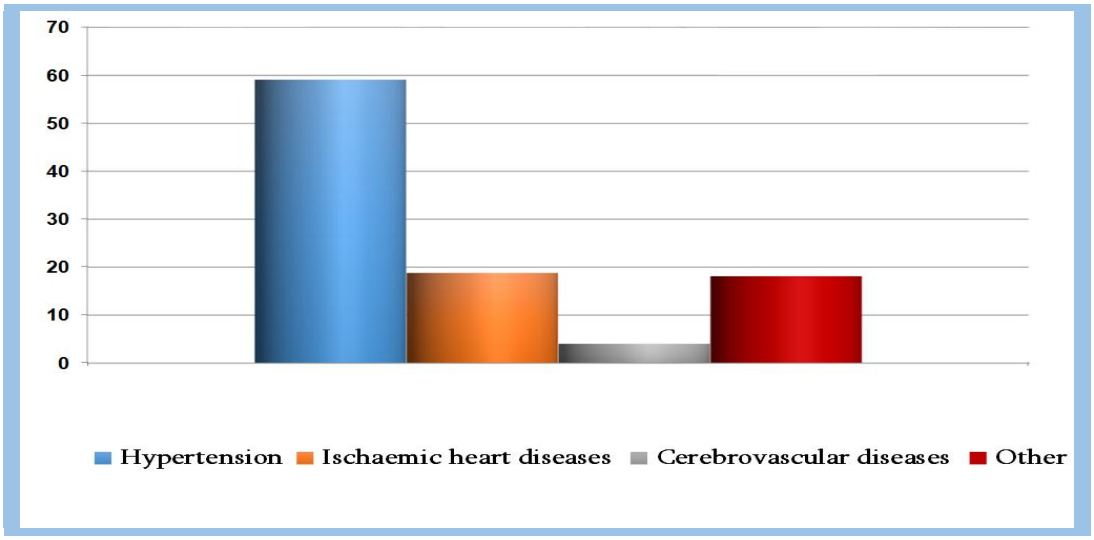
Ischaemic heart diseases constitute about 18% of all diseases of the circulatory system: angina pectoris – 6.8%; acute myocardial infarction – 1.2%, other acute ischaemic diseases – 1.6%.

In 2016, 52.8% of patients with acute myocardial infarction were admitted to hospital timely (within the first 24 hours from the onset of symptoms).

Cerebrovascular diseases

Cerebrovascular diseases occupied the third place among diseases of the circulatory system. Over the past years the prevalence of the cerebrovascular diseases had an incrieasing trend.

Diseases of the circulatory system, structure (%), Georgia, 2016



Source: NCDC

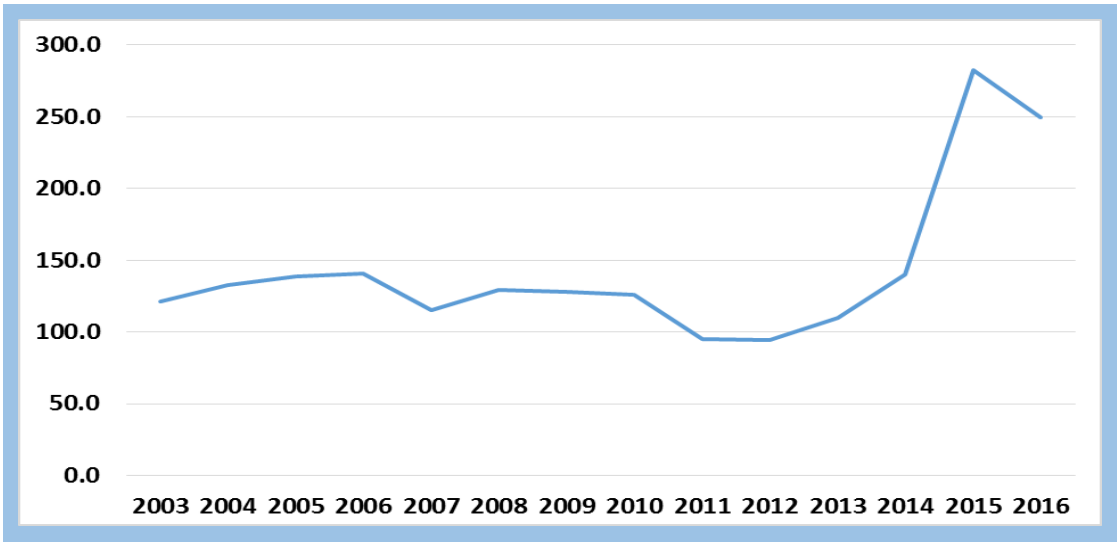
Cardio-surgical interventions

After introduction of the Universal Healthcare Program in the country accessability to the cardiosurgical interventions is substantially increased. In 2013-2016 number of cardio-surgical interventions has been doubled (from 8209 to 18762), number of implantation of an aorto-coronary bypass also doubled (from 1355 to 3045) and number of correction of the acquired heart malformation has been increased from 322 to 717 cases. Number of the Coronary artery angioplasty in emergency situations has been almost doubled (from 4923 to 9442).

Malignant neoplasms

In order to improve cancer registration and surveillance population-based cancer registry (PCR) was established in 2015. According to the PCR data, 10 506 new cases of malignant neoplasms, including non-melanoma skin cancers and cancers in situ were registered in 2015 (incidence rate per 100 000 population – 293.4). In 2016, there were 10 097 registered cases (incidence rate per 100000 population – 271.5).

Malignant neoplasms, incidence per 100000 population, Georgia, 2003-2016

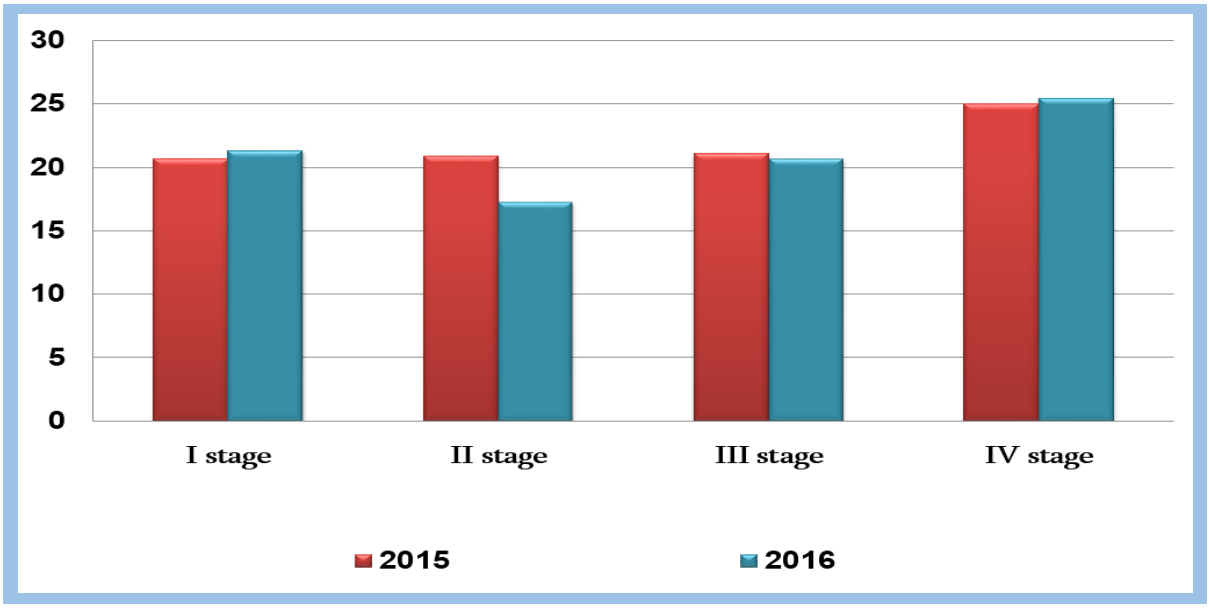


Source: NCDC

In 2015-2016, 56% of all new cases were registered in women and 44% - in men. 72.2% of all new cases are registered in the working age group (30 – 70 years); about 24% - in the population aged 70 years; 1% - in children (under 15 years), and 0.5% - in adolescents (15 – 19 years).

According the cancer registry data in 2015-2016, the share of cancers, diagnosed at the I and II stages, constituted 39%, and the share of cases diagnosed at III and IV stage is high (in 2015 - 50%; in 2016 - 46.2%).

New cases of cancer by stages (%), Georgia, 2015-2016



Source: NCDC

Cancer Types by Top 5 Sites in women, Georgia, 2016

Site	Number of new cases	Percent from the total number of all new cases
Breast	1 756	33.5%
Thyroid	757	14.4%
Cervix uteri	371	7.1%
Corpus uteri	351	6.7%
Colorectal	342	6.5%

Source: NCDC

Cancer Types by Top 5 Sites in men, Georgia, 2016

Site	Number of new cases	Percent from the total number of all new cases
Trachea, bronchus and lung	676	16.7%
Prostate	406	10.0%
Bladder	398	9.8%
Colorectal	389	9.6%
Stomach	278	6.9%

Source: NCDC

From 2013 the Universal Healthcare Program covers chemo-, hormone-, and radio-therapy 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 radio-therapy 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 radio-therapy.

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, in 2015-2016 (according to the Cancer Registry)

Method of treatment	2015	2016
Surgery	5253	4443
Radio-therapy	1786	1716
Chemo-therapy	3047	2423
Palliative Care	1260	1010
Other (symptomatic)	840	1010

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.165 patients benefited by the program (1 323 cases) and 3 567 873 GEL was spent.

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

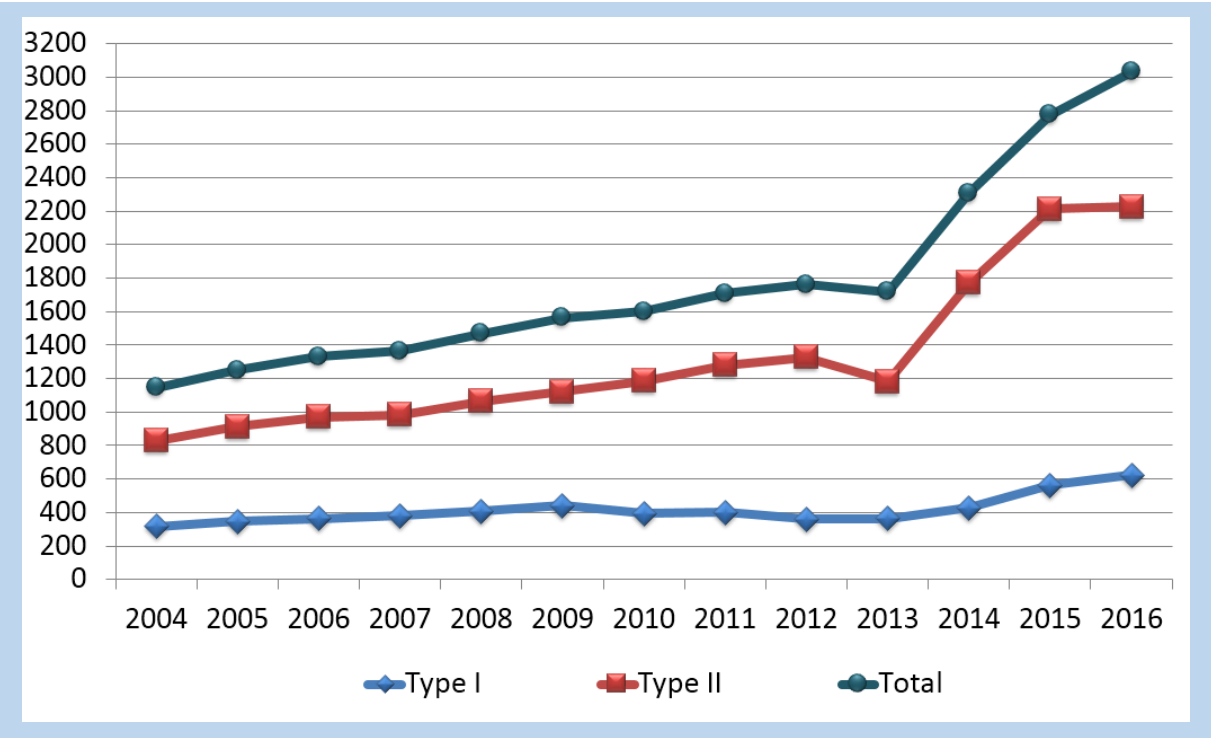
- Breast cancer screening for 40-70-year-old women;
- Cervical cancer screening for 25-60-year-old women;
- Prostate cancer management for 50-70-year-old men;
- Colorectal cancer screening for 50-70-year-old population.

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%.

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 2. 3.2% of new cases of diabetes type 1 were registered in children under 15 in 2016. There were only 17 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 by type, Georgia, 2004-2016



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 2016, chronic obstructive pulmonary diseases (COPD) contributed 73.8% of all registered cases of lower respiratory diseases.

Tobacco smoke (including passive smoking) is the main cause of chronic pulmonary diseases. Indoor air contamination, outdoor air pollution, occupational dust and chemicals also represent risk factors.

Risk factors

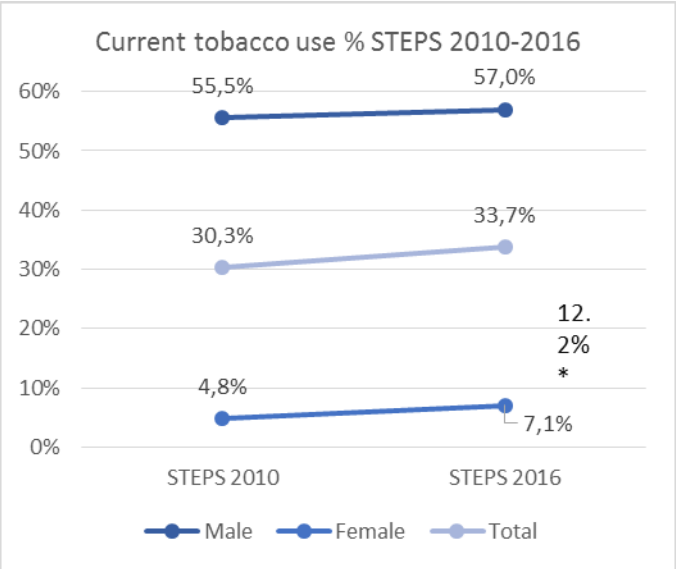
According to the data of the noncommunicable diseases risk factors survey (STEPS-2016):

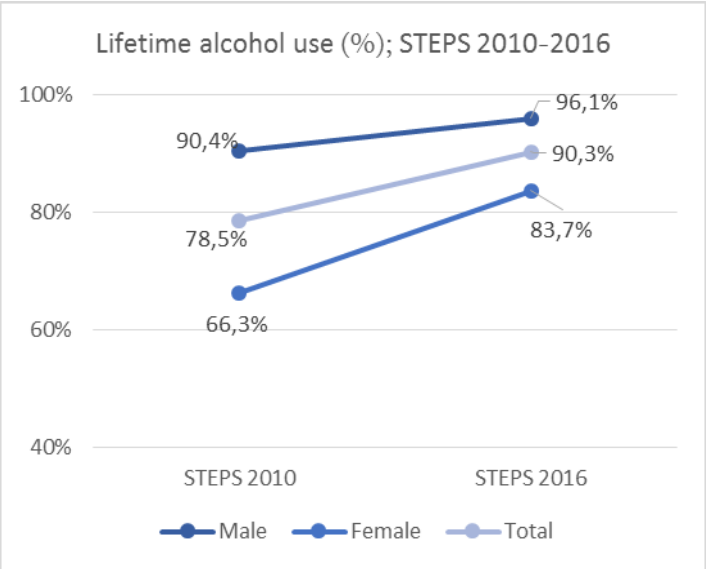
Standardized rates in 18-69 population	Both sexes	Males	Females
Tobacco consumption			
Percentage who currently smoke tobacco	31.0%	57.0%	7.0%
Percentage who currently smoke tobacco daily	28.0%	51.5%	6.2%
For those who smoke tobacco daily			
Average age started smoking (years) among current daily smokers	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%

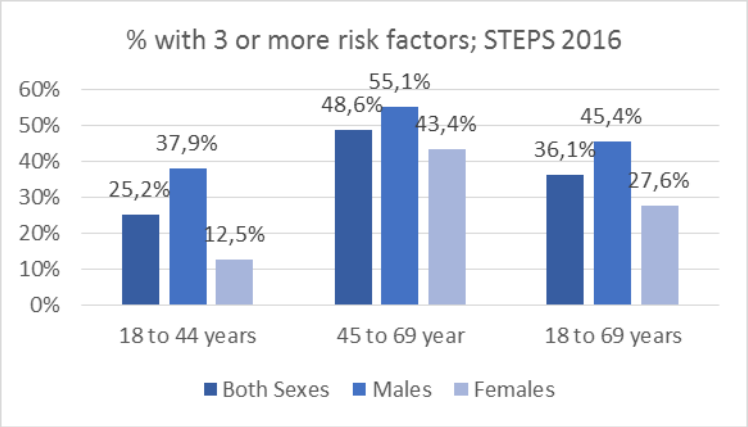
Percentage with raised BP (SBP ≥ 140 and/or DBP ≥ 90 mmHg or currently on medication for raised BP)	55.4%	64.2%	47.2%

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 ≥ 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

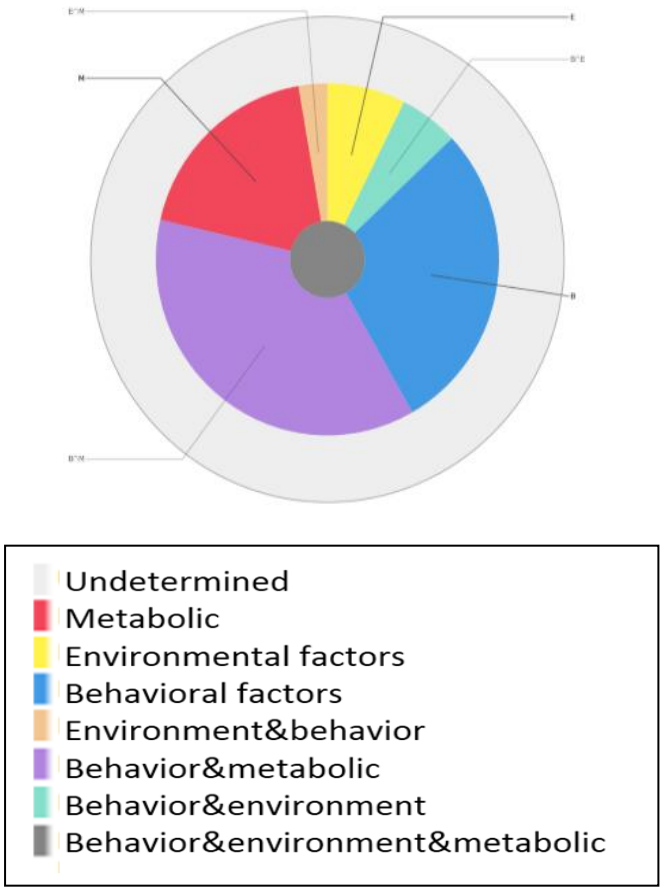






The Institute for Health Metrics and Evaluation (IHME) at the University of Washington in the publication “Systematic analysis for the Global Burden of Disease Study 2016” show the following:

Loss of healthy life (DALYs) attributable to all risk factors, Georgia, 2015



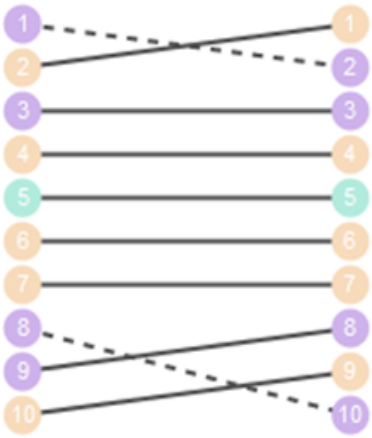
Number of smokers by country, 2015

Country	Number of smokers
Russian Federation	33 000 000
Germany	16 000 000
Turkey	15 000 000
France	12 000 000
England	11 000 000
Ukraine	11 000 000
Kazakhstan	2 900 000
Belarus	2 400 000
Uzbekistan	2 100 000
Azerbaijan	1 800 000
Sweden	990 000
Kyrgyzstan	790 000
Georgia	750 000
Moldova	710 000
Norway	700 000
Lithuania	650 000
Tajikistan	630 000
Armenia	570 000
Latvia	540 000
Turkmenistan	310 000
Estonia	270 000

Source: IHME

Main risk factors for death and disability, Georgia

Ranking 2005	Ranking 2016	Change in %
Nutrition	High blood pressure	-19,5
High blood pressure	Nutrition	-23,5
Smoking	Smoking	-13,5
Overweight	Overweight	-8,1
Air pollution	Air pollution	-32,1
High level of cholesterol	High level of cholesterol	-17,9
High level of glucose	High level of glucose	-0,4
Insufficient nutrition	Alcohol / drug abuse	25,9
Alcohol / drug abuse	Diseases of a kidney	-12,5
Diseases of a kidney	Insufficient nutrition	-40,8



Metabolic risks

Environmental risks

Behavioral risks

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 ammendments 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:

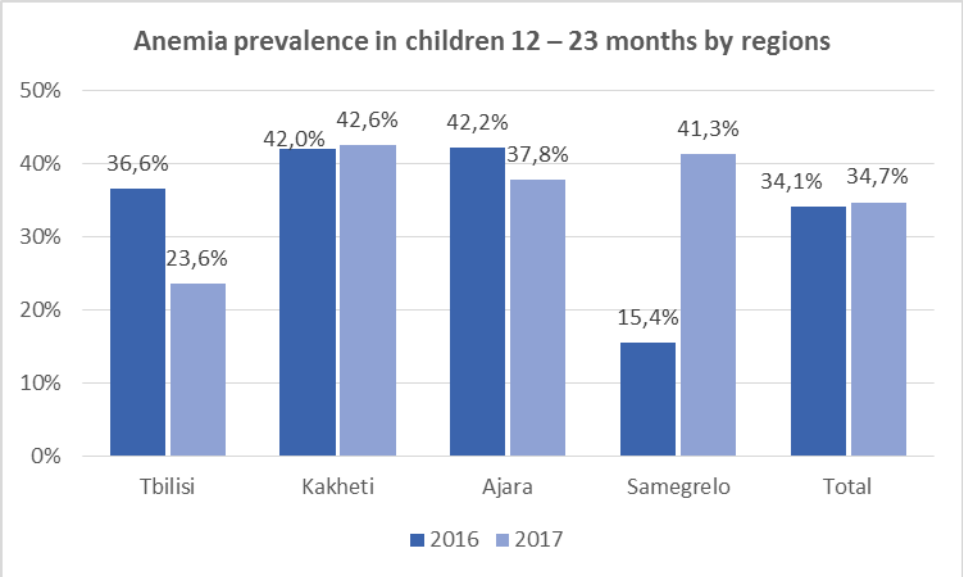
- Exclusion of the interests of tobacco industry and transparency in relationship between tobacco industry and public organizations/individuals in the process of preparation, adoption and establishment of health care decisions
- Increasing size of health warnings to 65% and obligatory pictorial warnings 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.

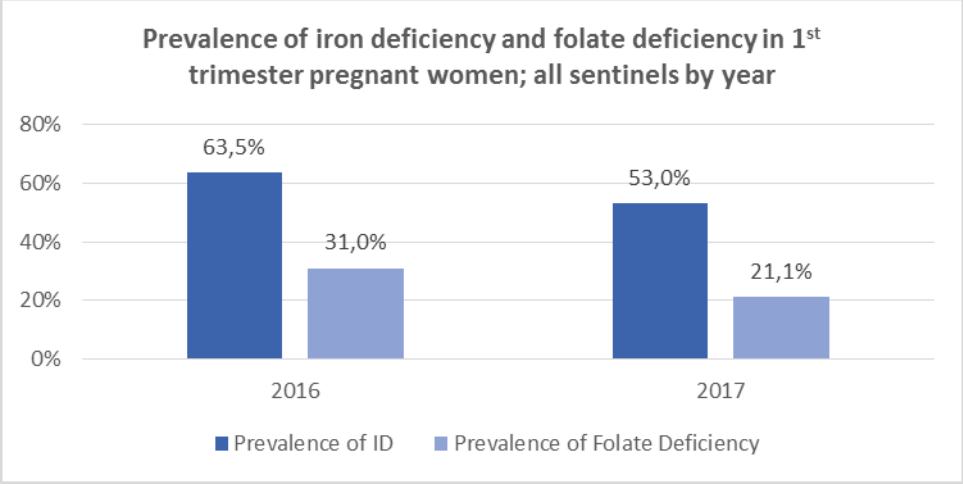
Collaboration project "Strengthening of micronutrients deficiency surveillance systems"

Since 2015, CDC/Altanta 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).





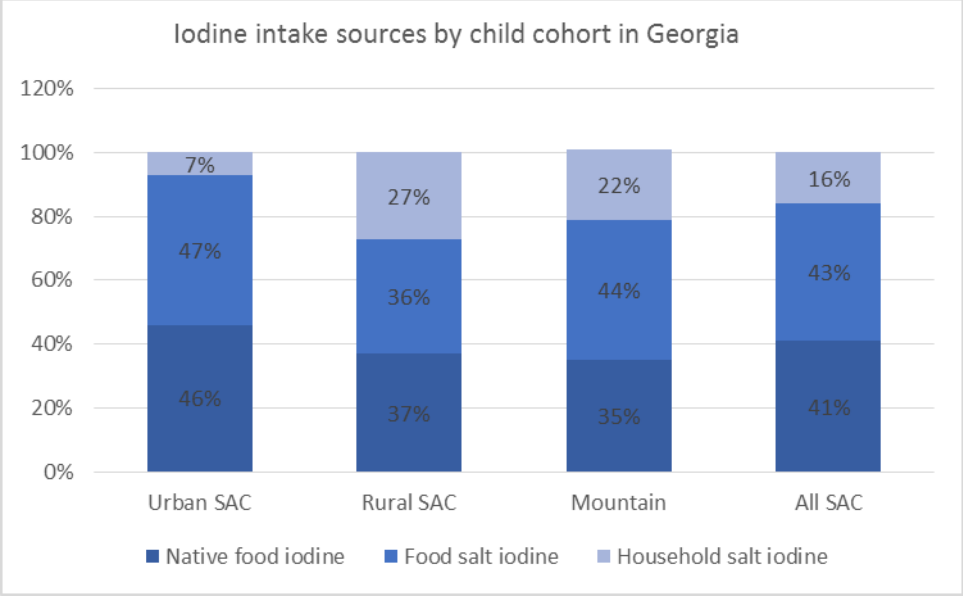
National assessment of iodine nutrition status and iodized salt use in Georgia

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±15mg 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 quality 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.



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

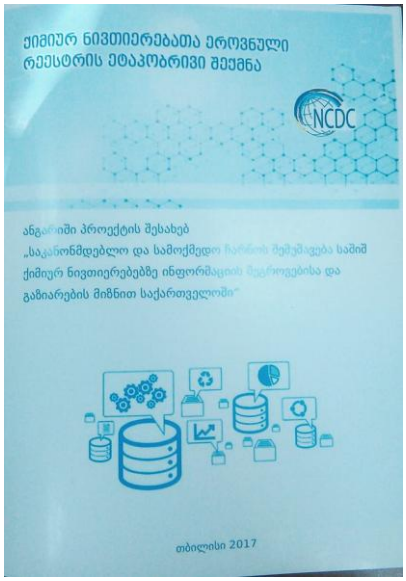
Burden of disease caused by adverse environmental impacts is quite high (17%) in Georgia. In order to reduce and prevent the environmentally-related diseases' burden and reduce people's exposure to ecological risks, the National Environmental and Health Action Plan has been developed based on requirements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

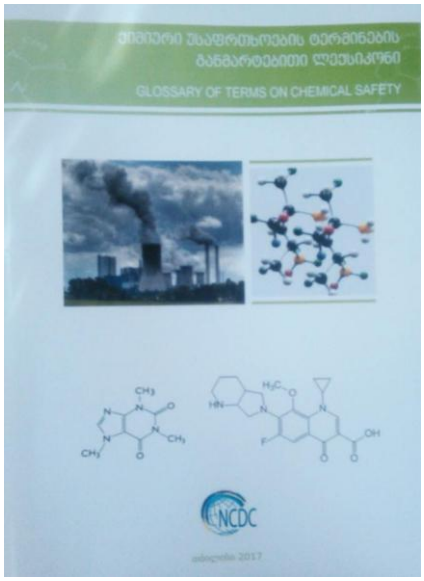
7 Strategic objectives and Interventions are set forth in the newly elaborated NEHAP:

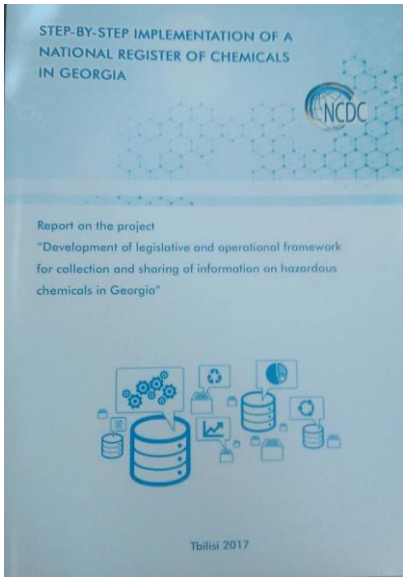
1. Ensure public health through improvement of access to safe and sustainable water supply and sanitation. Ensure access of each child to safe water supply and sanitation by 2021.
2. Improved children accessibility to healthy and safe environments and settings of daily life, promoting their increased 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.
6. Improving Governance of existing "Environment and Health "System in Georgia.
7. Reduced risks from physical agents of the environment by 2021

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 Programe (AAP), a project "Development of a framework for the collection and sharing of information on Chemicals", was carried out in 2015-2017.







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

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

Universal Healthcare

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-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.

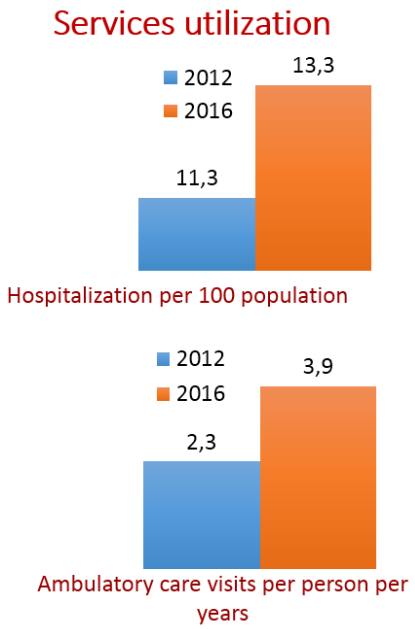
All citizens are provided with medical care among them 130 thousand individual has only private or corporate insurance, while the rest of the population is covered by the universal health care program or health insurance financed by state budget (military, soldiers, etc.).

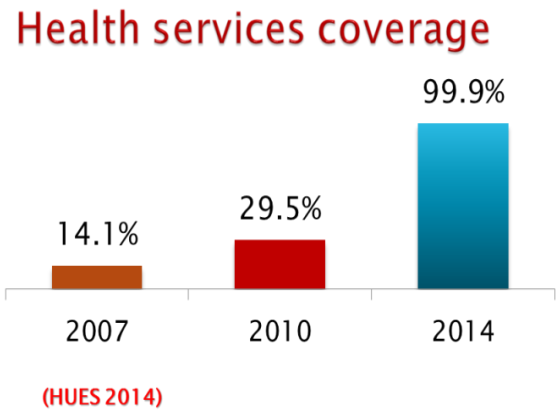
From February 28 to July 1, 2013, the first phase of the UHC program provided the primary healthcare services by the family physician and emergency outpatient and inpatient care.

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, chemo-, hormone-, 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.

From July 1, 2017, persons suffering from chronic conditions, who are registered in the unified database of "socially vulnerable families" with the rating score not exceeding 100,000, are eligible for the state program providing drugs for chronic conditions. The program provides patients with selected drugs for chronic cardiovascular diseases, chronic obstructive pulmonary disease, diabetes (type 2) and thyroid conditions.





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 2016, the number of contacts with out-patient facilities per capita reached 3.9.

According to the survey conducted by the World Bank, WHO and the USAID, the main achievements of the Universal Healthcare Program are: increased accessability 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 ceasearian 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
- Epidsurveilance
- Blood safety
- Prevention of occupational diseases
- TB management
- HIV/AIDS management

- Maternal and child health
- Treatment of patients with drug addiction
- Health promotion
- Hep C management

State health program in priority area include:

- Management of the Infectious diseases
- Mental Health
- Management of Diabetes
- Treatment of drug abuse
- Child onco-hematology
- Provision of medicines for chronic noncommunicable diseases
- 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
Universal health care	70	338	574	681	710
State health insurance programs	240	68			
Public health programs	31	53	69	73	73
Programs in priority areas	95	124	140	149	158
Total	436	583	783	903	941

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%).

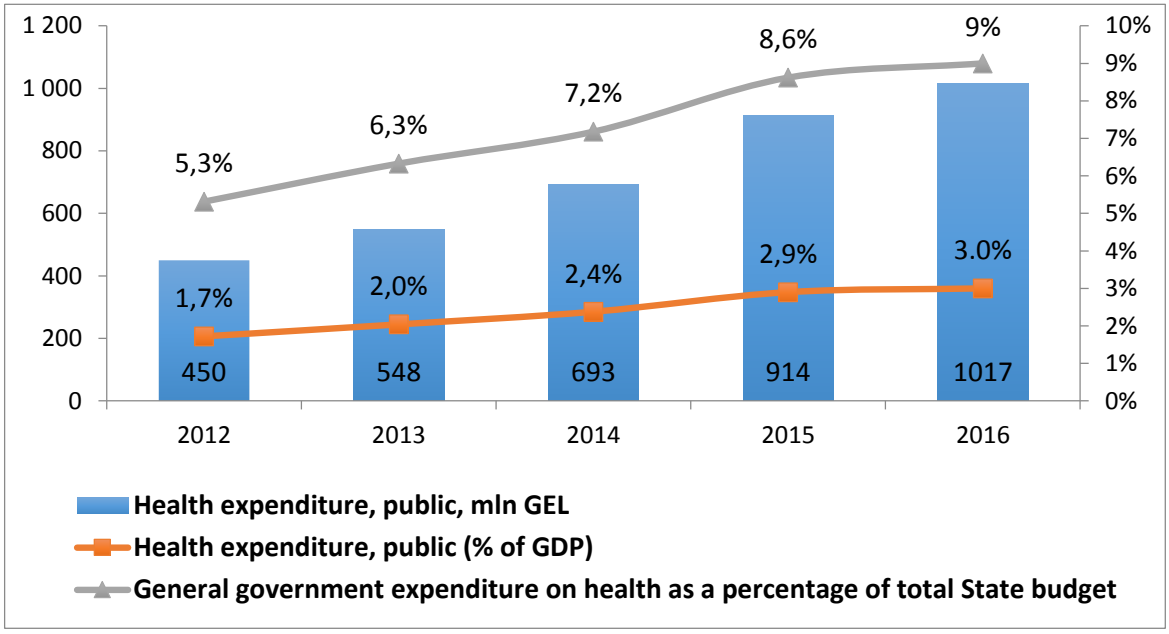
Since 2013, the Government of Georgia has laid the foundation for public health and welfare oriented health policy. Last years the state budget allocations for the health sector substantially increased (in 2012 - 450 million GEL; in 2016 - 1017 million GEL). State expenditure on health, as a share of the GDP is growing annually (in 2012 - 1.7%, in 2016 - 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 2014-2015, the State spending on health per capita substantially increased: in 2014 - 186 GEL; in 2015 - 246 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.

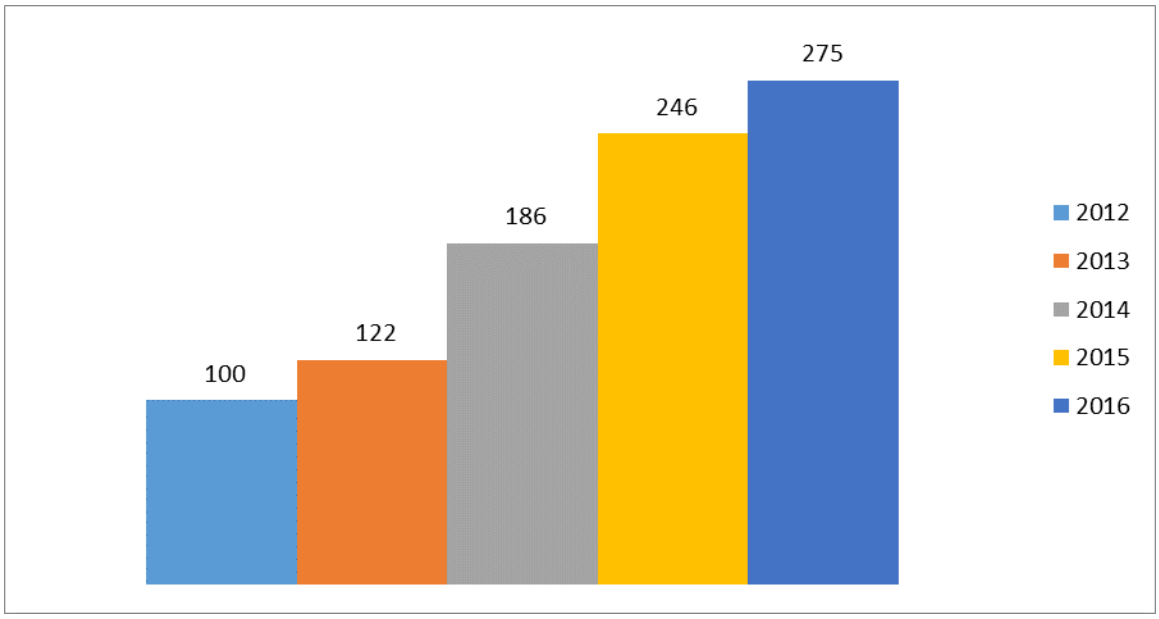
In 2012-2015, the sources of healthcare financing were distributed as follows: State (in 2012 - 21%; in 2015 - 36%), private (in 2012 - 77%; in 2015 - 62%), international aid and grants (in 2012 - 2.3%; in 2015 - 1.8%). To compare the trends, in 2015, a cost of hepatitis C treatment drugs provided by 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% (in 2012) to 57% (in 2015), mainly due to the lower cost of hospitalization, which is a direct consequence of the universal healthcare program.

Dynamics of the Health Expenditures, Georgia



State spending on health per capita, Georgia



Healthcare expenditures, Georgia

	2012	2013	2014	2015
GDP, mln GEL	26167.3	26847.4	29150.5	31755.6
Total expenditure on health, mln GEL	2190.5	2254.3	2460.2	2518.7
Health expenditure, total (% of GDP)	8.4%	8.5%	8.5%	8.5%
Health expenditure**,** public, mln GEL	450.3	547.9	693.2	914.0
Health expenditure**,** public (% of total health expenditure**)**	20.6%	24.3%	28.2%	36.3%
Health expenditure, public (% of GDP)	1.7%	2.0%	2.4%	2.9%
General government expenditure on health as a percentage of total State budget	5.3%	6.3%	7.2%	8.6%
Health expenditure, private, mln GEL	1689.7	1655.5	1720.4	1558.9
Health expenditure, private (% of total health expenditure)	77.1%	73.4%	69.9%	61.9%
Direct out-of-pocket health expenditure, mln GEL	1608. 8	1 557.0	1623.4	1443.8
International aid for healthcare, mln GEL	50.5	50.9	46.5	45.8
International aid for healthcare, (% of total health expenditure)	2.3%	2.3%	1.9%	1.8%
Total expenditures on health per capita, GEL	488	502	660	677
Total expenditures on health per capita, USD	295	302	374	298
Total expenditures on health per capita, international dollars	571	601	772	792
Public health expenditure per capita, GEL	100	122	186	246
Public health expenditure per capita, USD	61	73	105	108
Public health expenditure per capita, international dollars	117	146	218	288
Out-of-pocket expenditure on health per capita, GEL	376	369	462	419
Out-of-pocket expenditure on health per capita, USD	228	222	261	185
Out-of-pocket expenditure on health per capita, international dollars	440	441	540	490
International aid for health per capita, GEL	11	11	12	12
International aid for health per capita, USD	7	7	7	5
International aid per capita on health, international dollars	13	14	15	14

Source: Ministry of Labour, Health and Social Affairs

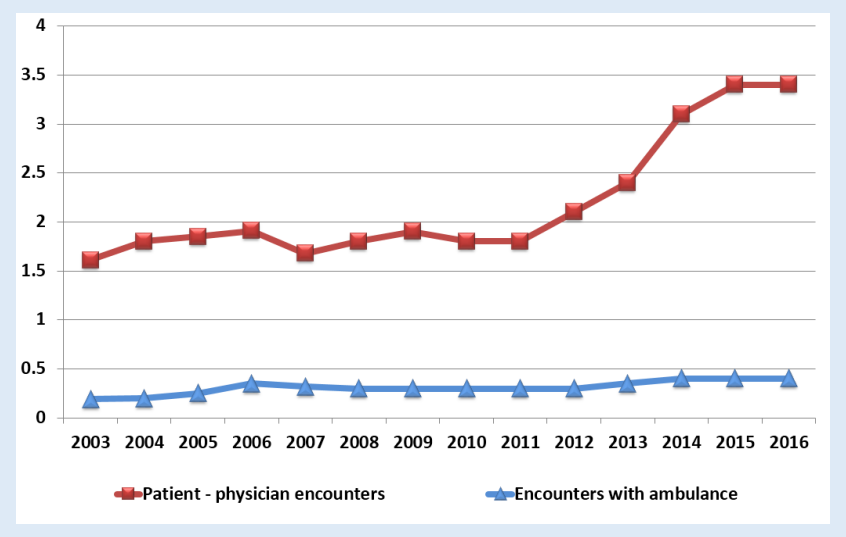
Healthcare resources

Healthcare resources, Georgia, 2016			
Number of physicians (including dentists)	29895	In-patient facilities	278
Number of physicians per 100000 population	803.8	Out-patient facilities	1043
Nurses	19376	Antenatal care centers	274
Number of nurses per 100000 population	521.0	Ambulance stations	79
Number of hospital beds	13840	Blood transfusion facilities	19
Number of hospital beds per 100000 population	372.1	Baby nurseries	1
Encounters with physicians	12081494	Scientific research institutes	5
Home visits of physicians	272910	Rural physician-entrepreneurs	1258

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

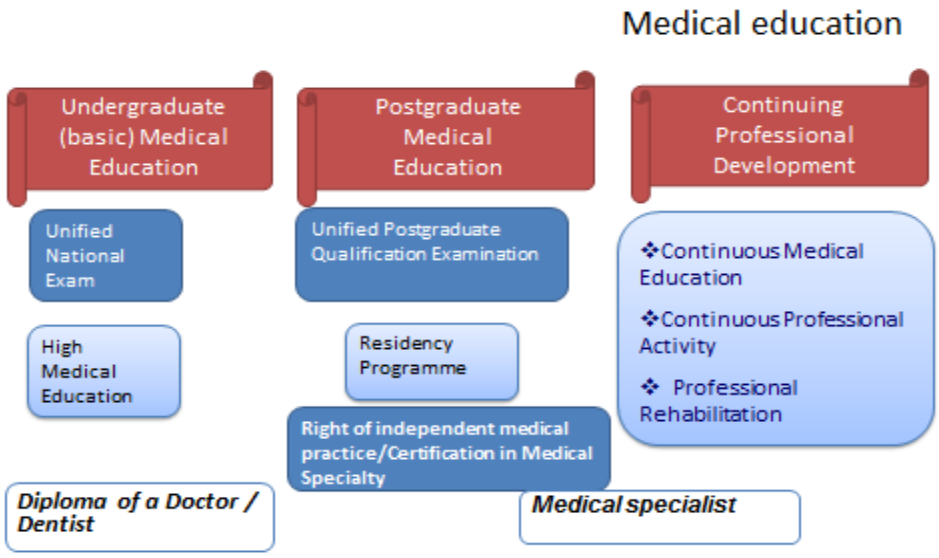


Source: NCDC

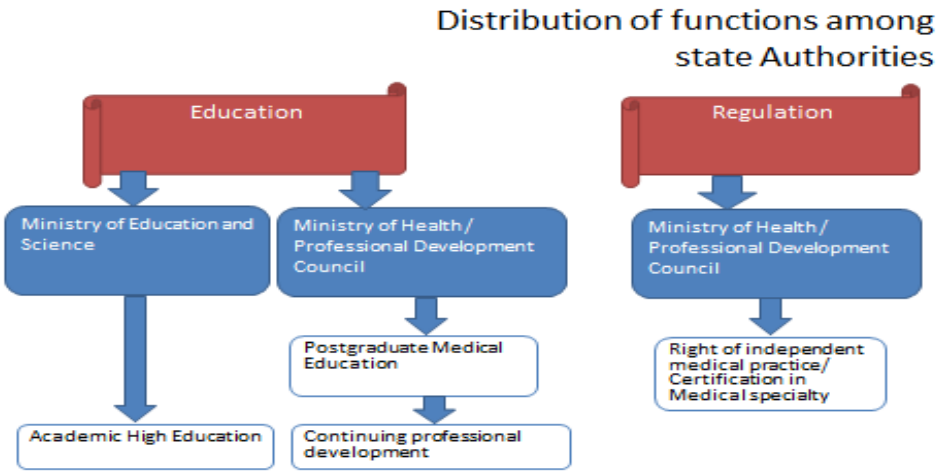
Medical education system in Georgia

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 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.

Challenges:

Education

- Supporting development of university clinics
- Constant update of programs and literature
- Perfection/improvement of authorization/accreditation standards
- Gradual implementation of periodical confirmation (re-certification) system of doctors

Supporting development of medical science

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.

Challenges:

- Establishment of mandatory system of CPD
- Safety of a patient and quality of medical service

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:

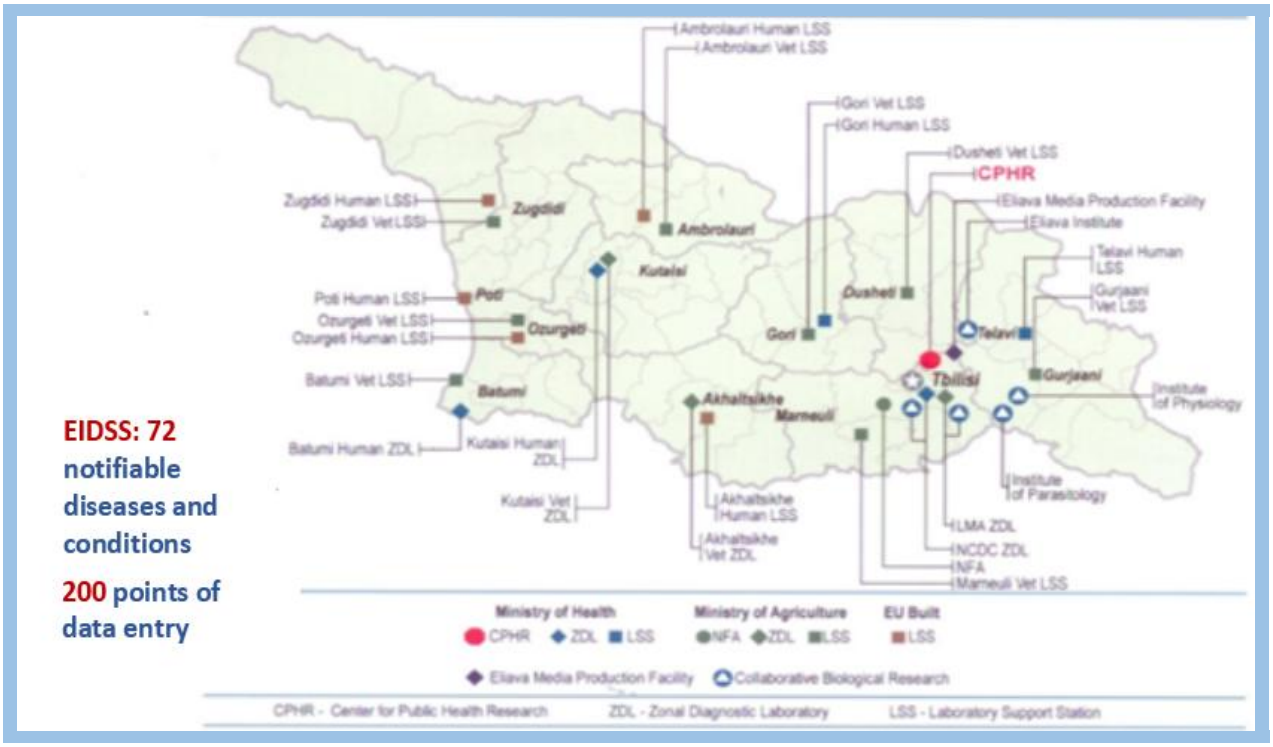
- The National Center for Disease Control and Public Health
- 9 regional branches of the NCDC
- PH centers in 61 municipalities.

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. Lugar 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”



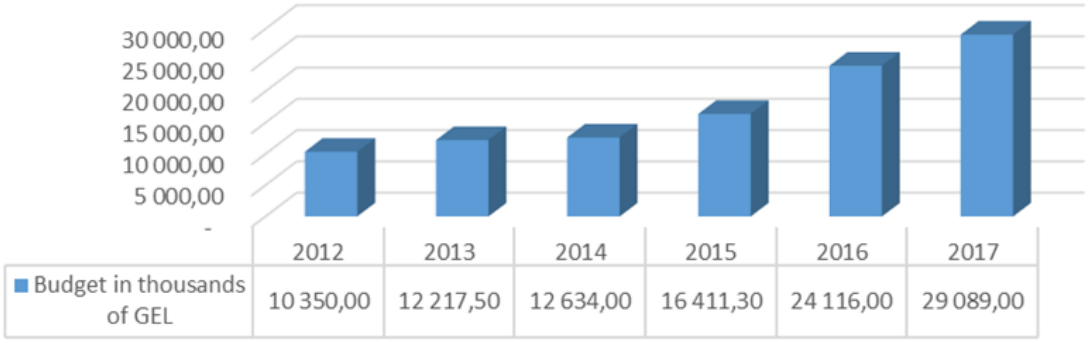
Administration of state public health programs and activities is an important function of the National Center for Disease Control and Public Health. The NCDC is carrying out 10 State public health programs directed on health promotion, healthy lifestyle establishment, and prevention of diseases, which contribute to infectious diseases and 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 29 089 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



	2012	2013	2014	2015	2016	2017
Budget in thousands of GEL	10 350,00	12 217,50	12 634,00	16 411,30	24 116,00	29 089,00

e-Health

Ministry of Labour, Health and Social affairs of Georgia is introducing innovative unified informational system of healthcare, which will ensure that informational needs of the Ministry, insurance companies, healthcare service providers, pharmaceutical establishments and patients are met and the feedback is established. It aims to assist the country population, State and the healthcare stakeholders to receive precise information simply and quickly and to respond adequately. Needs and efficieny assessment of the given initiative can be drawn with the following indicators:

- Increased effectiveness of operational and analytical
- Improved governmental control of the State programs
- Increased transparency of healthcare financing and decrease of the number of fraudulent cases
- Standartization, institutionalization of business processes and quality improvement of services
- Increased healthcare data quality and better opportunity to compare with the international statistical data
- Improved accessability of the patients to the information on healthcare services and insurance
- Effective instruments of decision making and policy elaboration

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 (eHealth), recent activities include:

- Implementation of the unique classifications of health interventions and services was an important step for reinforcing the data standardization in Georgia (2011)
- a new case-based electronic hospital discharge reporting system (2014)
- Population-based Cancer Registry (2015)
- A case-based electronic reporting system for primary health care (2016)
- electronic system for antenatal and obstetric services - “Georgian Birth Registry” (2016)

Since Georgia introduced electronic data collection of births and deaths, coverage of the birth and death registration reached more than 95% in recent years.

A rapid 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.

Collaboration with the WHO continues to be the most fruitful and beneficial for the country. 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.

Collaboration with the WHO

The main strategic directions of WHO in Georgia, as well as in other countries in the world, are:

- reducing excess mortality, morbidity and disability, especially in poor and marginalized populations;
- promoting healthy lifestyles and reducing risk factors to human health that arise from environmental, economic, social and behavioral causes;
- developing health systems that equitably improve health outcomes, respond to people's legitimate demands, and are financially fair;
- framing an enabling policy and creating an institutional environment for the health sector, and promoting an effective health dimension to social, economic, environmental and development policy.

The overall goal of WHO in Georgia is to:

- assist the government in developing its national health policy and strengthening healthcare systems;
- provide needed technical assistance; improve preparedness for emergency situations;
- promote up-dated standards of education and training in the healthcare sector;
- provide evidence based expertise and information in the healthcare sector to take all necessary actions to attain WHO objectives.

Georgia has currently representatives in the Executive Board (Dr. David Sergeenko, 2017-2020) and SCRC EURO (Dr. Amiran Gamkrelidze, 2015-2018). Minister David Sergeenko has served as well as a Member of the European Ministerial Board on Environment and Health (2013-2015).

Second sessions of the 25th Standing Committee of the Regional Committee for Europe took place in Tbilisi, 28-29 Nov 2017, as Georgia is chairing the SCRC for 2017-2018.

Georgia became a member of WHO on 16 May 1992. In 1993 a Liaison office was opened in Tbilisi. The Basic Agreement between Georgia and WHO has been signed in 1994. In 2005 the name of the office was changed to WHO Country Office in Georgia. Georgia acceded the Convention on the Privileges and Immunities of the Specialized Agencies on 28 February 2007.

The first Head of WHO Country Office (WHO CO) was Prof. Tamaz Kereselidze, who was one of the active participant of Global Smallpox Eradication campaign from WHO in 1970-ies. In 1999-2016 Dr. Rusudan Klimiashvili was a Head of WHO CO GEO. Since October 2016 WHO Country office is headed by Dr. Marijan Ivanusa. The WHO Country Office in Georgia is subordinated to the Regional Office for Europe. The Country Office plays a crucial role in administration, consolidation, management and enhancement of WHO collaboration in the country. It also contributes to interfacing between the Government and WHO, assists in informing the Government regarding WHO policies in a timely manner and elaborates strategies and activities while providing advice on healthcare sector development and inter-sectoral issues for health.

The WHO Country Office implements its activities in the country in close collaboration with the Ministry of Labour, Health and Social Affairs of Georgia, UN agencies, governmental and non-governmental organizations and is active in the healthcare sector.

There is close collaboration between WHO country office, respective technical units in the regional office or headquarters and the National Center for Disease Control and Public Health of Georgia, including Lugar center.

The WHO significantly contributes to capacity-building in the country. Georgian medical professionals regularly participate in WHO meetings, conferences, workshops and trainings. WHO experts and consultants regularly visit Georgia to provide technical assistance to local professionals in their efforts to meet the country's needs and requirements. In line with WHO policy, the Ministry on a yearly basis actively participates in the work of WHO governing bodies, World Health Assemblies and Regional Committees.

WHO cooperates with Georgia, as with all other countries, in the frame of **Biennial Collaborative Agreements** (BCA), which defines the priorities for collaboration. BCA documents are elaborated through successive stages of talks between the national health authorities and the regional and country levels of WHO offices.
Since early 1990s, the BCA between the WHO Regional Office for Europe and the Government of Georgia was focusing on the following cooperative priorities:

- Development of National Health Policy, Health Strategies and Action Plans;
- Strengthening of Health Systems and Public Health:

  Strengthening National Surveillance System and Laboratory Capacities for communicable diseases – 3 laboratories within the Lugar Center (polio, measles/rubella, influenza) are getting WHO accreditation annually and 5 laboratories are included in the WHO laboratory network (Rota and others); Health System Performance Assessment (HSPA); Assessment of Georgian Public Health System; Health Financing/Inequality in health; National System of Health Accounts; Human Resources for Health; Support of Primary Health Care.
- Universal Health Coverage;

- Strengthening national health information systems: capacity building for morbidity and mortality data quality improvement;
- Cooperation in global strategies, such as Millennium Development Goals, Health 2020 Policy and Sustainable Development Goals (Health related goals);
- Maternal and Child Health;
  - selective purchasing of selected services in the area of reproductive health;
- Strengthening National Immunization Systems, such as: Measles / Rubella / Influenza; Introducing new vaccines in National Immunization Programme (Hepatitis B, Rota, Pneumo, Hexa, HPV); Implementation and monitoring of the global vaccine action plan to achieve the goals for the Decade of Vaccines; Assessment of Vaccine Procurement System in Georgia.
- Addressing Communicable Diseases, such as:
  - HIV/AIDS/STI, including the process of obtaining status of "Free from Mother to Child transmission of HIV and Syphilis";
  - Viral Hepatitis / Hepatitis C Elimination Strategy for Georgia;
  - Tuberculosis/Multidrug resistance Tuberculosis (MDR-TB);
  - Influenza;
  - Malaria elimination /Leishmaniasis;
  - Laboratory based surveillance of Acute Flaccid Paralysis (AFP) and environmental samples to maintain polio-free status;
  - International Health regulations (IHR);
  - Disaster Preparedness and Response;
  - Antimicrobial Resistance: National Strategy, Global action plan;

- Addressing Noncommunicable Diseases such as:
  - Developing integrated NCD prevention and control policies and strategies;
  - STEPs Surveys;
  - Surveys on NCD risk-factors – Childhood Obesity Surveillance Initiative (COSI), Health Behavior in School-aged Children (HBSC), Global Youth Tobacco Survey (GYTS), etc.;
  - Strengthening capacity of primary healthcare professionals personnel on NCD prevention and control;
  - Strengthening tobacco control;
  - National Environmental Health Action Plan (NEHAP);
  - Chemical safety – "Development of legislative and operational framework for collection and sharing of information on hazardous chemicals in Georgia";
  - GLAAS - Global analysis and Assessment of Sanitation and Drinking-Water 2016/2017 Survey;
  - Implementation of mental health strategy in accordance with Helsinki Declaration;
  - Cancer Strategy;
  - Epilepsy demonstration Project;
  - Road Safety.
- Strengthening Blood Safety System: Assessing blood establishments; Setting recommendations for upgrading of blood transfusion system in Georgia.

BCA 2018-2019

BCA 2018-2019, which has been/will be signed on 28 November 2017, defines the technical collaboration/assistance in the following programme areas:

- Communicable diseases: hepatitis, tuberculosis, vaccine-preventable infections, antimicrobial resistance;
- Noncommunicable diseases: population-based prevention measures and tobacco-control;
- Reproductive, maternal, newborn, child, adolescent health as well as environment and health;
- Health system strengthening, in particular Universal Health Coverage (incl. strategic purchasing, selective contracting, SSA capacity building, Primary Health Care etc.) as well as information and evidence (in support for policy development);
- Emergency preparedness.

The planned value of technical assistance in 2018-2019 will exceed 1,000,000 USD (excluded WHO staff costs). WHO advocates for stronger support to the area of health at meetings with other national and international partners, including the World Bank, The Global Fund, the European Commission, GAVI and others.

Tbilisi

Population

Total - 1113800, Urban - 1083100, Rural - 30700

Live births

Total - 16784, rate per 1000 population – 15.1

Stillbirths

Total - 316, ratio per 1000 births – 18.5

Under-5 mortality rate

Total - 376, 0-5 mortality rate – 22.4

Under-1 mortality rate

Total - 327, 0-1 mortality rate – 19.5

Obstetric care

Number of deliveries - 25559
Number of cesarean sections - 11021, ratio per 1000 LB – 429.3

Abortions

Total - 11339
Ratio per 100 LB – 44.2

Healthcare network

In-patient facilities - 134
Out-patient facilities - 489
Ambulance stations - 10
Blood transfusion stations - 8

Human resources in Health

Number of physicians - 15281
Number of nurses - 8138

Number of enrollements with primary healthcare and ambulance

Total number of enrollements - 7640214
Number of enrollements per capita per year - 6.9

Hospital beds

Total - 6956, density per 100000 population – 624.5

Ajara

Administrative units:

Batumi
Keda
Kobuleti
Shuakhevi
Khelvachauri
Khulo

Demographic indicators

	Number of population	Live births	
		Total number	Rate per 1000 population
Ajara	**338 000**	**5977**	**17.7**
Batumi	155 000	2762	17.8
Keda	16 900	292	17.3
Kobuleti	75 400	1216	16.1
Shuakhevi	15 100	255	16.9
Khelvachauri	52 000	982	18.9
Khulo	23 600	470	19.9

Source: NSO Georgia

Stillbirths

Total - 44
Ratio per 1000 births - 7.3

Under-5 mortality rate

Total - 54
Ratio per 1000 LB – 9.0

Under-1 mortality rate

Total - 48
Ratio per 1000 LB – 8.0

Obstetric care

Number of deliveries - 6255
Number of cesarean sections - 3230, ratio per 1000 LB – 512.7

Abortions

Total - 3783
Ratio per 100 LB – 60.0

Healthcare network

In-patient facilities - 20
Out-patient facilities - 132
Rural doctors - 107
Ambulance stations - 5
Blood transfusion stations - 3

Human resources in Health

	Physicians		Nurses	
	Total number	Density per 100000 population	Total number	Density per 100000 population
Ajara	**2122**	**627.8**	**1879**	**555.9**
Batumi	1774	1144.5	1577	1017.4
Keda	39	230.8	31	183.4
Kobuleti	162	214.9	139	184.4
Shuakhevi	31	205.3	28	185.4
Khelvachauri	77	148.1	58	111.5
Khulo	39	165.3	46	194.9

Source: NCDC

Number of enrollements with primary healthcare and ambulance

Total number of enrollements - 1129838
Number of enrollements per capita per year - 3.3

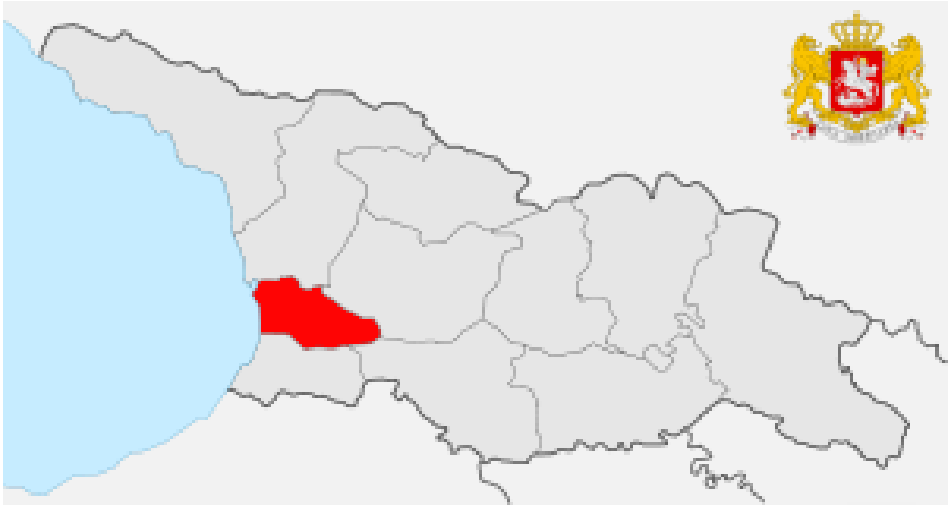
Hospital beds

Total - 1305, density per 100000 population – 386.1

Guria

Administrative units:

Ozurgeti
Lanchkhuti
Chokhatauri



Demographic indicators

	Number of population	Live births	
		Total number	Rate per 1000 population
Guria	**112800**	**1535**	**13.6**
Lanchkhuti	31300	396	12.7
Ozurgeti	62600	719	11.5
Chokhatauri	18900	249	13.2

Source: NSO Georgia

Stillbirths

Total - 5, ratio per 1000 births – 3.2

Under-5 mortality rate

Total - 7, 0-5 mortality rate – 4.6

Under-1 mortality rate

Total - 3, 0-1 mortality rate – 2.0

Obstetric care

Number of deliveries - 667
Number of cesarean sections - 213, ratio per 1000 LB – 317.9

Abortions

Total - 192
Ratio per 100 LB – 28.7

Healthcare network

In-patient facilities - 6
Out-patient facilities - 10
Rural doctors - 75
Ambulance stations - 3
Blood transfusion stations - 1

Human resources in Health

	Physicians		Nurses	
	Total number	Density per 100000 population	Total number	Density per 100000 population
Guria	**391**	**346.6**	**279**	**247.3**
Lanchkhuti	131	418.5	82	262.0
Ozurgeti	176	281.2	152	242.8
Chokhatauri	84	444.4	45	238.1

Source: NCDC

Number of enrollements with primary healthcare and ambulance

Total number of enrollements - 246038

Number of enrollements per capita per year - 2.2

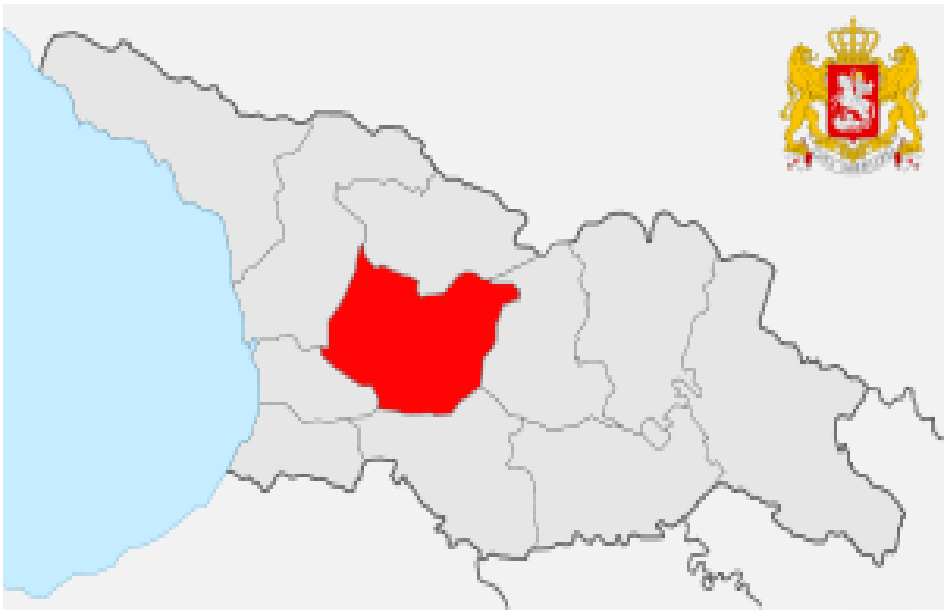
Hospital beds

Total - 128, density per 100000 population – 113.5

Imereti

Administrative units:

Kutaisi
Bagdati
Vani
Zestaponi
Terjola
Samtredia
Sachkhere
Tkibuli
Tskhaltubo
Chiatura
Kharagauli
Khoni



Demographic indicators

	Number of population	Live births	
		Total number	Rate per 1000 population
Imereti	**531300**	**7784**	**14.7**
Kutaisi	147500	2469	16.7
Tkibuli	20500	260	12.7
Tskhaltubo	56400	695	12.3
Chiatura	39700	569	14.3
Bagdati	21300	284	13.3
Vani	24300	356	14.7
Zestaponi	57400	833	14.5
Terjola	35300	474	13.4
Samtredia	48400	674	13.9
Sachkhere	37800	584	15.4
Kharagauli	19300	277	14.4
Khoni	23400	309	13.2

Source: NSO Georgia

Stillbirths

Total - 81, ratio per 1000 births – 10.3

Under-5 mortality rate

Total - 63, 0-5 mortality rate – 8.1

Under-1 mortality rate

Total - 54, 0-1 mortality rate – 6.9

Obstetric care

Number of deliveries - 7378
Number of cesarean sections - 3652, ratio per 1000 LB – 494.9

Abortions

Total - 2999
Ratio per 100 LB – 40.6

Healthcare network

In-patient facilities - 32
Out-patient facilities - 140
Rural doctors - 214
Ambulance stations - 13
Blood transfusion stations - 2

Human resources in Health

	Physicians		Nurses	
	Total number	Density per 100000 population	Total number	Density per 100000 population
Imereti	**2709**	**509.9**	**2531**	**476.4**
Kutaisi	1561	1058.3	1517	1028.5
Tkibuli	60	281.7	46	216.0
Tskhaltubo	62	255.1	39	160.5
Chiatura	229	399.0	183	318.8
Bagdati	65	184.1	56	158.6
Vani	199	411.2	138	285.1
Zestaponi	149	394.2	195	515.9
Terjola	50	243.9	32	156.1
Samtredia	99	175.5	56	99.3
Sachkhere	90	226.7	92	231.7
Kharagauli	32	165.8	31	160.6
Khoni	113	482.9	146	623.9

Source: NCDC

Number of enrollements with primary healthcare and ambulance

Total number of enrollements - 1637440
Number of enrollements per capita per year - 3.1

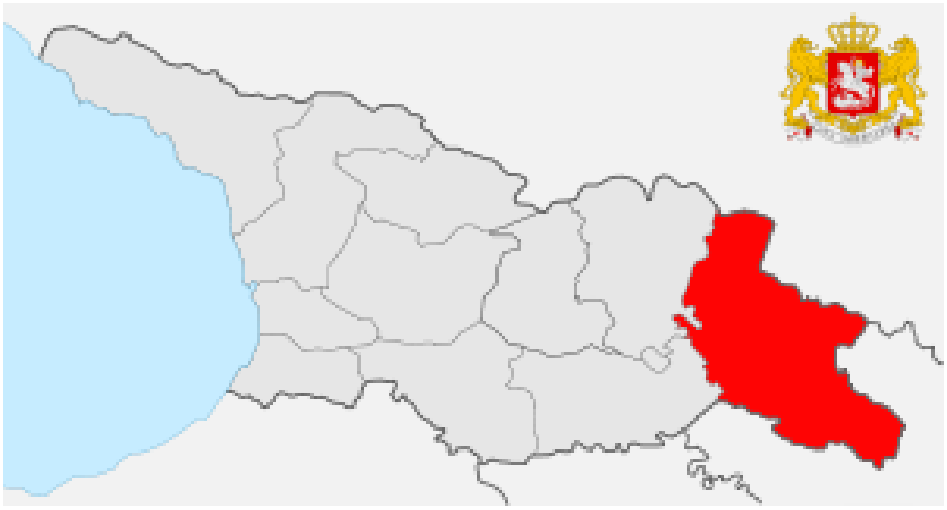
Hospital beds

Total - 2043, density per 100000 population – 384.5

Kakheti

Administrative units:

Telavi
Akhmeta
Gurjaani
Kvareli
Dedoplistskaro
Lagodekhi
Sagarejo
Sighnaghi



Demographic indicators

	Number of population	Live births	
		Total number	Rate per 1000 population
Kakheti	**317 900**	**4870**	**15.3**
Akhmeta	31 600	509	16.1
Gurjaani	53 700	696	13.0
Dedoplistskaro	21 100	333	15.8
Telavi	58 300	596	10.2
Lagodekhi	41 700	697	16.7
Sagarejo	52 300	936	17.9
Sighnaghi	29 500	413	14.0
Kvareli	29 700	472	15.9

Source: NSO Georgia

Stillbirths

Total - 20, ratio per 1000 births – 4.1

Under-5 mortality rate

Total - 20, 0-5 mortality rate – 4.1

Under-1 mortality rate

Total - 16, 0-1 mortality rate – 3.3

Obstetric care

Number of deliveries - 3337
Number of cesarean sections - 1380, ratio per 1000 LB – 411.8

Abortions

Total - 1503
Ratio per 100 LB – 44.9

Healthcare network

In-patient facilities - 16
Out-patient facilities - 65
Rural doctors - 209
Ambulance stations - 9
Blood transfusion stations - 1

Human resources in Health

	Physicians		Nurses	
	Total number	Density per 100000 population	Total number	Density per 100000 population
Kakheti	**1222**	**384.4**	**798**	**251.0**
Akhmeta	66	208.9	76	240.5
Gurjaani	249	463.7	108	201.1
Dedoplistskaro	58	274.9	43	203.8
Telavi	410	703.3	259	444.3
Lagodekhi	151	362.1	102	244.6
Sagarejo	126	240.9	87	166.3
Sighnaghi	98	332.2	74	250.8
Kvareli	64	215.5	49	165.0

Source: NCDC

Number of enrollements with primary healthcare and ambulance

Total number of enrollements - 671766

Number of enrollements per capita per year - 2.1

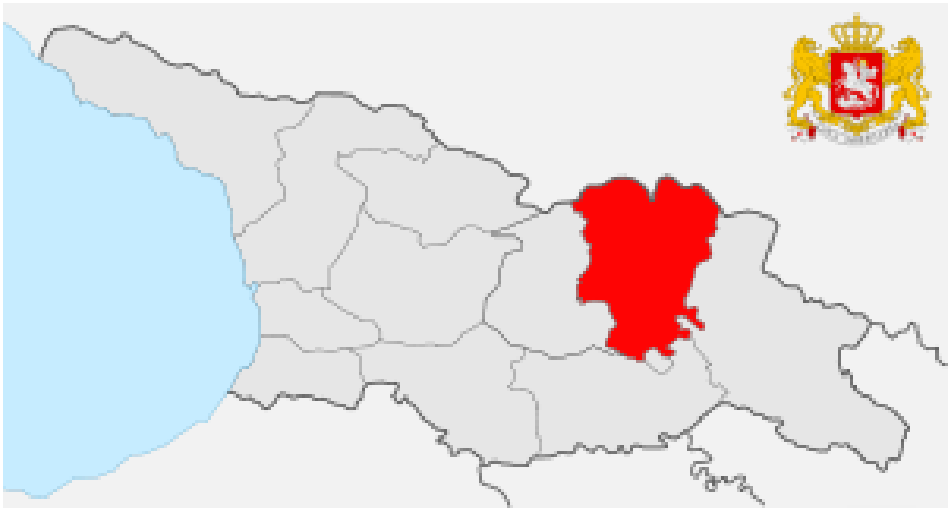
Hospital beds

Total - 531, density per 100000 population – 167.0

Mtskheta-Mtianeti

Administrative units:

Akhalgori
Dusheti
Mtskheta
Stepantsminda
Tianeti



Demographic indicators

	Number of population	Live births	
		Total number	Rate per 1000 population
Mtskheta-Mtianeti	**94000**	**1180**	**12.6**
Akhalgori	-	-	-
Dusheti	25300	327	12.9
Tianeti	9300	118	12.7
Mtskheta	55600	563	10.1
Stepantsminda	3800	52	13.7

Source: NSO Georgia

Stillbirths

Total - 0, ratio per 1000 births - 0

Under-5 mortality rate

Total - 3, 0-5 mortality rate – 2.5

Under-1 mortality rate

Total - 2, 0-1 mortality rate – 1.7

Obstetric care

Number of deliveries - 68
Number of cesarean sections - 14, ratio per 1000 LB – 205.9

Abortions

Total - 20
Ratio per 100 LB – 1.7

Healthcare network

In-patient facilities - 4
Out-patient facilities - 16
Rural doctors - 55
Ambulance stations - 5
Blood transfusion stations - 0

Human resources in Health

	Physicians		Nurses	
	Total number	Density per 100000 population	Total number	Density per 100000 population
Mtskheta-Mtianeti	**272**	**289.4**	**258**	**274.5**
Akhalgori	19	--	14	--
Dusheti	58	229.2	53	209.5
Tianeti	28	301.1	32	344.1
Mtskheta	153	275.2	145	260.8
Stepantsminda	14	368.4	14	368.4

Source: NCDC

Number of enrollements with primary healthcare and ambulance

Total number of enrollements - 557160

Number of enrollements per capita per year - 5.9

Hospital beds

Total - 119, density per 100000 population – 126.6

Racha-Lechkhumi and Kvemo Svaneti

Administrative units:

Ambrolauri
Lentekhi
Oni
Tsageri

Demographic indicators

	Number of population	Live births	
		Total number	Rate per 1000 population
Racha-Lechkhumi and Kvemo Svaneti	**31300**	**327**	**10.4**
Ambrolauri	10800	73	6.8
Lentekhi	4400	65	14.8
Oni	6000	55	9.2
Tsageri	10100	109	10.8

Source: NSO Georgia

Stillbirths

Total - 0, ratio per 1000 births - 0

Under-5 mortality rate

Total - 1, 0-5 mortality rate – 3.1

Under-1 mortality rate

Total - 0, 0-1 mortality rate - 0

Obstetric care

Number of deliveries - 34
Number of cesarean sections - 4, ratio per 1000 LB – 117.6

Abortions

Total - 6
Ratio per 100 LB – 1.8

Healthcare network

In-patient facilities - 4
Out-patient facilities - 0
Rural doctors - 62
Ambulance stations - 4
Blood transfusion stations - 0

Human resources in Health

	Physicians		Nurses	
	Total number	Density per 100000 population	Total number	Density per 100000 population
Racha-Lechkhumi and Kvemo Svaneti	**147**	**469.6**	**217**	**693.3**
Ambrolauri	44	407.4	69	638.9
Lentekhi	29	659.1	42	954.5
Oni	32	533.3	46	766.7
Tsageri	42	415.8	60	594.1

Source: NCDC

Number of enrollements with primary healthcare and ambulance

Total number of enrollements - 51636

Number of enrollements per capita per year - 1.6

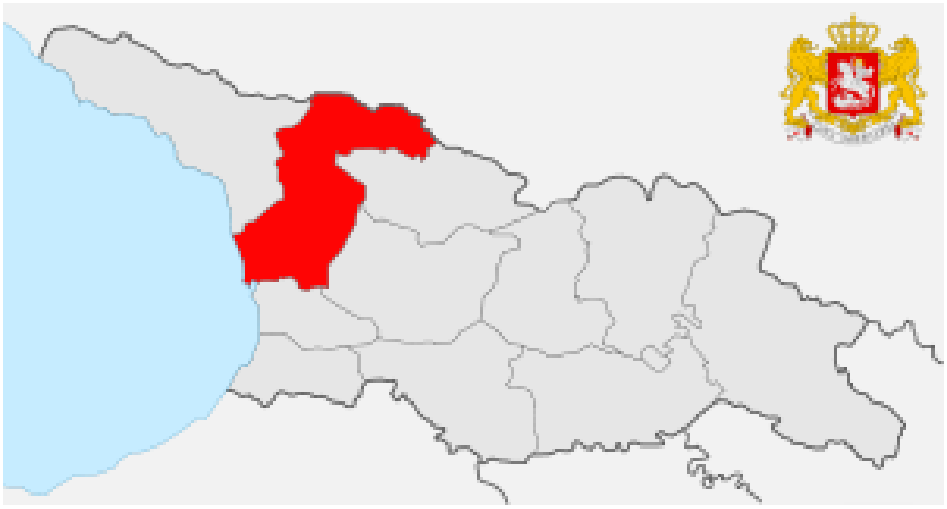
Hospital beds

Total - 83, density per 100000 population – 265.2

Samegrelo and Zemo Svaneti

Administrative units:

Abasha
Zugdidi
Martvili
Mestia
Senaki
Chkhorotsku
Tsalenjikha
Khobi
Poti



Demographic indicators

	Number of population	Live births	
		Total number	Rate per 1000 population
Samegrelo and Zemo Svaneti	**329000**	**4797**	**14.6**
Zugdidi	105000	994	9.5
Abasha	22000	245	11.1
Martvili	33200	470	14.2
Senaki	39400	563	14.3
Chkhorotsku	22200	324	14.6
Tsalenjikha	26000	354	13.6
Khobi	30400	386	12.7
Poti	41400	545	13.2
Mestia	9400	196	20.9

Source: NSO Georgia

Stillbirths

Total - 13, ratio per 1000 births – 2.7

Under-5 mortality rate

Total - 20, 0-5 mortality rate – 4.3

Under-1 mortality rate

Total - 14, 0-1 mortality rate – 1.7

Obstetric care

Number of deliveries - 3144
Number of cesarean sections - 1870, ratio per 1000 LB – 593.8

Abortions

Total - 972
Ratio per 100 LB – 41.4

Healthcare network

In-patient facilities - 21
Out-patient facilities - 88
Rural doctors - 161
Ambulance stations - 11
Blood transfusion stations - 0

Human resources in Health

	Physicians		Nurses	
	Total number	Density per 100000 population	Total number	Density per 100000 population
Samegrelo and Zemo Svaneti	**1333**	**405.2**	**978**	**297.3**
Zugdidi	514	489.5	407	387.6
Abasha	81	368.2	51	231.8
Martvili	78	234.9	50	150.6
Senaki	194	492.4	160	406.1
Chkhorotsku	33	148.6	39	175.7
Tsalenjikha	94	361.5	60	230.8
Khobi	78	256.6	52	171.1
Poti	224	541.1	105	253.6
Mestia	37	393.6	54	574.5

Source: NCDC

Number of enrollements with primary healthcare and ambulance

Total number of enrollements - 624502
Number of enrollements per capita per year - 1.9

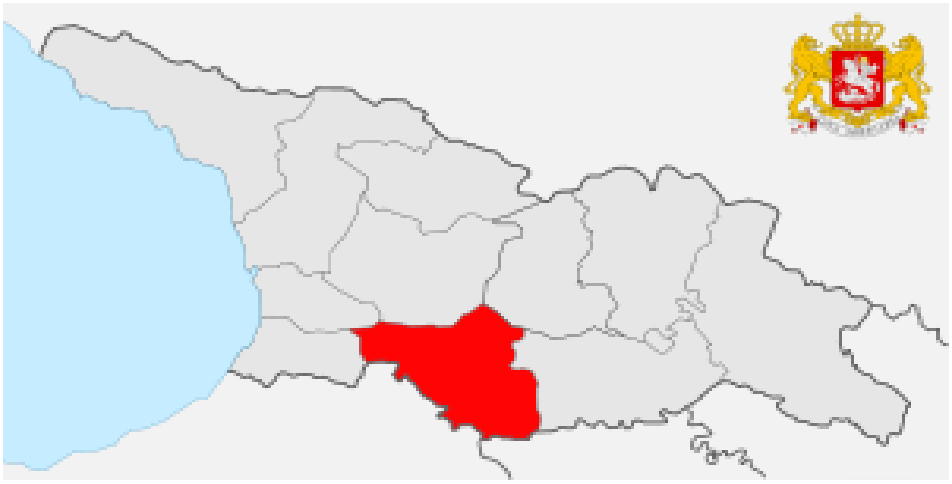
Hospital beds

Total - 600, density per 100000 population – 182.4

Samtskhe-Javakheti

Administrative units:

Akhaltsikhe
Adigeni
Akhalkalaki
Aspindza
Borjomi
Ninotsminda



Demographic indicators

	Number of population	Live births	
		Total number	Rate per 1000 population
Samtskhe-Javakheti	**160 500**	**2349**	**14.6**
Adigeni	16 500	251	15.2
Aspindza	10 400	179	17.2
Akhalkalaki	45 200	638	14.1
Akhaltsikhe	38 700	262	6.8
Borjomi	25 100	380	15.1
Ninotsminda	24 600	349	14.2

Source: NSO Georgia

Stillbirths

Total - 9, ratio per 1000 births – 3.8

Under-5 mortality rate

Total - 10, 0-5 mortality rate – 4.3

Under-1 mortality rate

Total - 4, 0-1 mortality rate – 1.7

Obstetric care

Number of deliveries - 1639
Number of cesarean sections - 229, ratio per 1000 LB – 139.1

Abortions

Total - 850
Ratio per 100 LB - 30,9

Healthcare network

In-patient facilities - 9
Out-patient facilities - 18
Rural doctors - 84
Ambulance stations - 6
Blood transfusion stations - 0

Human resources in Health

	Physicians		Nurses	
	Total number	Density per 100000 population	Total number	Density per 100000 population
Samtskhe-Javakheti	**451**	**281.0**	**486**	**302.8**
Adigeni	49	297.0	56	339.4
Aspindza	31	298.1	29	278.8
Akhalkalaki	63	139.4	93	205.8
Akhaltsikhe	177	457.4	179	462.5
Borjomi	92	366.5	85	338.6
Ninotsminda	39	158.5	44	178.9

Source: NCDC

Number of enrollements with primary healthcare and ambulance

Total number of enrollements - 243014

Number of enrollements per capita per year - 1.5

Hospital beds

Total - 377, density per 100000 population – 234.9

Kvemo Kartli

Administrative units:

Rustavi
Bolnisi
Gardabani
Dmanisi
Marneuli
Tetritskaro
Tsalka

Demographic indicators

	Number of population	Live births	
		Total number	Rate per 1000 population
Kvemo Kartli	**426 900**	**6892**	**16.1**
Rustavi	126 200	1940	15.4
Bolnisi	53 800	828	15.4
Gardabani	82 400	1313	15.9
Dmanisi	19 100	304	15.9
Marneuli	105 600	1926	92.2
Tetritskaro	20 900	284	2.7
Tsalka	18 900	297	15.7

Source: NSO Georgia

Stillbirths

Total - 52, ratio per 1000 births – 7.5

Under-5 mortality rate

Total - 36, 0-5 mortality rate – 5.2

Under-1 mortality rate

Total - 28, 0-1 mortality rate – 4.1

Obstetric care

Number of deliveries - 4929
Number of cesarean sections - 1710, ratio per 1000 LB – 346.9

Abortions

Total - 4281
Ratio per 100 LB - 86.9

Healthcare network

In-patient facilities - 19
Out-patient facilities - 49
Rural doctors - 160
Ambulance stations - 8
Blood transfusion stations - 1

Human resources in Health

	Physicians		Nurses	
	Total number	Density per 100000 population	Total number	Density per 100000 population
Kvemo Kartli	**1382**	**323.7**	**994**	**232.8**
Rustavi	676	535.7	450	356.6
Bolnisi	136	252.8	121	224.9
Gardabani	133	161.4	107	129.9
Dmanisi	30	157.1	31	162.3
Marneuli	305	288.8	213	201.7
Tetritskaro	44	210.5	36	172.2
Tsalka	58	306.9	36	190.5

Source: NCDC

Number of enrollements with primary healthcare and ambulance

Total number of enrollements - 734629
Number of enrollements per capita per year - 1.7

Hospital beds

Total - 812, density per 100000 population – 190.2

Shida Kartli

Administrative units:

Gori
Java
Kareli
Kaspi
Khashuri

Demographic indicators

	Number of population	Live births	
		Total number	Rate per 1000 population
Shida Kartli	**263800**	**4074**	**15.4**
Gori	126200	684	5.4
Kaspi	43600	587	13.5
Kareli	41300	700	16.9
Khashuri	52700	784	14.9

Source: NSO Georgia

Stillbirths

Total - 18, ratio per 1000 births – 4.4

Under-5 mortality rate

Total - 36, 0-5 mortality rate – 3.4

Under-1 mortality rate

Total - 28, 0-1 mortality rate – 2.7

Obstetric care

Number of deliveries - 2927
Number of cesarean sections - 1138, ratio per 1000 LB – 387.9

Abortions

Total - 2775
Ratio per 100 LB - 94,6

Healthcare network

In-patient facilities - 10
Out-patient facilities - 21
Rural doctors - 131
Ambulance stations - 5
Blood transfusion stations - 2

Human resources in Health

	Physicians		Nurses	
	Total number	Density per 100000 population	Total number	Density per 100000 population
Shida Kartli	**682**	**258.5**	**558**	**211.5**
Gori	302	239.3	236	187.0
Kaspi	130	298.2	106	243.1
Kareli	95	230.0	76	184.0
Khashuri	155	294.1	140	265.7

Source: NCDC

Number of enrollements with primary healthcare and ambulance

Total number of enrollements - 638980
Number of enrollements per capita per year - 2.4

Hospital beds

Total - 443, density per 100000 population – 167.9

In any question applications, should be made to the National Centre for Disease Control and Public Health named after L.Sakvarelidze at 9, Asatiani Street, Tbilisi, Georgia

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