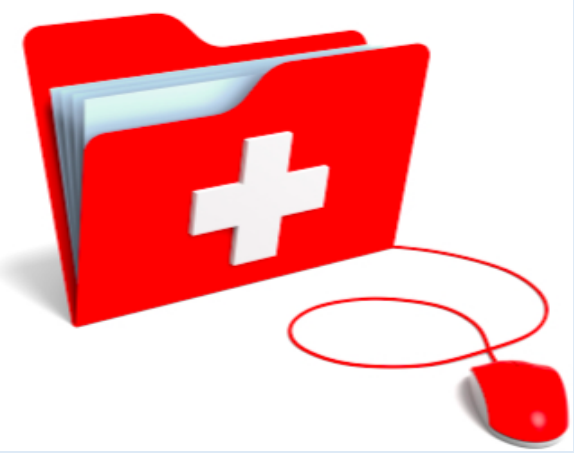
Health Care

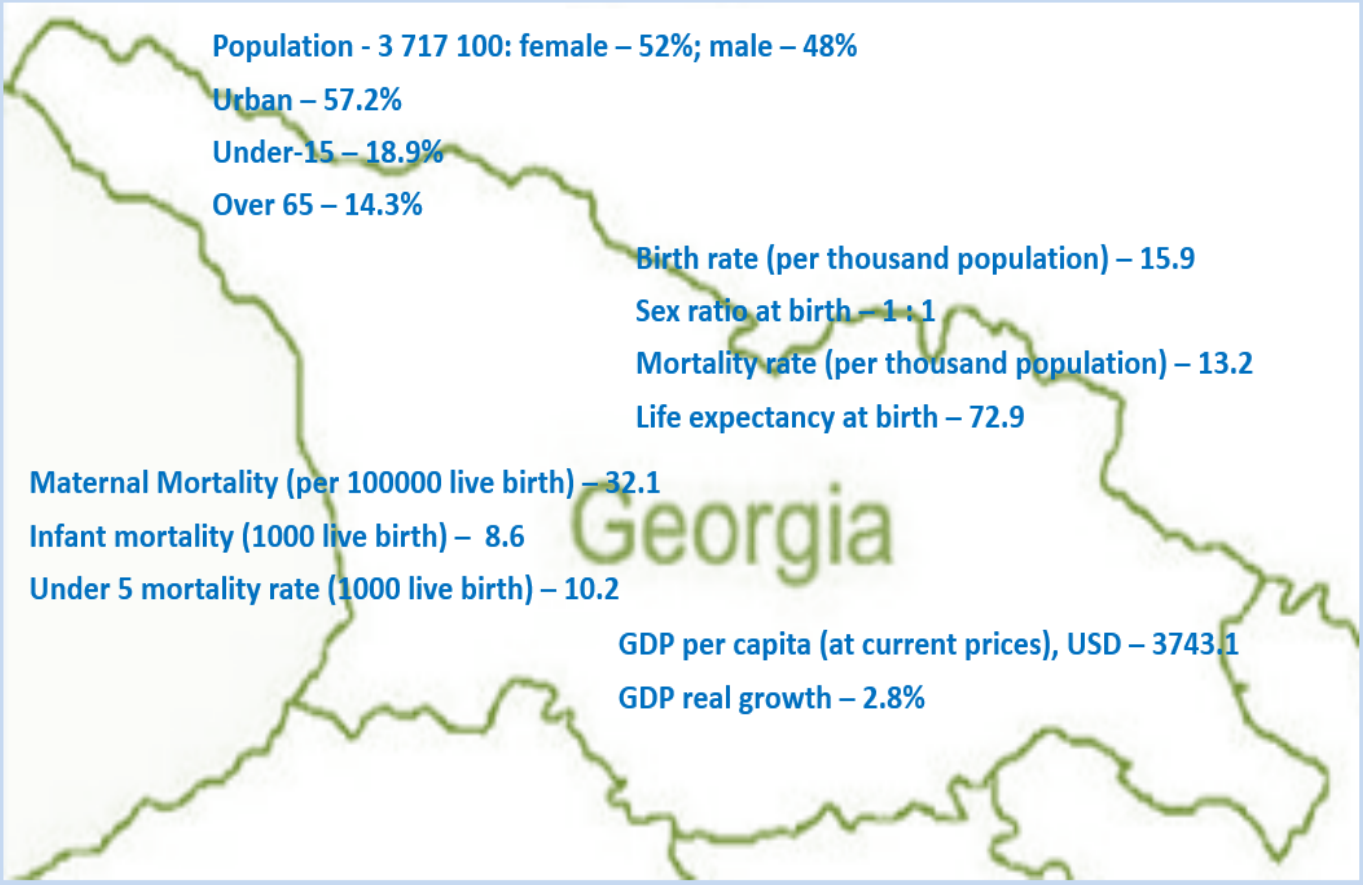
HIGHLIGHTS



Georgia

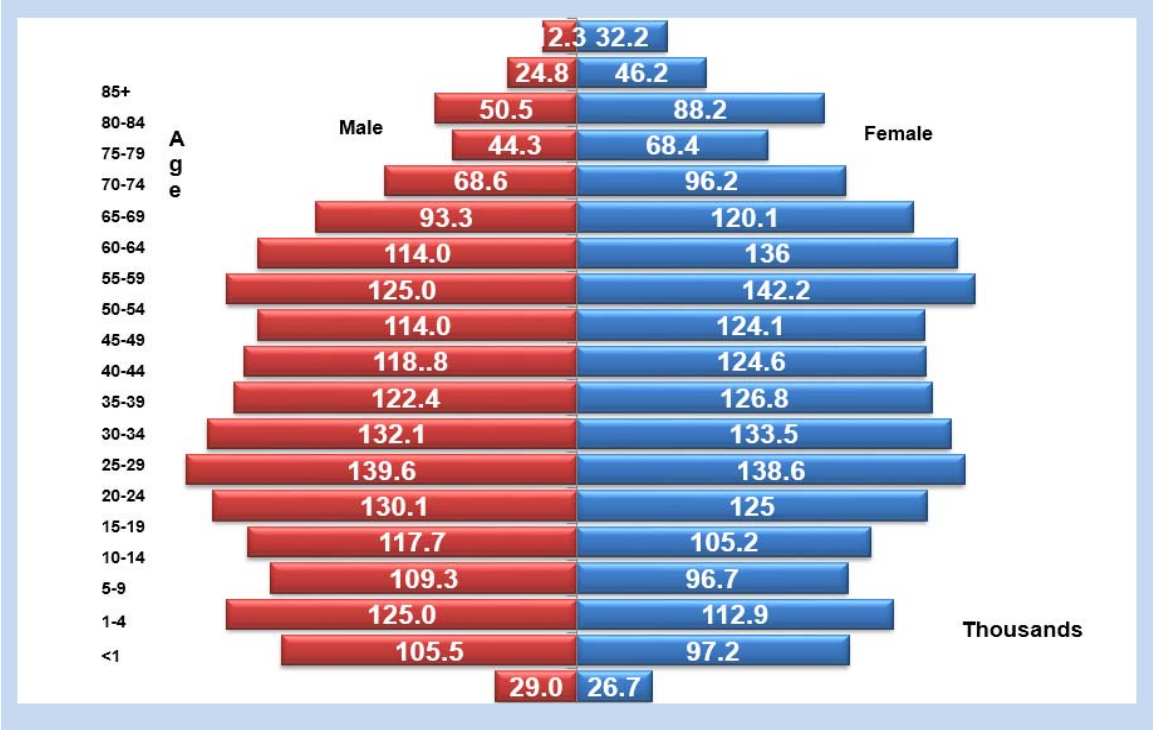
2016

Demographic and socio-economic indicators, 2015



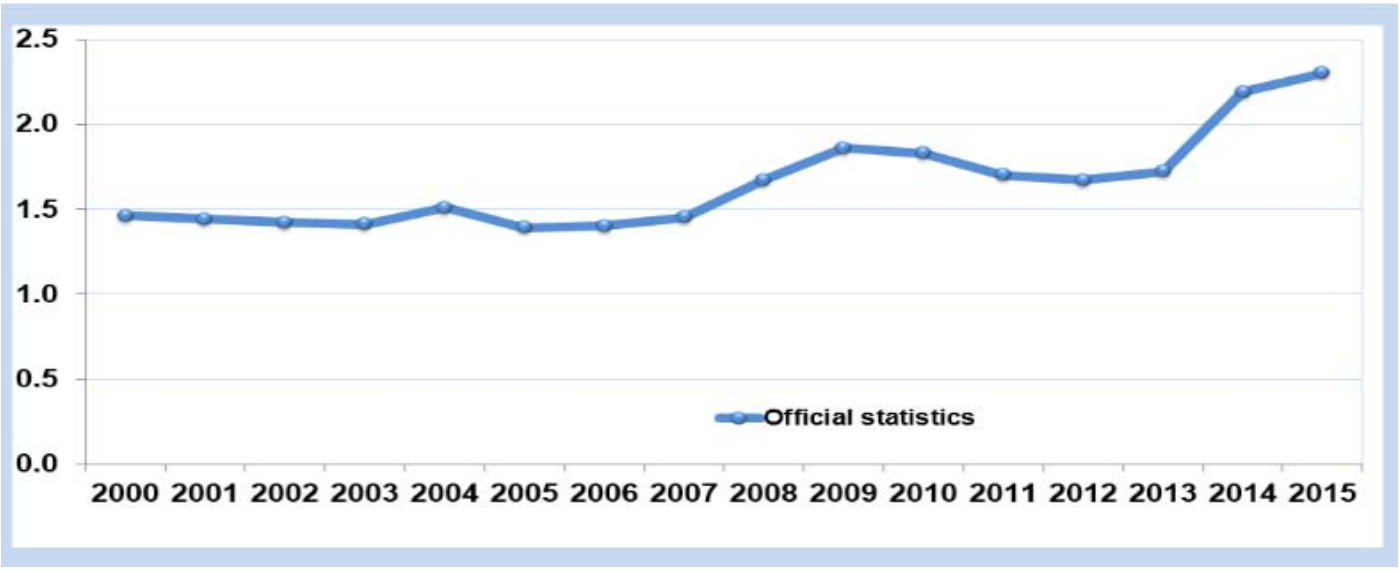
Area, km^2
69 700
Administrative units
11regions, 64 raions
Capital
Tbilisi
Ethnical Composition (according to the Census 2014)
Georgian - 86.8%, Azeri - 6.3%, Armenian - 4.5%, Other - 2.4%
Main religions (according to the Census 2014)
Orthodox Christian - 83.4%, Muslim - 10.7%, Armenian Apostolic - 2.9%, Catholic - 0.5%
State system
Parliamentary republic
Independence
Since 1991
Human Development Index
0.744 (Human Development Report, 2015)
National currency
Lari
Membership in international organizations
International Monetary Fund, United Nations, World Health Organization, World Bank, International Trade Organization, etc.

Population pyramid, Georgia, 2015



Source: NSO Georgia

Total fertility rate, Georgia



Source: NSO Georgia

Main demographic indicators, 2015

Number of live births (birth rate per 1,000 population)	59 249 (15.9)
Natural population growth (natural population growth rate per 1,000 population)	10 128 (2.7)
Number of deaths (mortality rate per 100,000 population)	49 121 (13.2)
Number of still-births (still-birth rate per 1000 births)	589 (9.9)
Number of marriages (marriage rate per 1,000 population)	29 157 (7.8)
Number of divorces (divorce rate per 1,000 population)	9 112 (2.5)
Migration (migration rate per 1,000 population)	-3 400 (-3.4)

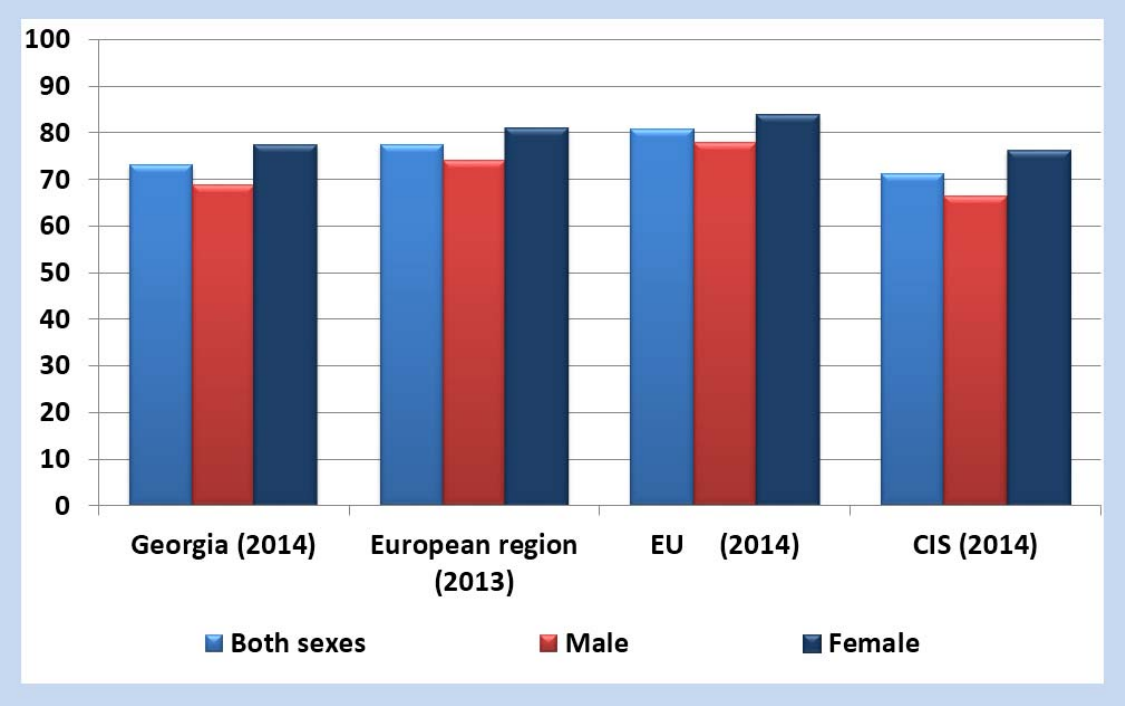
Source: NSO Georgia

Life expectancy at birth, 2015

Both sexes	72.9 Years (2001 – 71.6; 2014 – 72.9)
Male	68.6 Years (2001 – 68.1; 2014 – 68.6)
Female	77.2 Years (2001 – 74.9; 2014 – 77.2)

Source: NSO Georgia

Life expectancy at birth (Last available year)



Source: World Health Organization HFA DB

Mortality

Last several decades, a decrease of mortality and increase of life expectancy at birth are mentioned over the World. Such a change in the epidemiology of diseases partially suffer non-share growth and traumatic injury deaths reduction and also improved management of diseases, early detection of diseases and risk factors associated with improved control. Such epidemiological change happened partially due to a growth of the share of non-fatal diseases, reduction of deaths caused by injuries, and, also, by the improved management of diseases, early detection of diseases and improved control of risk factors.

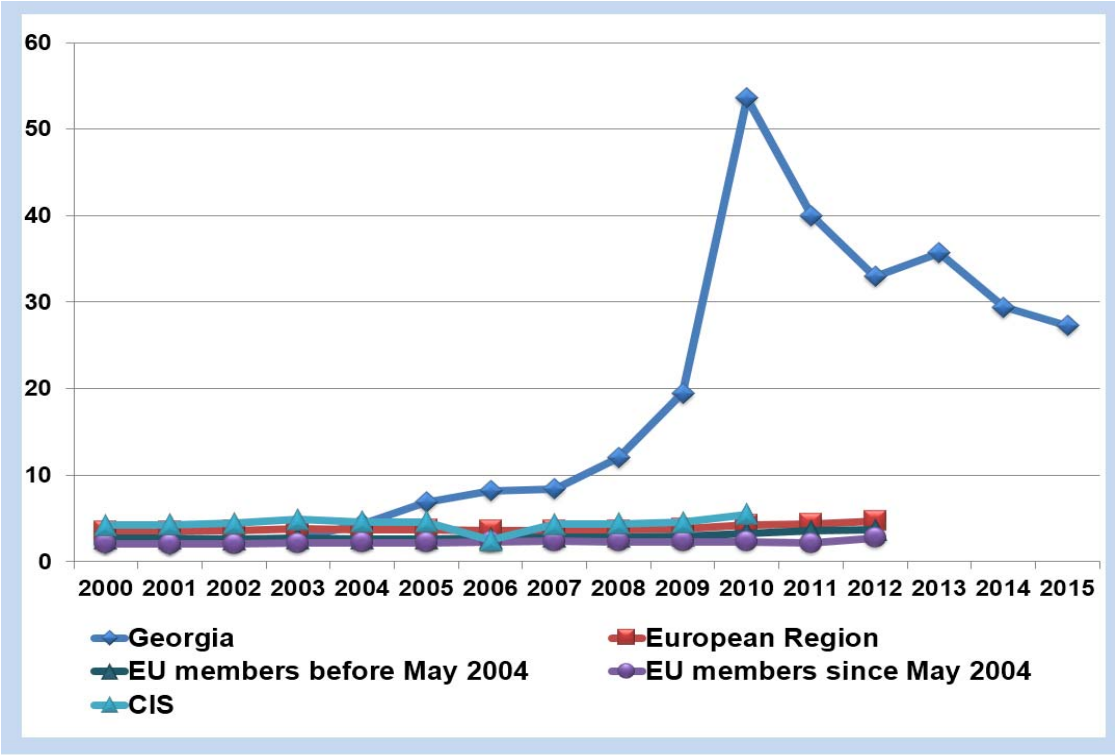
According to the data from the National Statistics Office, last years, the total mortality rate retains stable.

	Number of deaths	Mortality rate per 1000 population	Including in under-15 population	Mortality rate per 1000 children
Both sexes	49121	13.2	778	1.0
Male	25198	14.2	433	1.2
Female	23923	12.3	345	0.9

Source: NSO Georgia

A correct identification of the underlying causes of death plays an important role in the mortality structure formation. Since 2009, the National Center for Disease Control and Public Health (NCDC) cooperates with the National Statistics Office in the field of improving the identification of causes of death, this resulted in a marked reduction of the share of the ill-defined causes (in 2015 - 27%).

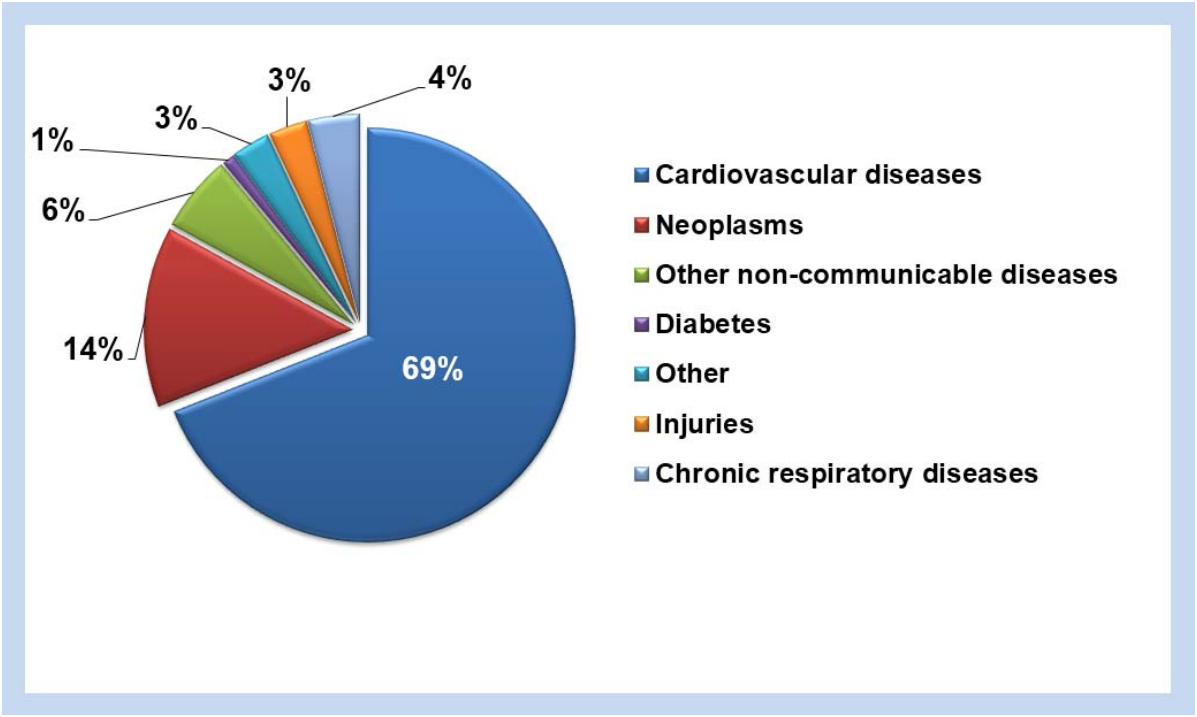
Share of the ill-defined causes (%) in the mortality structure



Source: World Health Organization HFA DB

In Georgia, like in the most of the countries over the World, non-communicable diseases has the largest share in the mortality structure.

Mortality structure, Georgia (WHO estimates, 2014)



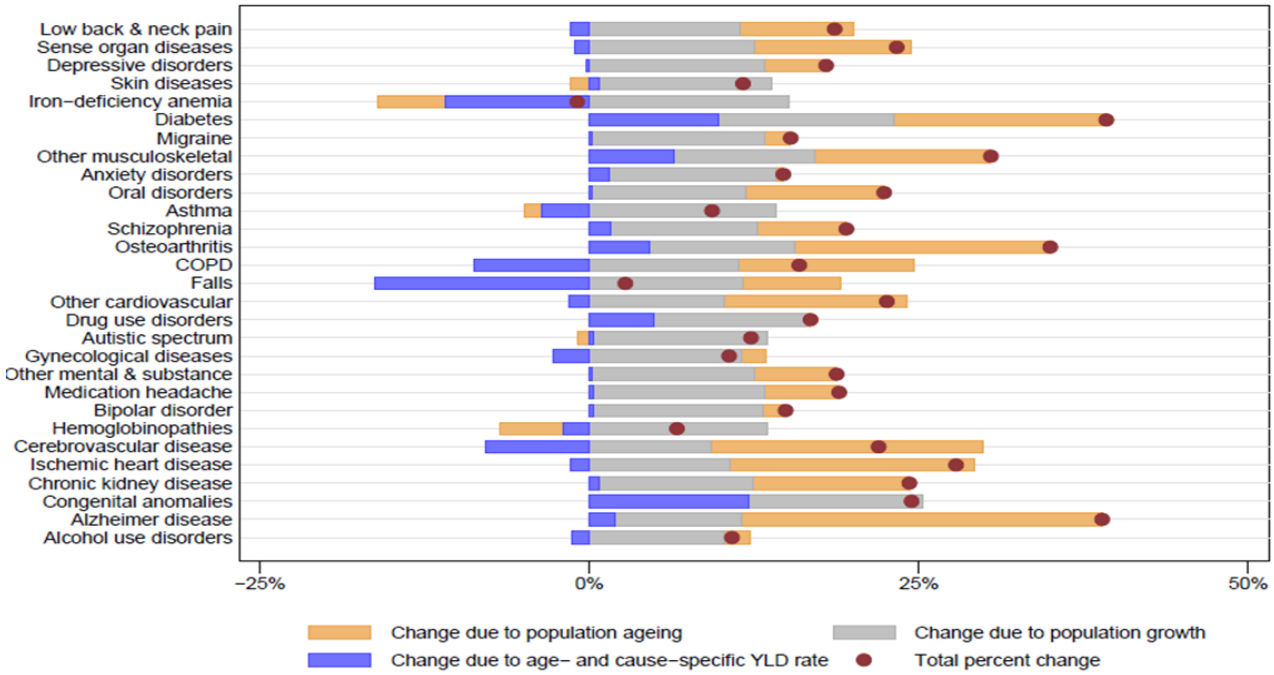
Source: World Health Organization

In 2013, the Institute for Health Metrics and Evaluation (IHME) at the University of Washington, in collaboration with the National Center for Disease Control and Public Health, conducted Global Burden of Disease Study (GBD), which was a scientific method of presentation of the number of years lost due to deaths, deseases, injuries, and risk factors. Complementing information on deaths by age, sex, cause,

geography, and time with equally detailed information on disease incidence, prevalence and severity, is key to a balanced debate in health policy. For this reason, the Global Burden of Disease Study (GBD) uses the disability adjusted life year (DALY) combining years of life lost (YLLs) due to mortality and years lived with disability (YLDs) in a single metric.

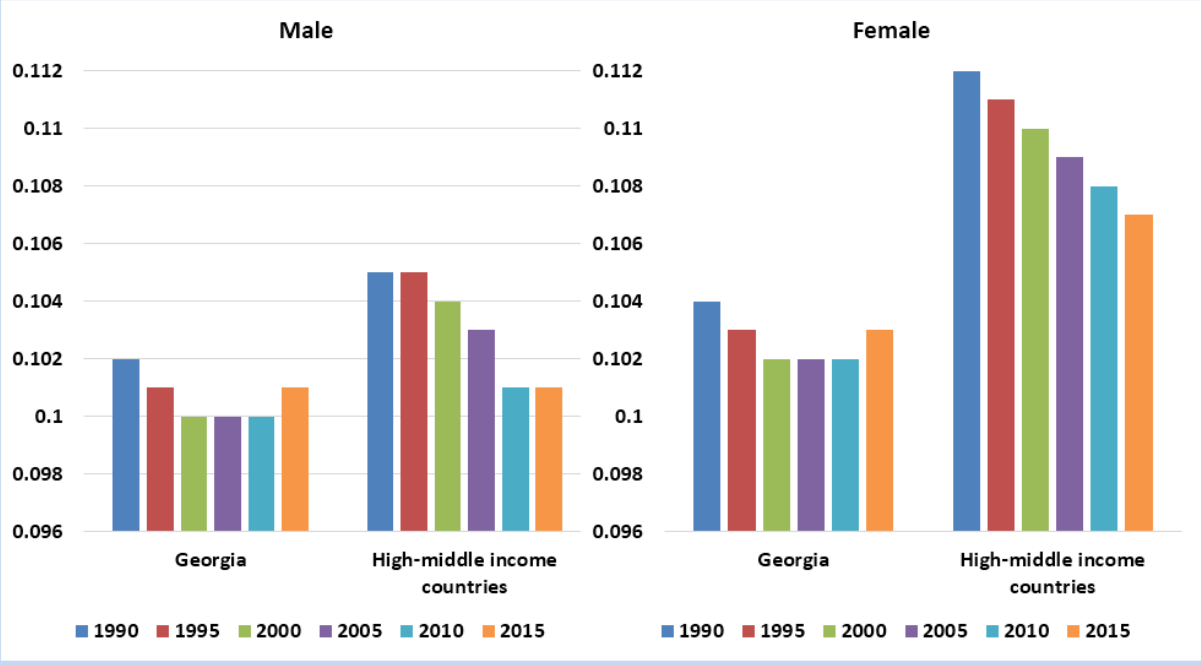
The estimates from GBD 2013 drew attention to large increases in the number of years lived with disability (YLDs) over the previous decade, while rates of YLDs for most causes remained stable or showed only small declines. Cardio-vascular diseases showed the larges difference of YLLs between 1990 and 2013 years.

Global decomposition of changes in leading 30 causes of years lived with disability due to population growths, population aging, and changes in age-specific YLD, 2005 to 2015



Source:: GBD 2015 study

Years lived with disability (YLD) rate per capita by geography and sex, 1990 – 2015



Source:: GBD 2015 study

Ratios of observed and expected YLDs for the leading 10 causes in 2015*

Georgia			Central Asia (GBD region for Georgia)			Global		
10 leading causes for YLDs	**Rank**	**Ratio observed and expected YLDs**	**10 leading causes for YLDs**	**Rank**	**Ratio observed and expected YLDs**	**10 leading causes for YLDs**	**Rank**	**Ratio observed and expected YLDs**
Low back and neck pain	1	0.93	Low back and neck pain	1	1.01	Low back and neck pain	1	0.96
Sensory disorders	2	1.06	Sensory disorders	2	0.99	Sensory disorders	2	1.0
Major depressive disorders	3	1.01	Major depressive disorders	3	0.97	Major depressive disorders	3	0.93
Diabetes	4	1.1	Skin diseases	4	0.88	Skin diseases	4	0.94
Skin diseases	5	0.86	Iron deficiency anaemia	5	0.92	Iron deficiency anaemia	5	0.94
Migraine	6	0.98	Migraine	6	0.98	Diabetes	6	0.97
Iron deficiency anaemia	7	0.87	Diabetes	7	0.92	Migraine	7	0.93
Oral conditions	8	1.03	Anxiety disorders	8	0.8	Other musculoskeletal conditions	8	1.31
Stroke	9	2.36	Oral conditions	9	1.06	Anxiety disorders	9	0.94
Anxiety disorders	10	0.82	Asthma	10	0.73	Oral conditions	10	0.86

Sustainable Development Goals - SDGs

In September 2015, the UN Summit announced 17 sustainable development goals and 169 objectives, those are based on the Millennium Development Goals, represent a new universal agenda of the World's development, and are aimed at achieving the MDG goals that haven't been achieved.

The Millennium Development Goals considered as priorities maternal and infant mortality, and infectious disease control. Neonatal mortality rate and hepatitis and water-borne diseases were added to these priorities.

Universal access to reproductive and sexual health services, provision access to essential drugs and vaccines, are continuation of activities, which began in the frame of the Millennium Development Goals.

Sustainable development goals set new goals aimed on non-communicable diseases and mental health, substance of addiction, injuries, chemicals, harmful effects on health from contaminated water and soil, on implementation of the frame convention on tobacco control, developed by the World Health Organization (WHO FCTC), on the financing needs of the health sector, and on defining of the needs on staffing.

The universal health care is a new objective, and is the only goal, which is reflected in all other health goals and objectives, associated with health.

Median absolute change for the health-related SDG index, health-related MDG index, and 34 individual health-related SDG indicators from 2000 to 2015 were used for assessment. Absolute change above zero represents improvements for a given health-related index or indicator since 2000, and an absolute change below zero indicates worsening performance since 2000. According to the mentioned index, Georgia is on the 108th place out of 188 countries. Individual SDG health-related indicators for Georgia are shown in the table below.

* *Color-coded by the magnitude of differences between observed and expected YLDs. Blues represent lower observed YLDs than expected levels based on SDI, whereas reds indicate that observed YLDs are higher than expected levels given SDI; shades of green, yellow, and orange reflect the spectrum of computed ratios for observed and expected YLDs*

Values for this difference are colour-coded such that dark red reflects an observed health-related SDG index that is much lower than expected on the basis of SDI (Sociodemographic Index) and purple indicates that observed levels are much higher than expected on the basis of SDI; shades of orange, yellow, green, and blue reflect values within this range.

SDG indicators, associated with health

Individual health-related SDG indicators	Absolute improvement
SDG index	51.6
Deaths due to exposure to forces of nature per 100000	42.2
Prevalence of stunting among children under 5 years of age	84.2
Prevalence of wasting among children under 5	90.5
Prevalence of overweight among children between the ages of 2 to 4 years	37.3
Maternal mortality ratio (maternal deaths per 100000 live births)	44.5
Proportion of births attended by skilled health personnel (doctors, nurses, midwives, or country-specific medical staff)	99.5
Under-5 mortality rate (probability of dying before the age of 5 per 1000 live births)	56.2
Neonatal mortality rate (probability of dying during the first 28 days of life per 1000 live births)	44.7
Number of new HIV infections per 1000	51.7
Number of new and relapsed tuberculosis (TB) cases per 1000	46.2
Malaria cases per 1000	100
Hepatitis B incidence (per 100000)	20.1
Prevalence of neglected tropical diseases (per 100000)	99.2
Deaths due to cardiovascular disease, cancer, diabetes, and chronic respiratory disease among populations aged 30 to 70 per 100000 population	44.6
Deaths due to self-harm per 100000	58.6
Risk-weighted prevalence of alcohol consumption	57.9
Deaths due to road injuries per 100000	45.9
Proportion of women of reproductive age (15 to 49 years) who have their need for family planning satisfied with modern methods	18.4
Birth rates (number of live births per 1000 women) for women aged 10 to 14 years and women aged 15 to 19 years	35.0
Composite Universal Health Coverage (UHC) indicator	45.6
Deaths attributable to household air pollution and ambient air pollution per 100000 population	17.2
Deaths attributable to unsafe water, sanitation, and hygiene (WaSH) per 100000 population	65.4
Deaths due to unintentional poisonings per 100000	57.9
Age-standardized prevalence of daily smoking among populations aged 10 and older	51.3
Prevalence of women aged 15 years and older who experienced intimate partner violence	94.2
Risk-weighted prevalence of populations using unsafe or unimproved water sources	23.1
Risk-weighted prevalence of populations using three categories of unsafe or unimproved sanitation	70.2
Prevalence of populations with unsafe hygiene, defined as handwashing without soap	31.4
Risk-weighted prevalence of household air pollution	73.1
Population-weighted mean levels of fine particulate matter (PM2.5)	44.2
Deaths due to interpersonal violence per 100000	57.4
Deaths due to collective violence and legal intervention (war) per 100000	100
MDG index	52.1

Maternal health and mortality

Pregnancy and delivery

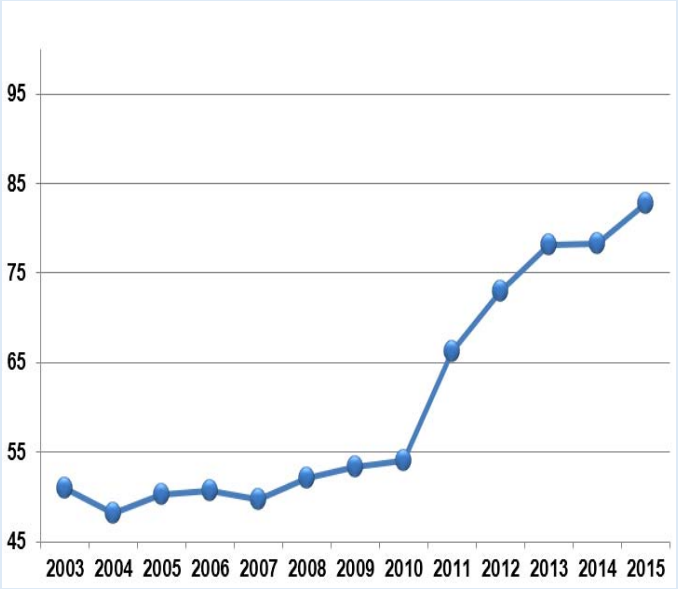
Last years, there was a growth of timely initiation of antenatal care, this could be based on the improved financial accessibility of antenatal services (MOHLSA is implementing a state maternal and child health program, which is funding 4 antenatal care visits).

Main indicators of reproductive health

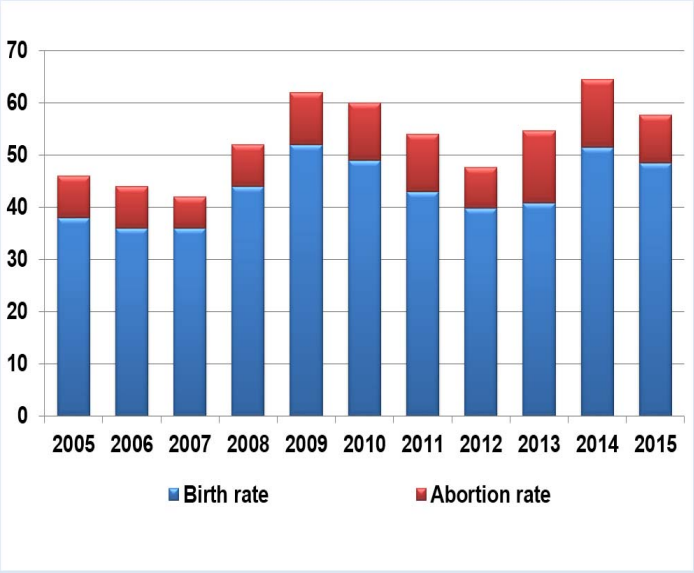
	2014	2015
Number of pregnant women	89725	94017
Percent of pregnancies resulted in delivery	90.3%	90.3%
Timely initiated antenatal care	78.3%	82.7%
Coverage with at least 4 antenatal care visits	86.9%	88.3%
Number of deliveries	60 126	58 688
Term deliveries	96.2%	82.1%
Normal deliveries	57.0%	55.0%
Pathological deliveries	43.0%	45.0%
Adolescent pregnancy rate	51.5	48.6
Proportion of births attended by skilled health personne	99.9%	99.8%

Source: NCDC

Share of pregnant women (%) initiating antenatal care during the 1st trimester, Georgia



Adolescent pregnancy rate (per 1,000 women aged 15-19), Georgia, 2005 – 2015



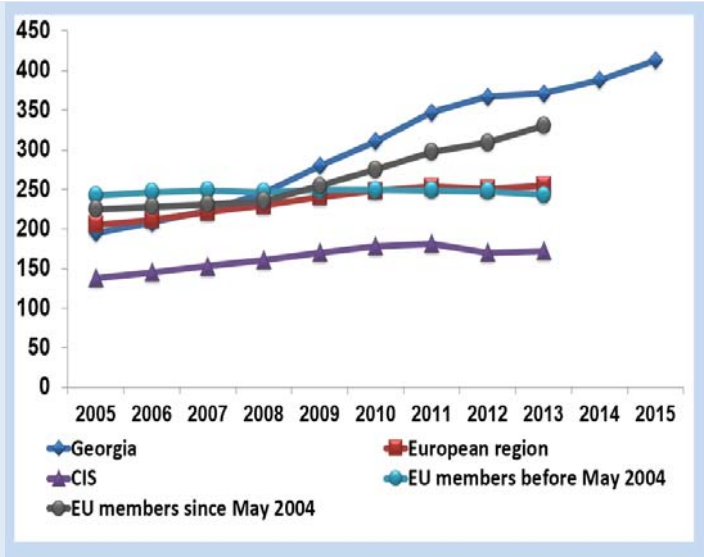
Source: NCDC, NSO

From 2015, a regionalization of perinatal services (introduction of levels of care), supported by the USAID/Sustain, began in Imereti and Racha-Lechkhumi.

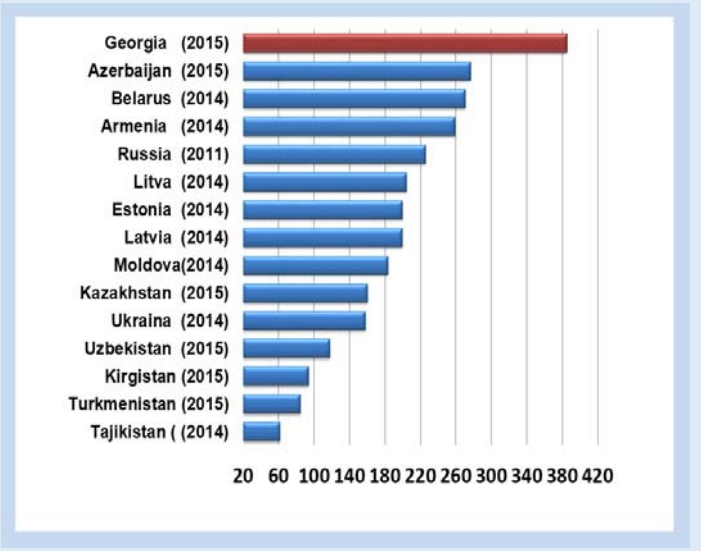
Caesarean sections and abortions

According to the WHO study, Georgia is among countries where the share of caesarean sections is excessive. Since 2000, the number of caesarean sections has been increased 4.3 times and, in 2015, the number of caesarean sections performed in Georgia had reached 41.4% of the total number of deliveries. Although, the share in the individual facilities is significantly higher than the country average.

Caesarean sections (ratio per 1000 live births)



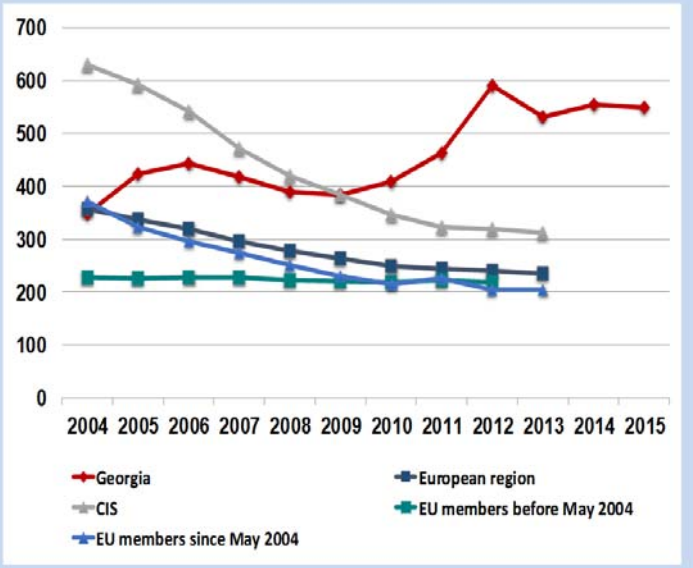
Caesarean sections (ratio per 1000 live births)



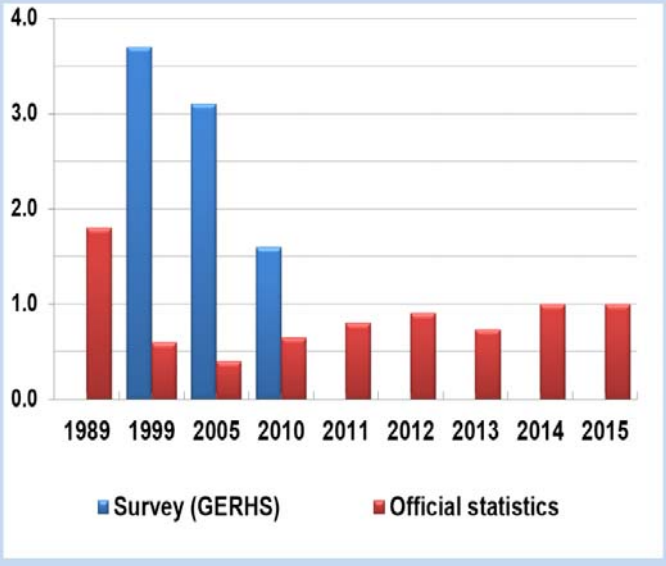
Source: World Health Organization HFA DB

In 2013, the country has made significant steps to reduce the number of caesarean sections: a caesarean section management protocol was developed and approved. The protocol defined indications and contraindications for a caesarean section.

Abortions, ratio per 1000 live births



Total induced abortion ratio (TIAR), Georgia



Source: NCDC, World Health Organization HFA DB

In 2015, a decrease of the total number of abortions has been continued. Last year, the share of abortions in women aged under-20 constituted 3.9% of the total number of induced abortions. The induced abortion rate was high in women aged 25-29 and 30-34. The share of medication induced abortions sufficiently increased.

Abortions, Georgia

	2014	2015
Total number of abortions	33469	33377
Including induced abortions	27637	25110
Share of medication induced abortions from the total number of induced abortions	28.1%	39.5%

Source: NCDC

Maternal mortality

In transitioning from the MDG to SDG era, it is imperative to comprehensively assess progress toward reducing maternal mortality to identify areas of success, remaining challenges, and frame policy discussions.

Only ten countries achieved MDG 5, but 122 of 195 countries have already met SDG 3.1. Geographic disparities widened and, in 2015, there were still 24 countries with MMR greater than 400. Historical patterns suggest achievement of SDG 3.1 will require 91% coverage of one antenatal care (ANC) visit, 78% of four ANC visits, 81% of in-facility delivery (IFD), and 87% of skilled birth attendance (SBA).

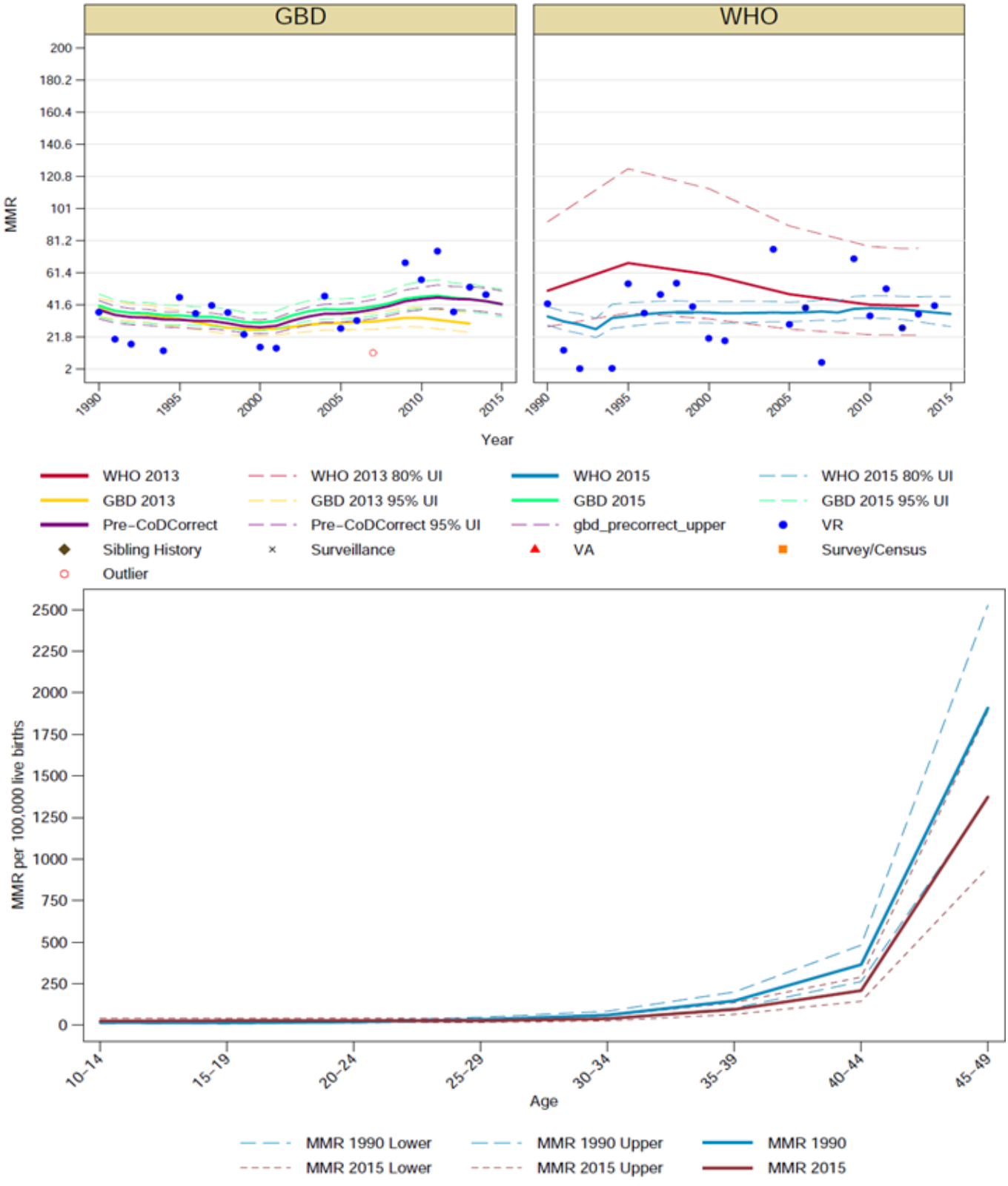
Since 2009, the NCDC and the NSO have been reconciling their information to improve the quality of the maternal mortality data. Since 2013, based on the Health Minister's Order #01-30/N "On the mandatory notification of the cases of maternal and child death or stillbirth' formats and rules" the data collected through this way also have been participating in the reconciling process.

Since 2013, data on the deaths in the reproductive age women have been collected by the Department of maternal and child health of the NCDC, using electronic information system (EIDSS); since 2015, this system covers also deaths in children under-5.

All above mentioned sources are used for the publishing of the mortality data, which happens after the course of comparisons and adjustments.

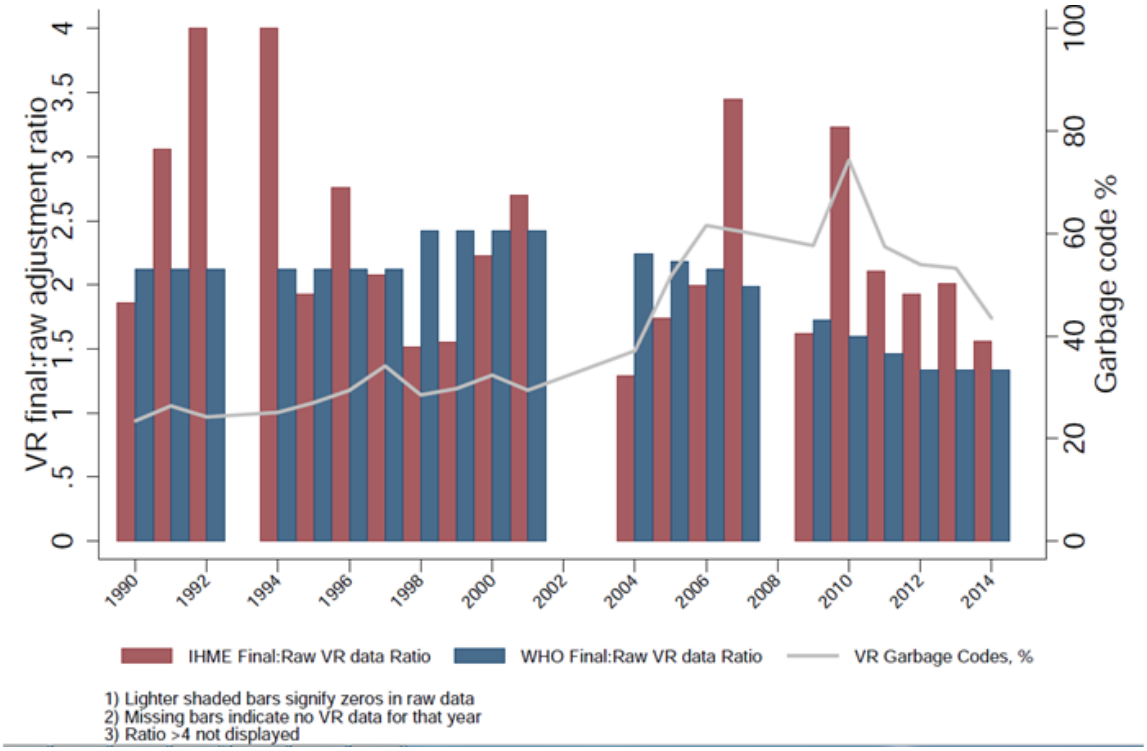
Different inernational orgaizations are producing maternal mortality estimates for different countries. Such institutions are, e.g., the UN Maternal Mortality Estimation Interagency Group (MMEIG) and Institute for Health Metrics and Evaluation.

Maternal mortality ratio per 100 000 life births, Georgia



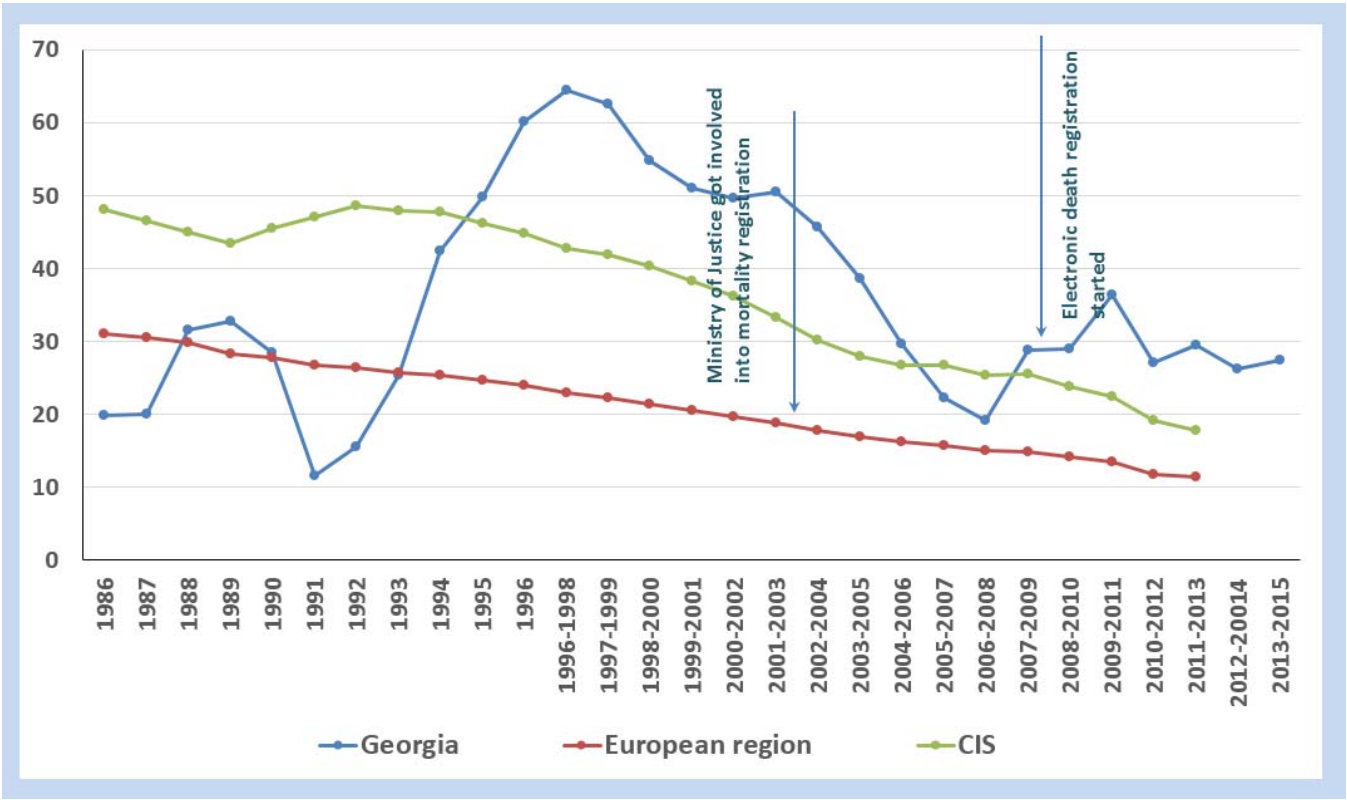
Source: GBD 2015 and MMEIG 2015 for all countries

Net adjustment ratio of maternal mortality vital registration (VR) data and percentage of VR deaths assigned to garbage codes from GBD and MMEIG 2015, Georgia[1]



Source: GBD 2015

Maternal mortality ratio per 100 000 live births, 3 year moving average



Source: World Health Organization HFA DB

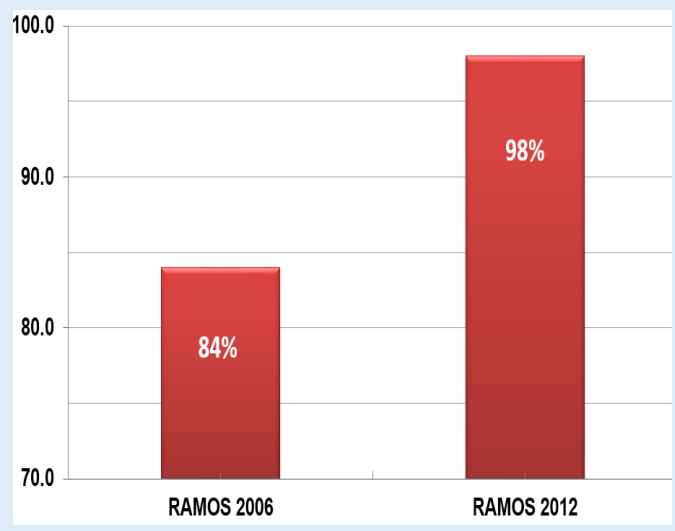
1 Garbage codes could be grouped as follows: 1. causes that cannot or should not be considered as underlying causes of death; 2. intermediate causes of death; 3. immediate causes of death that are the final steps in a disease pathway leading to death; 4. unspecified causes within a larger cause grouping.

Maternal mortality ratio per 100 000 live births, Georgia

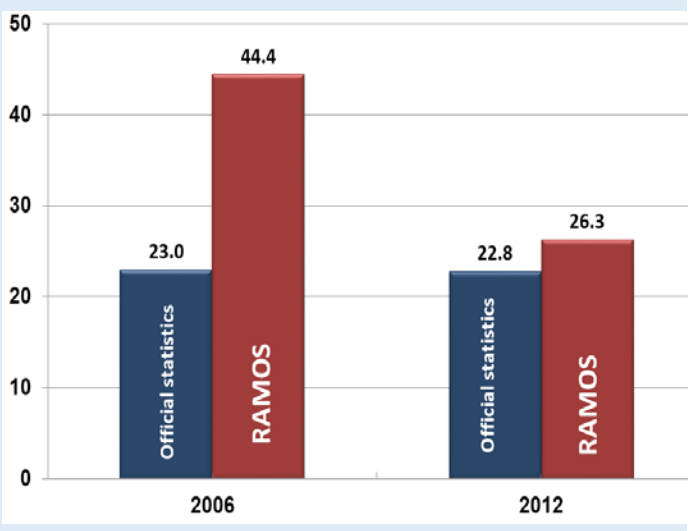
Source	1990	1995	2000	2005	2006	2010	2011	2012	2013	2014	2015
Official statistics	40.9	55.1	49.2	23.4	23.0	19.4	27.6	22.8	27.7	31.5	32.1
MMEIG_2012	92	129	113	95	-	-	-	77		-	-
MMEIG_2013	50	67	60	48	-	-	-	-	41	-	-
MMEIG_2015	34	35	37	37	-	40	-	-	-	-	36
GBD	41.5	-	30.7	-	-	-	-	-	-	-	42.3
RAMOS	-	-	-	-	44	-	-	26	-	-	-
MMS_2011	-	-	-	-	-	-	20.6	-	-	-	-

Reproductive age mortality studies (RAMOS) confirm an improvement of the quality of registration of deaths of women of reproductive age. In 2012, according to these surveys data, the registration of deaths of women of reproductive age reached 98%.

Percent of death registration in women of reproductive age



Difference by sources of the data



Source: RAMOS; NCDC

Morbidity and mortality in children under 5

Morbidity in children under 5, 2015

Top causes of under 5 children morbidity	Incidence per 1000 children aged under 5
Diseases of the respiratory system	616.0
Infectious and parasitic diseases	114.7
Diseases of the ear and mustoid process	54.7
Diseases of the skin and subcutaneous tissue	29.2
Diseases of the blood and blood forming organs	24.5
Diseases of the eye and adnexa	18.9
Diseases of the digestive system	18.5

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.

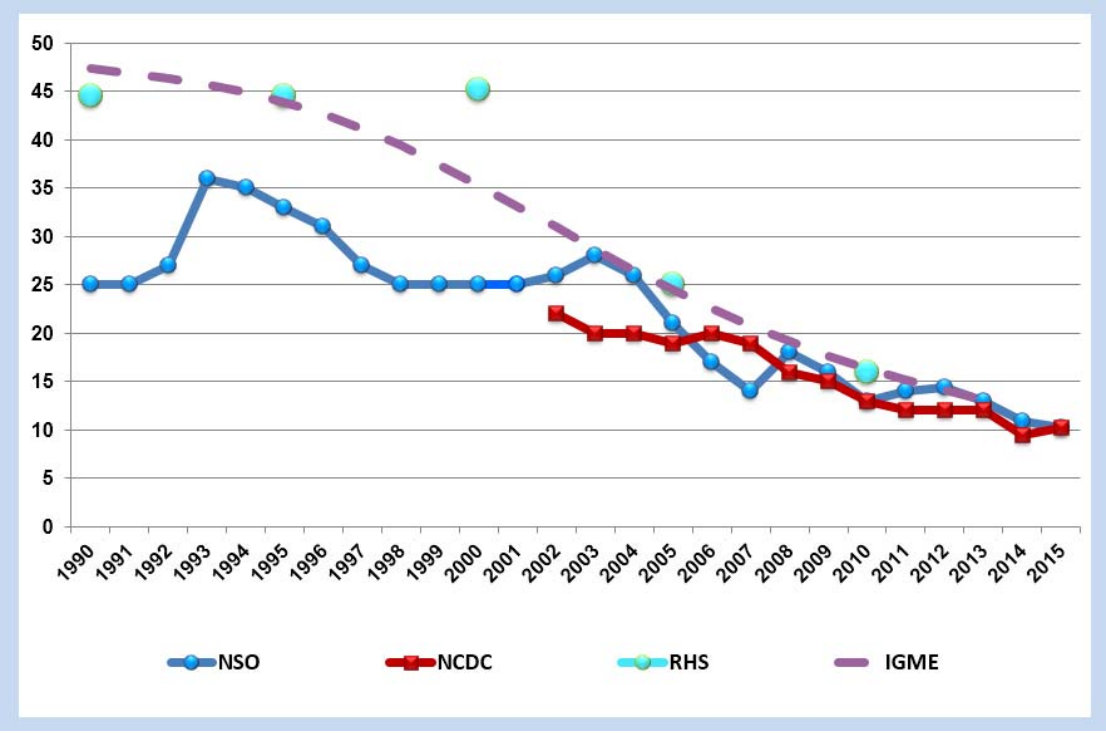
During this time, 58 countries met or exceeded the pace of progress required to meet MDG4. Yet since 2000, the time at which MDG4 was formally enacted, 28 additional countries that did not achieve the 4.4% rate of decline from 1990 met the MDG4 pace of decline in the next 15 years.

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 MDG goal. Essential, that the GBD and IGME estimates for the global and regional levels are almost the same (matching level – 98%).

Under 5 mortality rate per 1000 live births, Georgia

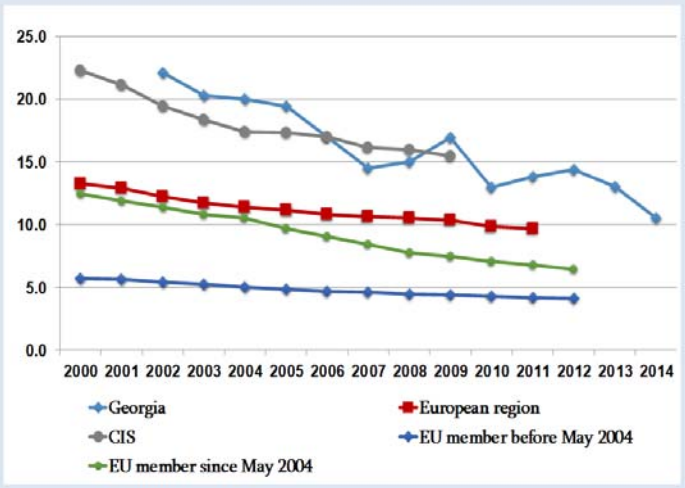
Source	1990	1995	2000	2005	2010	2011	2012	2013	2014	2015
NCDC	-	-	27.2	19.4	13.4	12.0	12.4	12.0	9.5	10.2
NSO	25	33	24.9	21.1	13.0	13.8	14.4	13.0	10.9	10.2
IGME	47.4	43.3	35.3	24.5	16.4	15.2	14.1	13.1	-	12.0
GBD	-	-	36.2	28.0	21.8	-	-	-	-	17.4
RHS	44.5	44.5	45.2	25.1	16.4	-	-	-	-	-

Under 5 mortality rate per 1000 live births, Georgia

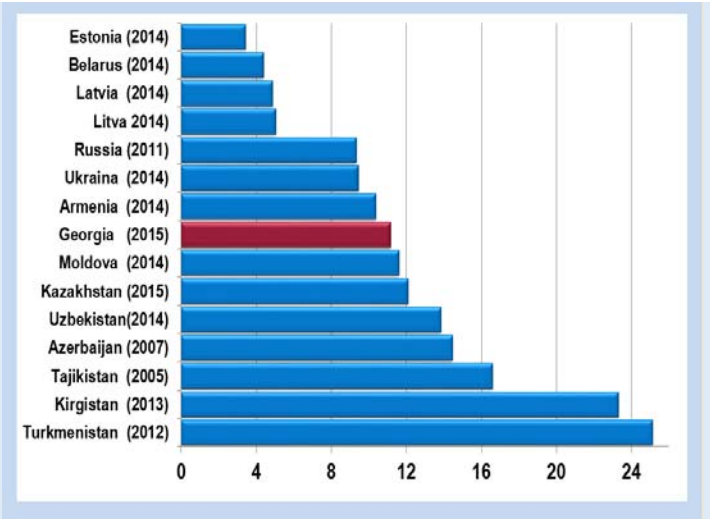


In Georgia, according to the WHO latest available data, the under 5 mortality rate, despite the downward trend, still maintains the higher value compared to the average indicator for the European Region and EU countries, and stays at the mid position between the former Soviet Union countries.

Under 5 mortality rate per 1000 live births



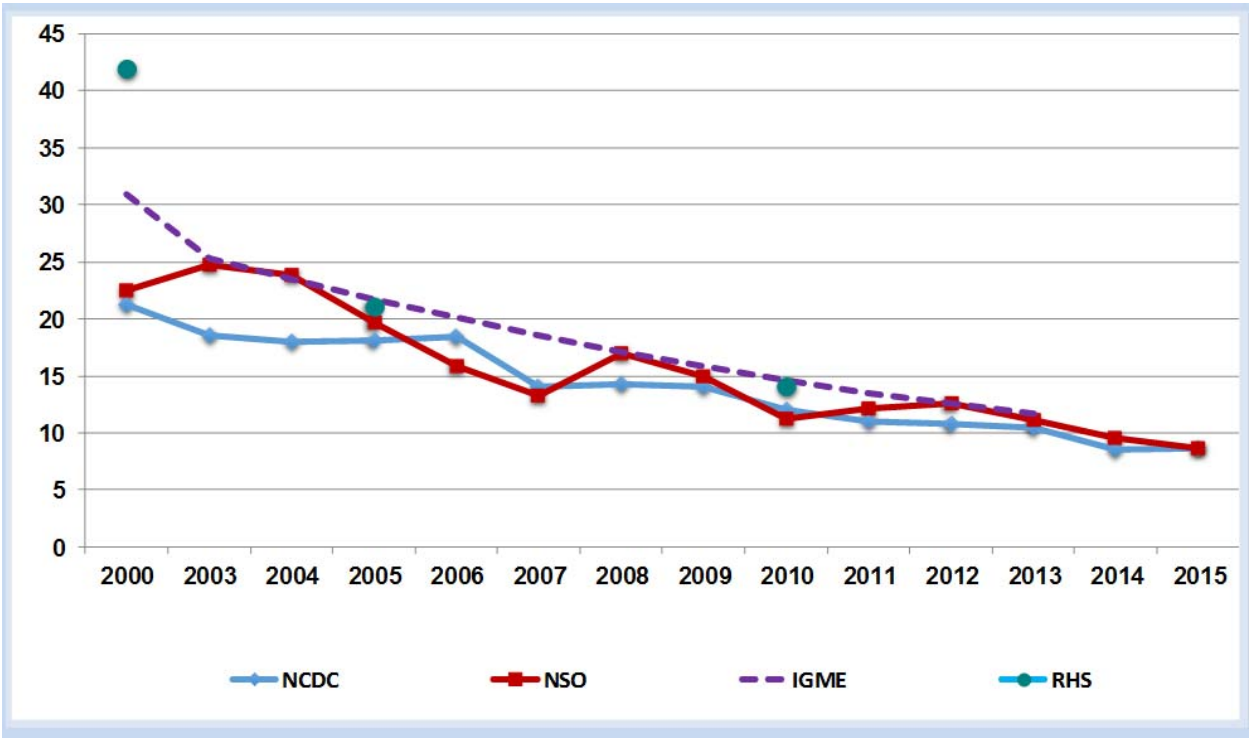
Under 5 mortality rate per 1000 live births, former Soviet Union



Source: World Health Organization HFA DB

According to the WHO global data, almost 40% of under-5 deaths occurred in infants. In 2015, in Georgia, this share, according to the National Center of Disease Contro and National statistics office, was 83.8%. According to all sources, the infant mortality is declining.

Infant mortality rate per 1000 LB, Georgia



Infant mortality rate per 1000 LB, Georgia

Source	1990	1995	2000	2005	2010	2012	2013	2014	2015
NCDC	-	27.8	21.2	18.1	12.0	10.8	10.5	8.5	8.6
NSO	20.7	28.3	22.1	19.7	11.2	12.6	11.1	9.5	8.6
IGME	41	37.8	30.9	21.7	14.6	12.6	11.7	-	11.0
GERHS	-	-	41.6	21.1	14.1	-	-	-	-

Neonatal and perinatal mortality, Georgia

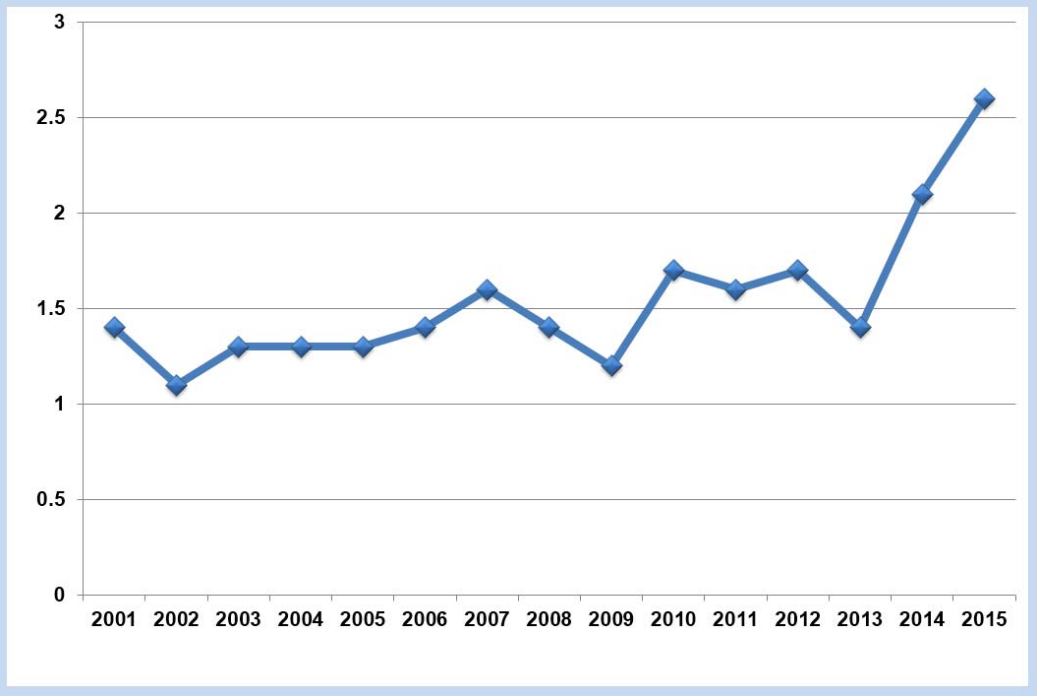
	Neonatal mortality rate per 1000 live births	Early neonatal mortality rate per 1000 live births	Late neonatal mortality rate per 1000 live births	Perinatal mortality per 1000 births
2010	9.6	6.6	3.0	17.4
2011	8.5	6.1	2.4	15.6
2012	9.2	6.6	2.7	17.7
2013	8.4	6.7	1.7	16.1
2014	7.2	5.1	2.1	15.5
2015	5.8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

Source: NSO

66.7% of mortal cases in infants were caused by conditions originating in the perinatal period. The largest share (73.6%) of the perinatal deaths comes from stillbirths; an adequate ratio of the number of stillbirths to the number of early neonatal deaths is very important. In Georgia, according to the WHO data, stillbirths to early neonatal deaths ratio should not exceed 1.2. In 2015, this ratio equaled to 2.6.

In 2015, in Georgia, the stillbirth rate was 9.9 per 1,000 births (according to the latest available data: in the CIS - 9.3, in the EU - 5.3).

Stillbirths to early neonatal deaths ratio, Georgia



Source: NCDC

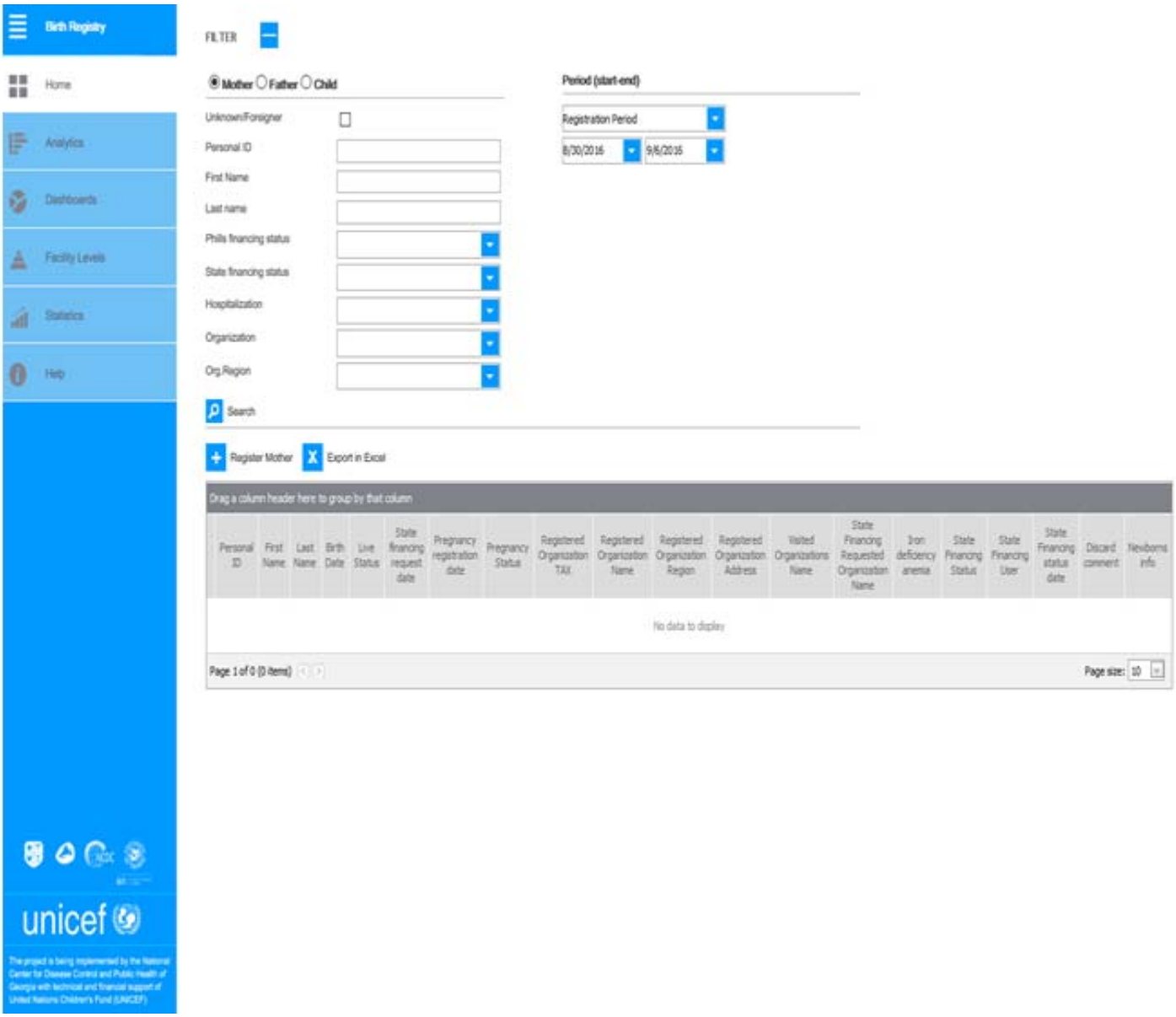
„Birth“ registry

In 2016, Georgia started electronic system for antenatal and obstetric services, maternal and child health surveillance "Electronic Module of health care for pregnant women and newborns" ("Birth" registry).

The electronic module provides continuous monitoring of each pregnant woman starting from the first antenatal visit till the childbirth.

The system also records data about the health conditions of the babies at the moment of birth. Given the fact, that only few countries in the world have implemented such registries, for Georgia this initiative is an important step forward.

In 2016, according to the preliminary data for the 9 months, the registry has recorded: 39,087 deliveries, 28,065 abortions, 38, 902 live births, 323 stillbirths.



Communicable diseases

Hepatitis C

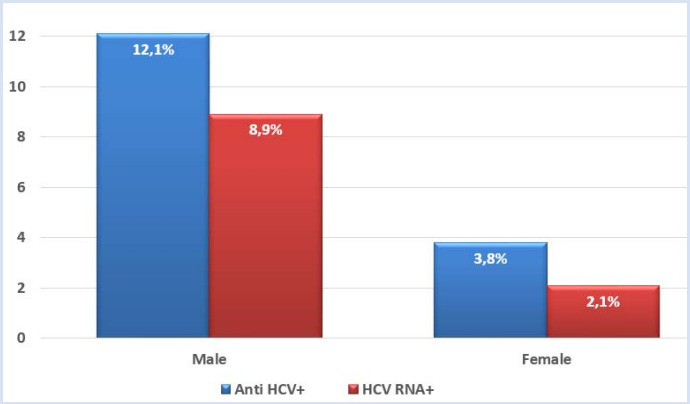
In April 2015 Georgia started unprecedented program, aimed to hepatitis C elimination in the country. From starting data till September, 2016, 36457 patients encountered to service provide medical facilities and 19338 of them were treated or are continued treatment using newest antiviral therapy.

9688 patients already had finish treatment process. Part of them 3 month later after treatment, were tested for sustain virologic response (SVR), share of cured patients in mentioned group was 80%. For current period, each person infected by hepatitis C in spite of degree of fibrosis, has free access for newest antiviral therapy.

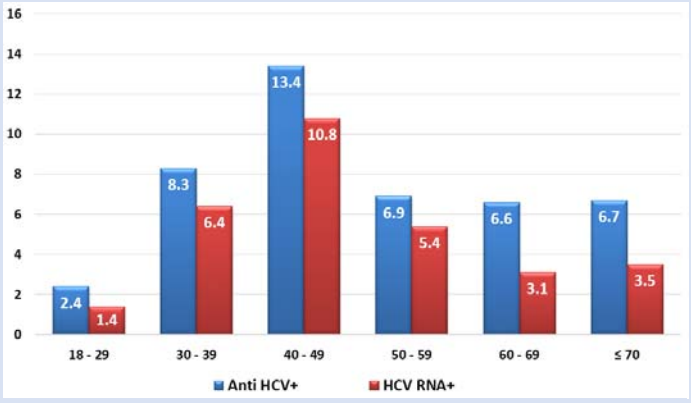
In 2015, in the frame of the hepatitis C elimination program, the National Center for Disease Control and Public Health, in collaboration with US Centers for Disease Control and Prevention (CDC), conducted the first Hepatitis C serosurvey in country. Totally, 6331 interviews were obtained and 6014 blood samples collected during the survey. According to the preliminary statistical analyses, 7.7% of the population was Anti-HCV positive and 5.4% had the active infection (RNA positive).

According to the survey results, the most prevalent genotypes are: genotype 1 (40% prevalence) and genotype 3 (34%). Seropositivity was highest among males 30-39 and 40-49 years (22.2%). Potentially, this could be associated with a cohort effect.

HCV Prevalence by sex (%), Survey 2015



HCV Prevalence by age (%), Survey 2015



Source: NCDC

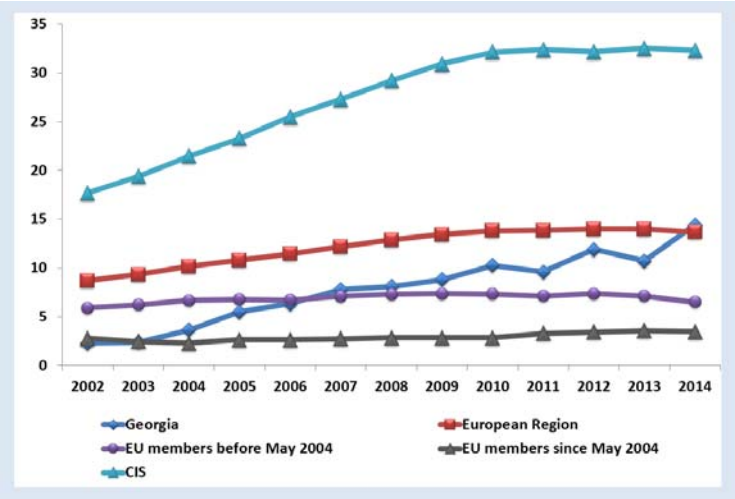
To achieve the country's ambitious elimination goals and streamline efforts aimed at strengthening the national response to Georgia's hepatitis C problem, a long-term strategy (2016-2020) was developed. This strategy covers different directions including raising awareness of the population, surveillance, prevention, screening, diagnostics, and treatment.

HIV/AIDS

Georgia is considered as a country with low prevalence of HIV/AIDS. However, in recent years Georgia has witnessed an increase of the HIV/AIDS incidence. In 2015, there were registered 717 new cases of HIV (incidence per 100,000 population – 19.3), and 94 deaths attributed to AIDS.

HIV, new cases by mode of transmission, Georgia, 2015	
Injecting drug use	28.0
Heterosexual contacts	50.2
Homosexual contacts	19.8
Vertical transmission	0.8
Blood or blood products transfusion	0.6
Unidentified	0.6

HIV incidence per 100000 population



Source: Center for infectious pathology, AIDS and clinical immunology; WHO Health for All Database

In 2015, compared to 2014, important trends were revealed:

- By 27% increased the number of new cases;
- By 17% increased the number of heterosexually transmitted new cases;
- By 122% increased the homo-bisexually transmitted new cases;
- By 4% increased the number of new cases transmitted by injected drug use.

There is a rather high level of HIV/AIDS late detection (30% of new cases are revealed at the AIDS stage), and this represents a serious problem. Over the past years, under the framework of the state program, testing for HIV/AIDS of pregnant women, blood donors, high-risk population and other groups, including voluntary testing of accused/prisoners in the penal system, was implemented.

There is a universal access to retroviral treatment in Georgia.

Tuberculosis

In 2015, 74.7 new cases of tuberculosis per 100,000 population have been registered. This is less than in 2014, although, high, compared to the European region and EU members. 2.3% of all new cases and relapses were registered in prisoners; the share of new cases of pulmonary tuberculosis constitutes 72.2% of new cases of all forms of tuberculosis.

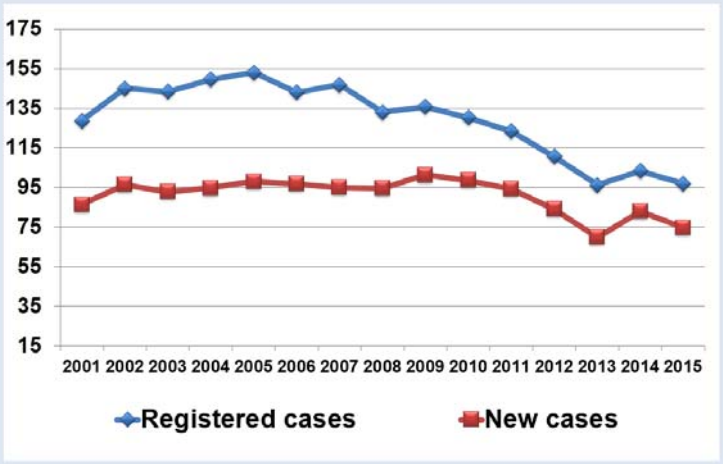
In 2015, according to the National Statistical Office of Georgia data, mortality caused by tuberculosis was 1.8 per 100,000 population.

The “successful treatment” of the new cases of pulmonary BK+ tuberculosis is a good assessment characteristic of the general tuberculosis control and management. In 2005, “successful treatment” of new cases of pulmonary BK+ tuberculosis reached only 64.1%. In 2014 and 2015, this indicator increased up to 81% (2013 cohort).

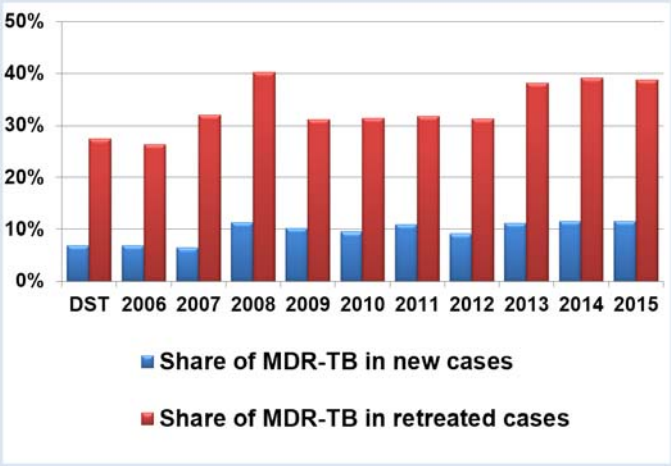
According to the World Health Organization estimates, Georgia belongs to the group of countries "with a high burden" of MDR-TB.

In 2015, 11.6% of the new pulmonary tuberculosis cases (168 cases) and 38.8% of the retreated pulmonary tuberculosis cases (186 cases) have been multidrug resistant.

Tuberculosis morbidity rates per 100 000 population



Multidrug resistant tuberculosis, Georgia



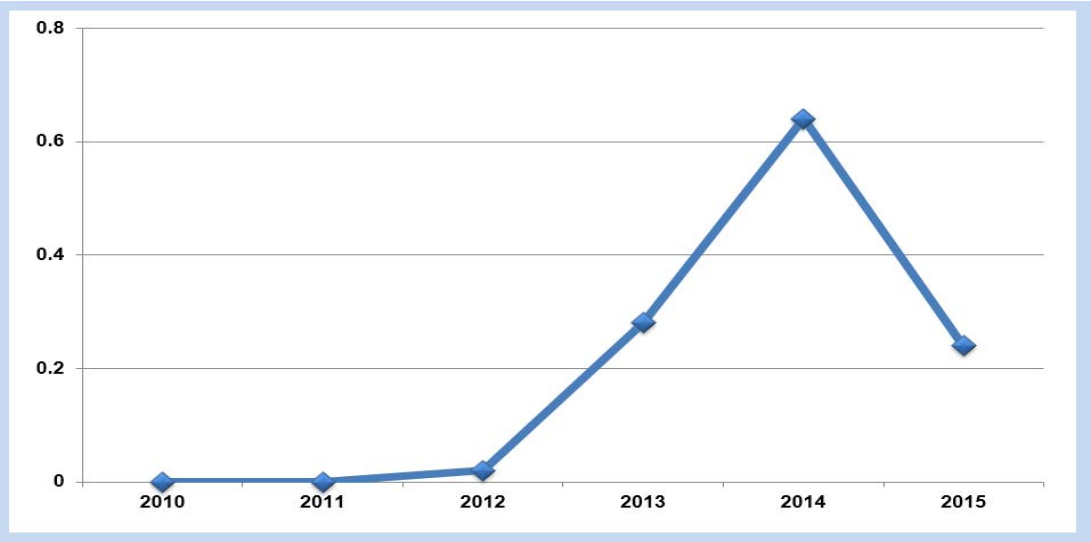
Source: NCDC; National center for tuberculosis and lung diseases

The frequency of interrupted treatment is high among the multidrug resistant cases. Hence, an upward trend of the multidrug resistance has been registered among new cases. This indicates the high risk of spreading of multidrug resistant tuberculosis in the society.

Crimean-Congo fever

In 2014, in the East part of Georgia there was an outbreak of Crimean-Congo fewer. Total number of registered cases was 24 (incidence per 100000 population – 0.6); 4 cases were fatal (case fatality rate – 16.6). In 2015, the number of registered cases of Crimean-Congo fewer reduced 3-fold (number of registered cases – 9; incidence rate - 0.2). 1 cases was fatal (case fatality rate – 11.1)

Crimean-Congo fewer, incidence per 100000 population, Georgia



Source: NCDC

Rabies

Continious provision of the anti-rabies serum (immunoglobulin) and vaccines provided background to reach the incidence rabies rate of zero in humans. This happened the first time from 1990 to the present

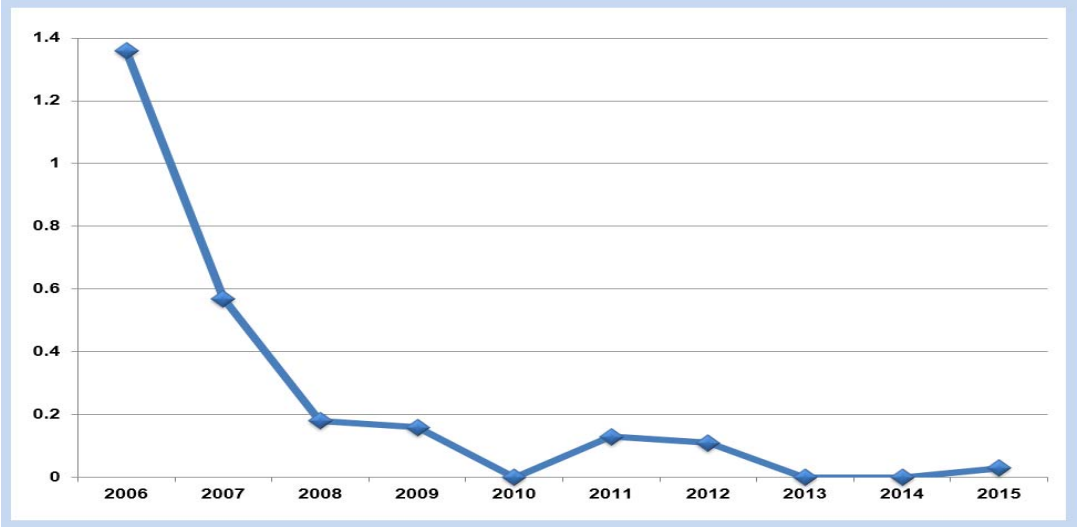
time. In 2015, 57125 cases of biting were registered, among them for 52738 persons preventive antirabial immunisation were conducted.

Malaria

Since 2002, malaria incidence has been sharply reduced and, in 2013 - 2014, it was 0. In 2015, five cases of malaria were registered, including 3 imported cases; one person was infected from imported cases.

During last years, there were no deaths, caused by malaria, registered in Georgia.

Malaria incidence per 100000 population



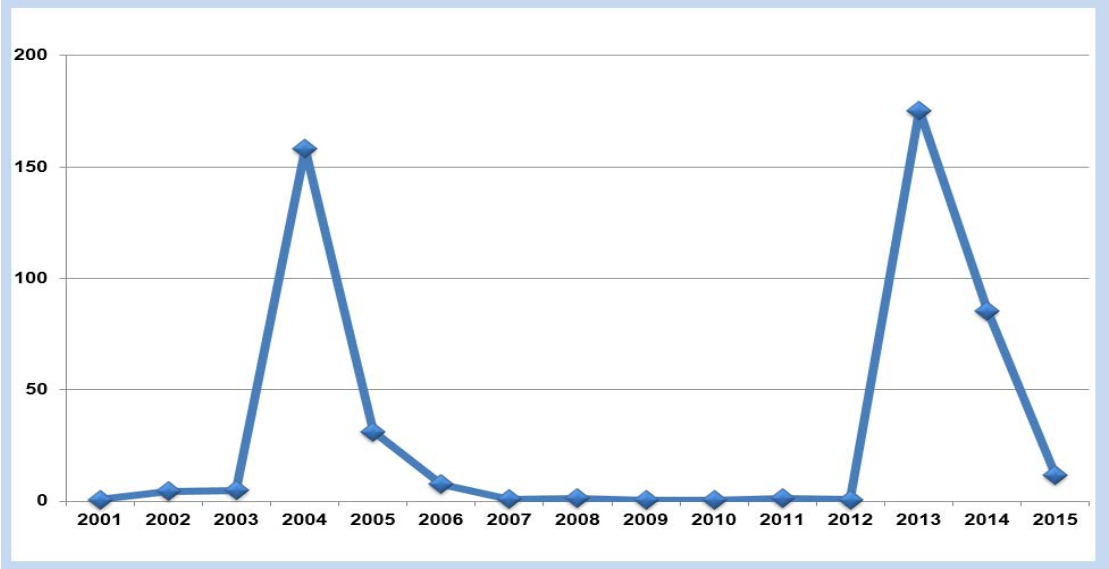
Source: NCDC

Measles

In Georgia, like in all other countries, measles registration 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 aided the 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 vaccinations to population aged 15-30, health professionals and some other specific groups. In 2013-2014, about 150,000 people were vaccinated.

Measles, incidence per 100000 population



Source: NCDC

Immunization

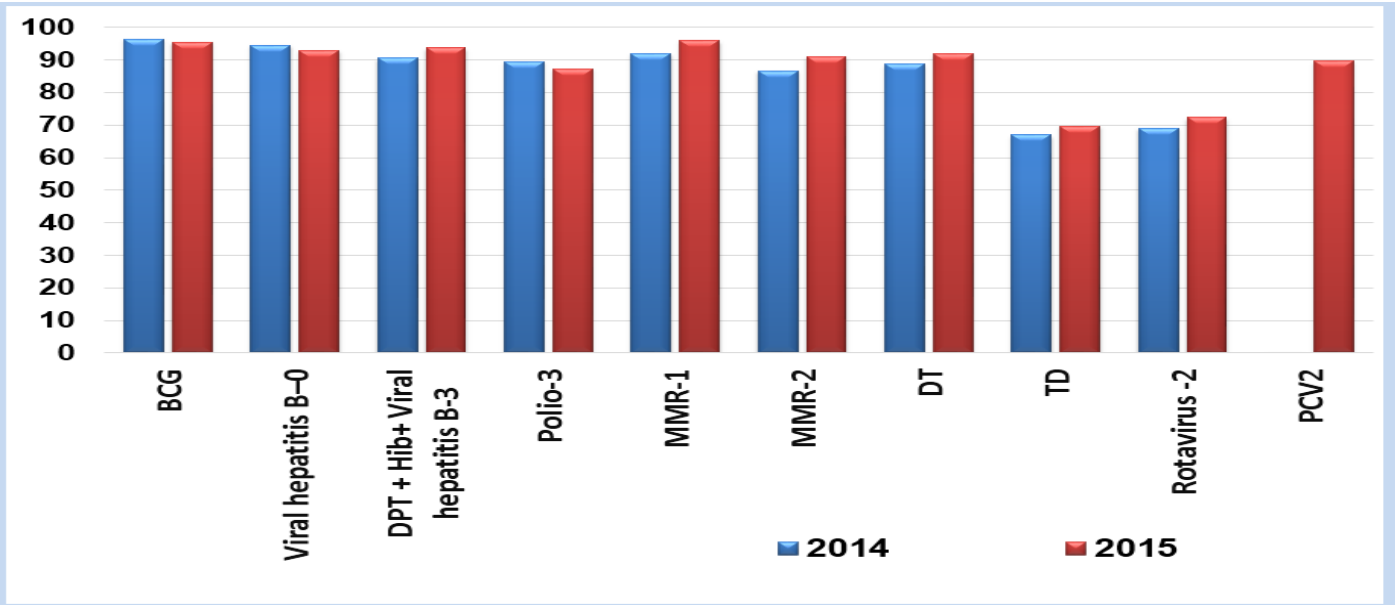
All vaccinations and immunizations included into the National vaccination calendar are free of charge for the population. For immunization of the population State purchases of vaccines, which are prequalified by the World Health Organization, this is a guarantee of a high quality and safe immunization. In 2014, the government paid 800,000 lari for updating the "cold chain" inventory, in order to increase the safety of immunization.

In 2015, compared to 2014, in the frame of the State immunization program, the vaccination rates coverage for most antigens is higher, also, year aim for 95% coverige was not reached completely.

Compared to previous year, decrease of vaccination coverige in infantants was registred: for BCG - 0.9% and for Hepatities B – 1.5%.

Compared to 2014, coverage by DPT 3 is improved for3%, very important sign – the Drop Out rate decreased to 6.3% (2014 -10.04%) and reached the recommended level, by 2.7% increased timelyness of vaccination.

Immunization coverage (%), Georgia



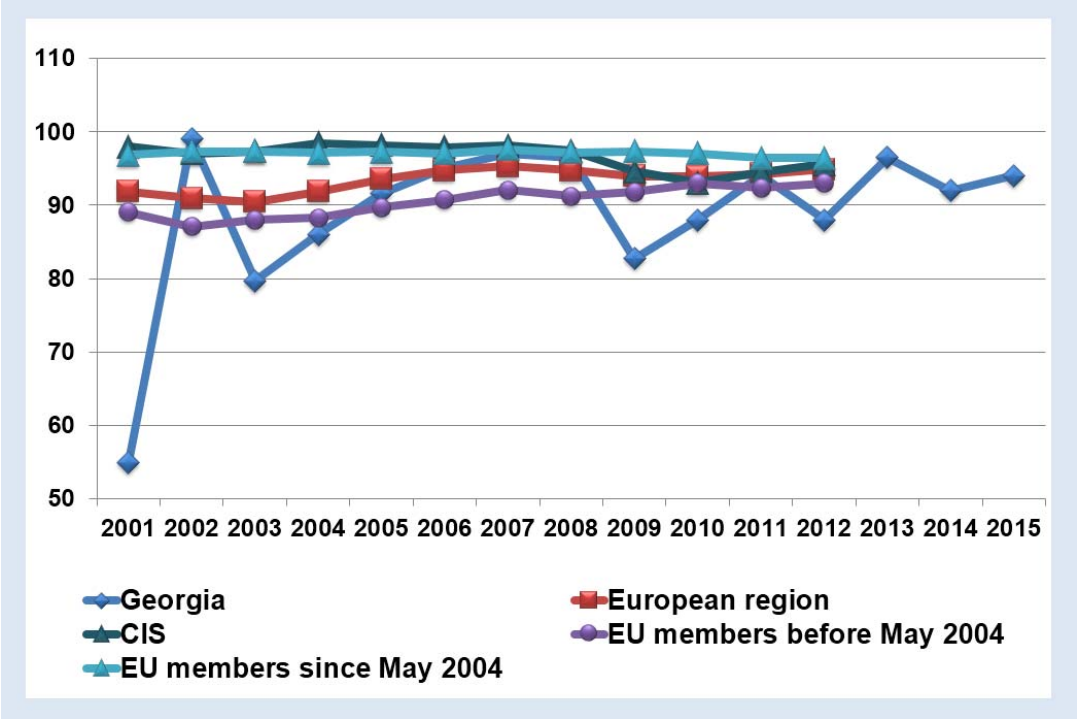
Source: NCDC

The recommendations of the World Health Organization and the European Centre for Disease Control to reduce measles morbidity and its elimination are as follows: achievement/maintenance of 95% coverage

of the population with two doses of vaccinations and the establishment of supervision for each case (including lab testing) are necessary for elimination of measles.

In Georgia, an increase of the coverage with immunization against measles has been registered over the last years, except for the year 2009. In 2009, the decrease can be explained by the longtime shortage of the vaccine in the country. In 2013, the coverage rate exceeded the recommended by the WHO level and made up 96.5%. In 2015, the coverage rate reached 94%.

Share of children (%) aged under-2, vaccinated against measles



Source: World Health Organization HFA DB

Since 2013, vaccinations against rotavirus gastroenteritis, and since October 30, 2014, against pneumococcal infection have been introduced.

Since December 2015, in the frame of the Global poliomielitis eradication, hexavalent vaccine has been introduced in the country. An action plan for transition from the trivalent oral polio vaccine to bivalent vaccine was set up.

Electronic information system Geovacc was updated due to inclusion of new vaccines in the national immunization calendar.

Noncommunicable diseases

Non-communicable diseases constitute the main burden of the world's population mortality and morbidity. Non-fatal outcomes of disease and injury increasingly detract from the ability of the world's population to live in full health. In 2015, non-communicable diseases (NCDs) accounted for 22 of the leading 25 causes of age-standardized YLDs worldwide.

Leading 25 causes of global years lived with disability (YLDs) for both sexes combined, 2015, with median percentage change (between 2010 and 2015) in all-age and age-standardized rates

Leading causes 2015	All-age median % change 2005-2015	Age-standardized median % change 2005-2015
Low back and neck pain	18.6% (17.6-19.6%)	-2.1% (-2.6 - (-1.4%)
Sense organ diseases	24.2%(23.2% -25.3%)	0.7% (0.1-1.3%)
Depressive disorders	18.2% (17.2-19.2%)	1.0% (0.5 -1.5%)
Skin diseases	11.7% (11.2-12.4%)	0.4% (01-08%)
Iron-deficiency anemia	-7.2% (-8.0 –(-6.3%)	-14.5% (-15.1- (-13.7)
Diabetes	33.3% (30.9-30.6%)	6.1% (4.1- 8.2%)
Migraine	15.3% (14.0-16.7%)	0.8% (-0.2 - 1.8%)
Other musculoskeletal diseases	20.5% (17.3-23.8%)	1.2% (-1.1-3.8%)
Anxiety disorders	14.8% (12.8-16.6%)	1.0% (-0.4 - 2.3%)
Other neonatal diseases	10.7% (-54.8 -195.6%)	-1.8% (-60.1-161.7%)
Oral disorders	22.4% (21.6 -23.1%)	-0.2% (-0.5 - 0.1)
Asthma	9.3% (7.4-11.4%)	-2.4% (-4.2- (-0.3%)
Schizophrenia	19.5% (18.5-20.5%)	0.2% (-0.4 - 0.9%)
Osteoarthritis	34.7% (33.6-35.9%)	3.9% (3.0 - 4.8%)
COPD	16.1% (13.4 – 18.7%)	-5.9% (-8.0 - (-4.0%)
Falls	11.2% (6.6 -15.6%)	-8.7% (-12.2 - (-5.2%)
Other cardiovascular diseases	33.0% (32 -34.1%)	1.8% (1.2 – 2.4%)
Autistic spectrum	12.3% (11.9- 12.7%)	0.5% (0.2 - 0.9%)
Drug use disorders	23.6% (21.5 - 25.9%)	8.2% (6.3 – 10.0%)
Other mental and substance use disorders	18.8% (17.7 – 19.8%)	0.3% (-0.5 – 1.2%)
Gynecological diseases	10.3% (9.0 – 11.7%)	-3.7% (-4.7 – (-2.8%)
Medication headache	18.9% (15.2 – 22.7%)	0.5% (-2.3 – 3.5%)
Bipolar disorder	14.9% (13.9 – 15.9%)	0.5% (-0.0 – 1.0%)
Hemoglobinopathies	7.7% (7.1 – 8.4%)	-1.4% (-1.9 – (-1.0%)
Cerebrovascular disease	23.0% (22.0 – 24.0%)	-4.7% (-5.4 – (-3.9%)

Noncommunicable diseases (NCDs) kill 38 mln people each year. Almost three quarters of NCD deaths - 28 mln - occur in low- and middle-income countries. Sixteen mln NCD deaths occur before the age of 70; 82% of these "premature" deaths occurred in low- and middle-income countries.

In Georgia, 94% of mortality are caused by noncommunicable diseases, 3% by injuries. In 2013, these led to development of the prevention and control strategies and action plans on hypertension, cancer, diabetes, chronic lung disease, obesity, healthy food promotion, violence, injuries, alcohol, tobacco, and salt.

Diseases of the circulatory system

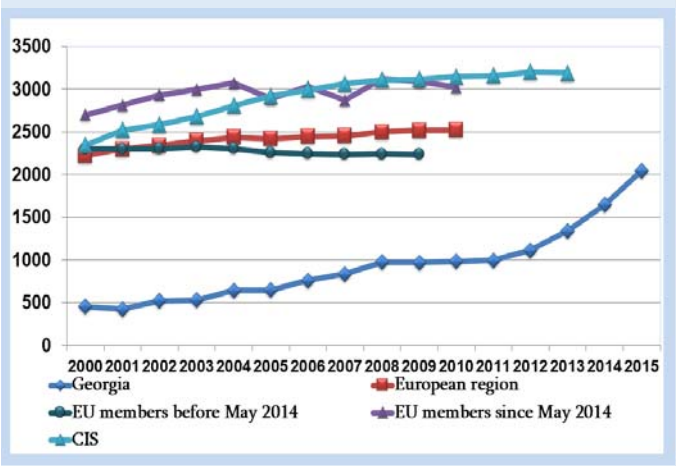
Diseases of the circulatory system constitute 15.5% of all registered cases of diseases in the country, and 8.6% of all new cases. High morbidity and mortality rates are specific for such diseases as hypertension, ischaemic heart diseases and cerebrovascular diseases.

In 2000 - 2015, prevalence of diseases of the circulatory system in Georgia has followed the upward trend.

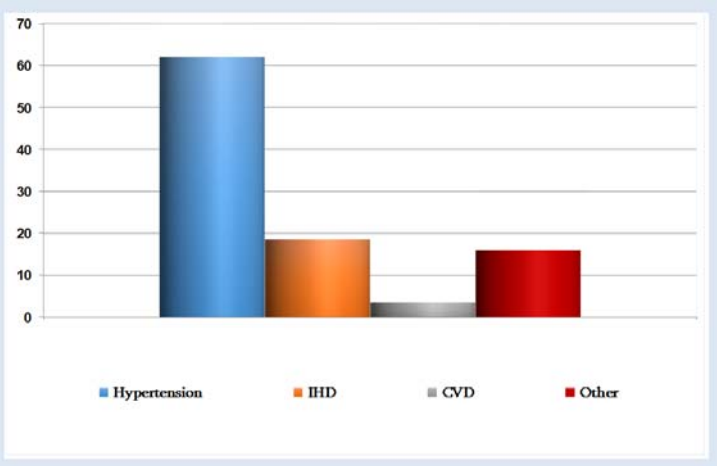
Hypertension

The share of hypertension in Georgia constitutes about 62% of the cardiovascular diseases structure (2015). In 2010, the NCDC with support of the WHO and EU conducted the first large-scale survey on the noncommunicable diseases risk-factors (STEPS-2010). According to surveys data, about 34% of the population suffers from either developed, or potential hypertension.

Diseases of the circulatory system, hospital admissions per 100000 population



Diseases of the circulatory system, structure (%), Georgia, 2015



Source: NCDC; World Health Organization HFA DB

Ischaemic heart diseases

Ischaemic heart diseases constitute about 18% of all diseases of the circulatory system: angina pectoris – 6.8%; acute myocardial infarction – 1.0%, other acute ischaemic diseases – 1.6%.

In 2015, 55.8% of patients with acute myocardial infarction were admitted to hospital timely (within the first 24 hours from the onset of symptoms).

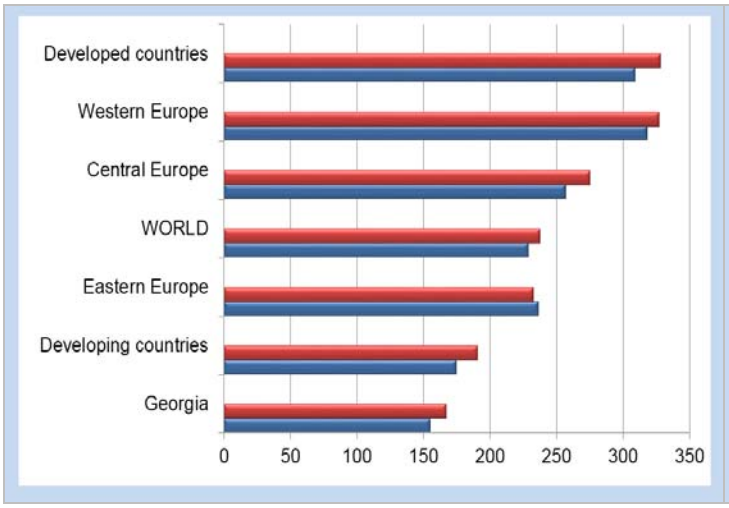
Cerebrovascular diseases

Cerebrovascular diseases occupied the third place among diseases of the circulatory system. Over the past years the cerebrovascular diseases prevalence rate has followed an upward trend.

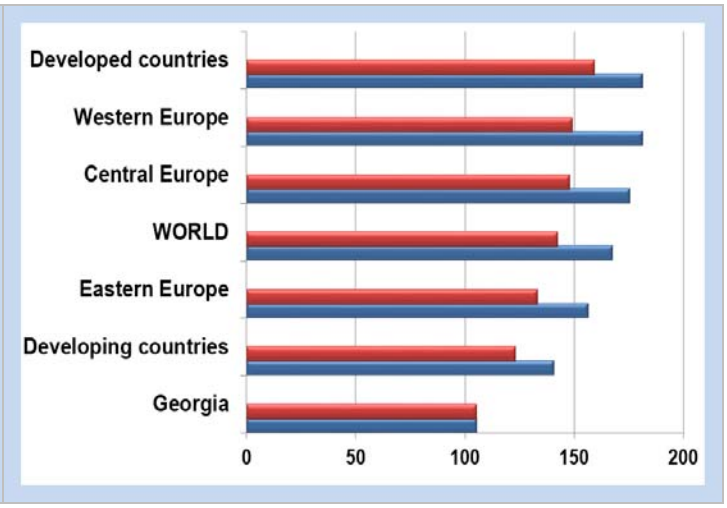
Malignant neoplasms

The Institute for Health Metrics and Evaluation at the University of Washington pays special attention to the estimates of the morbidity and mortality caused by malignant neoplasms.

Malignant neoplasms, age-specific incidence per 100000 population, 2013



Malignant neoplasms, age-specific mortality rate per 100000 population, 2013



Source: IHME, 2015

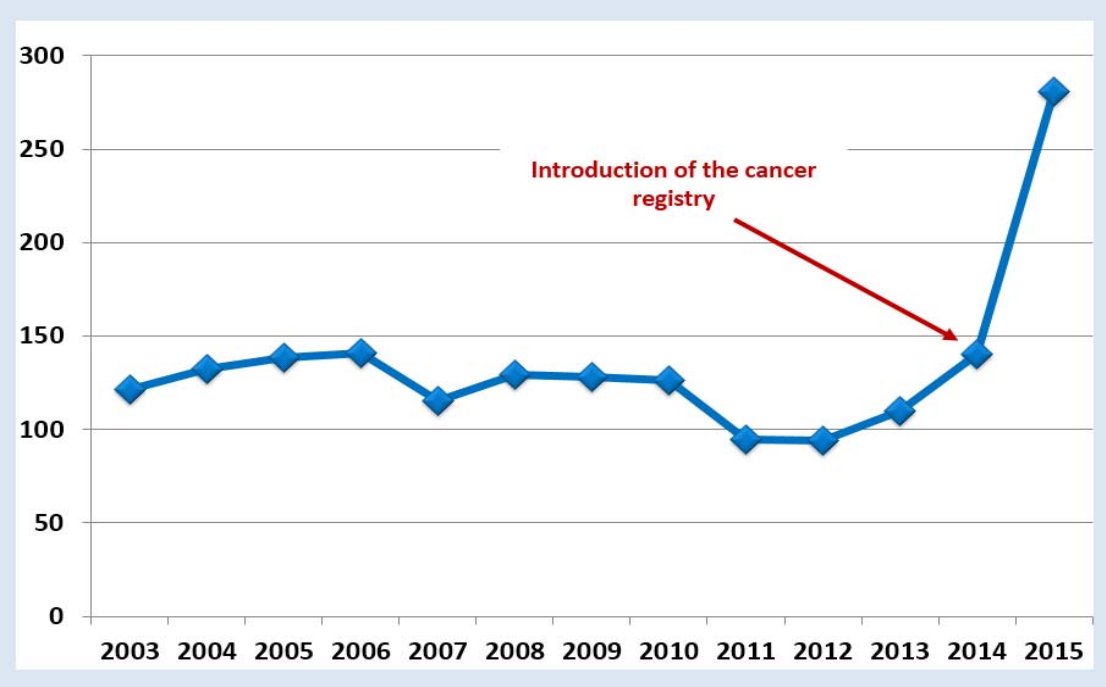
The collapse of the dispensary registration system caused a lack of statistical data on malignant neoplasms, and deterioration of the cancer morbidity. Due to the above, the incidence and mortality rates of malignant neoplasms in Georgia was significantly lower than in the CIS and European countries.

Since January 1, 2015, Georgia started implementation of the Cancer Population Registry (CPR), in order to improve the epidemiological surveillance of cancer. In 2015, according to the CPR data, there were registered 10506 new cases of malignant neoplasms, including non-melanoma skin cancers and cancers in situ. According to recommendations of the International Agency for Research on Cancer (IARC) [2], all cancer cases except non-melanoma skin cancers and cancers in situ, must be used for statistical calculations. In 2015, this number constitutes 9598 cases. The incidence rate is 258.2 per 100000 population; this is close to the IARC estimates.

	GLOBOCAN 2012		NCDC
Georgia	**2012**	**2014**	**2015 (registry)**
Number of the mid-year population	4 304 000	3 727 100	3 717 100
Number of the new cases	12 400	5 229	9 598
Incidence per 100000 population	288.1	140.1	258.2

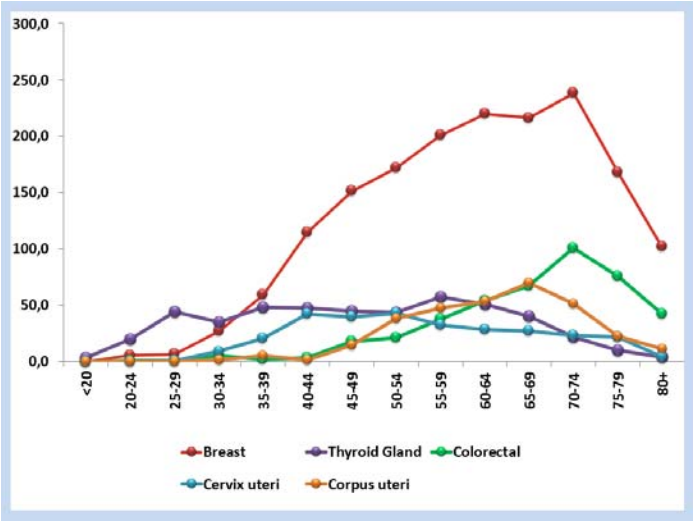
[2] *http://globocan.iarc.fr/Pages/cancer.aspx*

Malignant neoplasms, incidence per 100000 population

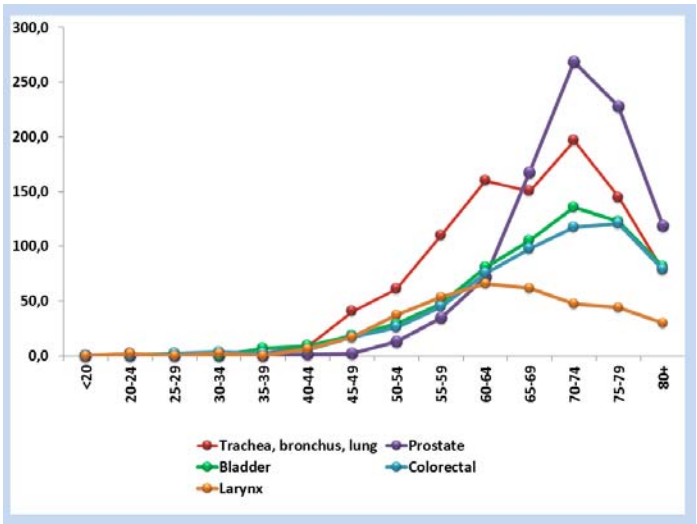


Source: NCDC

Top cancer sites, age specific rates, females, 2015



Top cancer sites, age specific rates, males, 2015



Source: NCDC, Cancer population registry

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 screening for 50-70-year-old men;
- Colorectal cancer screening for 50-70-year-old population.

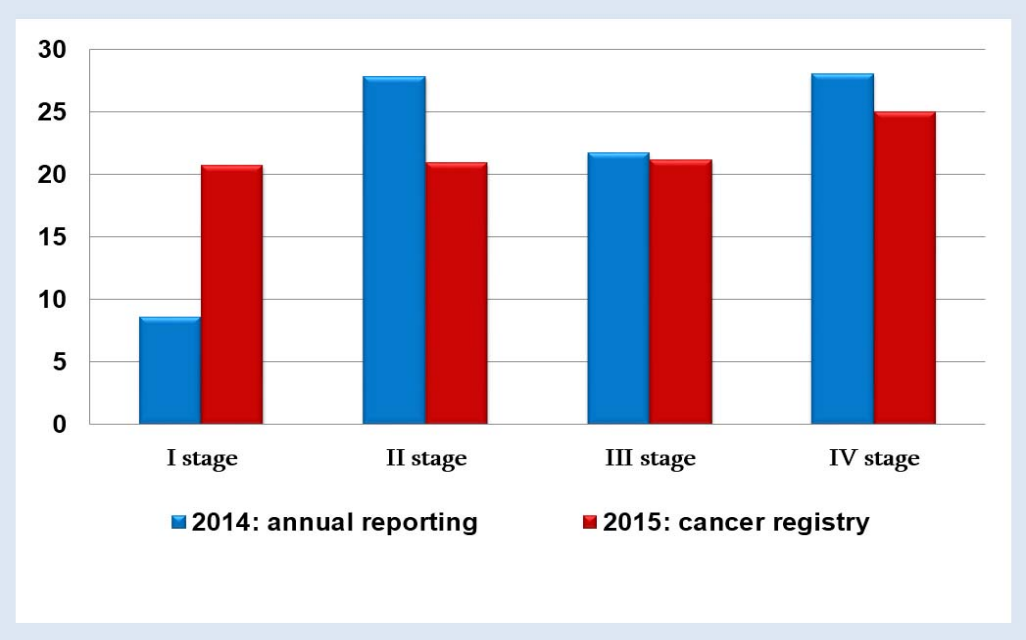
Number of tests performed in the frame of cancer screening programs

Site	2012	2013	2014	2015
Breast	17576	20121	21865	21511
Cervix	27374	26111	23532	25005
Prostate	3424	5900	6178	9768
Colon	4691	6025	6417	6490

Source: NCDC

Last period among the new cases a share of the cases, diagnosed at early stages (I and II), increased, consequently the share of the late cases (III and IV) decreased. In 2015, the share of cancers diagnosed at the I and II stages constitutes 39%. Although, the share of cases diagnosed at III and IV stage is high (50%).

New cases of cancer by stages (%), Georgia



Source: NCDC

Diabetes melitus

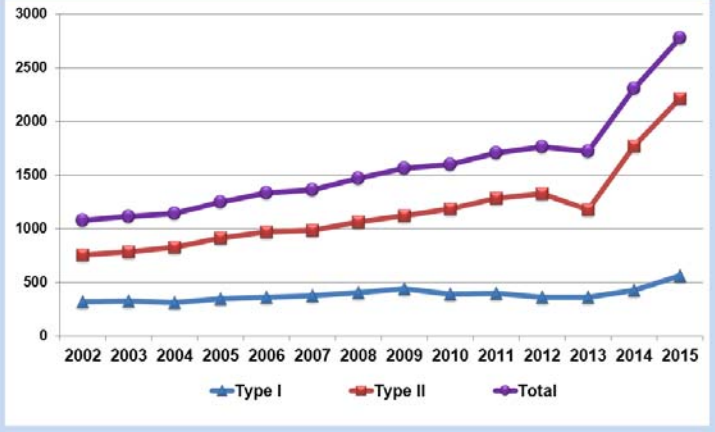
- Diabetes increases at least two-fold a risk of heart disease and stroke.
- People with diabetes need 2-3 times more health care resources, compared to people without diabetes.
- Diabetes in pregnancy linked to life-threatening complications, and adverse pregnancy outcomes.

In recent years an upward trend of diabetes mellitus has been registered. In 2015, 4.2% of cases of insulin-dependent diabetes (type I) were registered in children.

Risk-factors for diabetes development:

- malnutrition
- obesity
- tobacco consumption
- overuse of alcohol
- hypertension
- intolerance toward glucose
- stress
- immunity imparment

Diabetes mellitus, prevalence by type, Georgia



Source: NCDC

Chronic obstructive pulmonary diseases (COPD)

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 2015, chronic obstructive pulmonary diseases (COPD) contributed 70.1% of all registered cases of lower respiratory diseases.

Tobacco smoke (including passive smoking) is the main cause of chronic pulmonary diseases. Air contamination in buildings, atmosphere air pollution, occupational dust and chemicals also constitute risk factors.

Risk-factors

Georgia, according to the World Health Organization, is one of the countries with the highest level of tobacco consumption in the European region and the world. In Georgia, 55% of males and 5% of females are smokers. Meanwhile, the level of alcohol consumption in Georgia is not considered problematic. According to the Hepatitis C survey (CDC/Atlanta, CDC-FETP, NCDC, 2015), the share of daily smokers is 27.1% (in males – 51.7%; in females – 6.0%).

In 2014, a Global Youth Tobacco Survey (GYTS) was conducted under the aegis of the WHO. According to this survey:

- 42% of respondents are under the second-hand tobacco smoking at home;
- 55% of respondents are affected by the second-hand tobacco smoke in the public space;
- 77% of respondents buy cigarettes at the stores, from outside vendors or in kiosks;
- 60% of respondents have seen anti-tobacco messages in the media;
- 50% of respondents have seen tobacco advertisments or promotions in the sale areas;
- 70% of respondents think that the second-hand smoking is harmful for health;
- 79% of respondents support ban of indoor smoking in public places.

In 2015, the European School Survey ESPAD 2015 EMCDDA, NCDC was conducted to study alcohol, tobacco and other drug use. According to the survey data:

- 21% of respondents had tried smoking at the age of 13 years or younger (28% of boys and 13% of girls); 4% started daily smoking (6% of boys and 2% of girls);
- 19% of students (25% of boys and 11% of girls) had ever smoked e-cigarette; 9% of respondents (13% of boys and 4% of girls) had smoked e-cigarette within last 30 days;
- 33% of the students (43% of boys and 21% of girls) had ever smoked hookah; 14% of them (22% for girls and 6%) had smoked hookah within last 30 days;
- for 60% of students it is easy to get cigarettes;
- 4% of the students (5% of boys and 2% of girls) had tried smoking e-cigarette at the age of 13 years or younger and 1% started daily smoking (2% of boys and no girls).

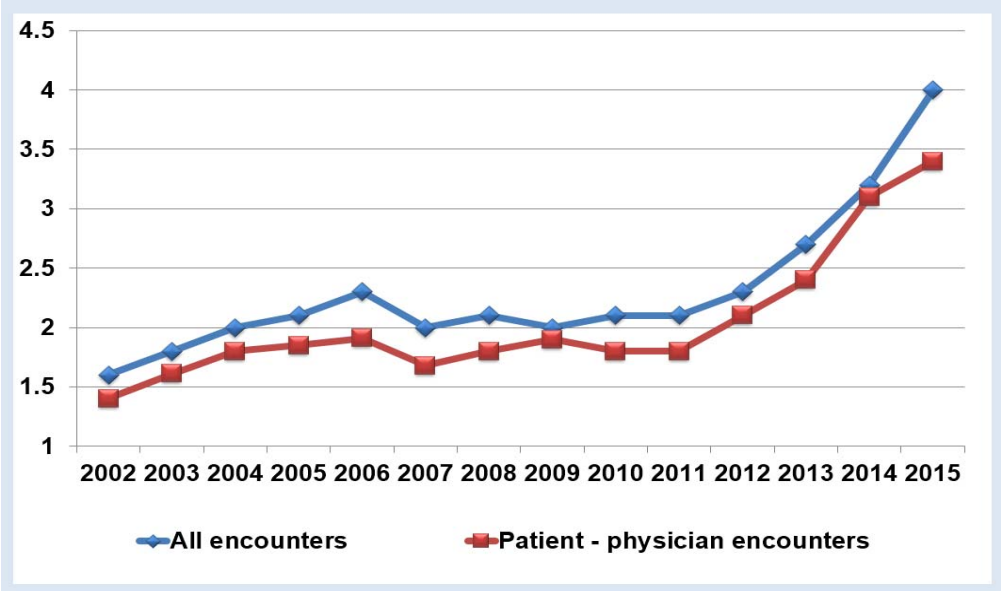
Health care resources

Health care resources, Georgia, 2015			
Physicians	24307	In-patient facilities	271
Number per 100000 population	653.9	Polyclinics	367
Nurses	16374	Antenatal care centers	268
Number per 100000 population	440.5	Ambulance stations	78
Number of hospital beds	12830	Blood transfusion facilities	18
Number per 100000 population	345.2	Nurseries for infants	1
Encounters with physicians	14696719	Scientific research institutes	9
Home visits of physicians	471020	Rural physician-entrepreneurs	1270

Source: NCDC

According to the WHO latest available data, the average number of out-patient encounters in the European Region constitutes about 6 per capita. In Georgia, during last 2 decades, this indicator did not exceed 2.2. In frame of the UHC programme, due to increased accessibility of health services, the number of out- and in-patient encounters continued to grow. In 2015, the number of contacts with out-patient facilities per capita reached to 4.0.

Annual number of out-patient encounters per capita, Georiga



Source: NCDC

In 2015, the number of surgical operations increased by 20.5%, compared to the previous year. The number of heart surgeries increased by 32.8%. Eye surgeris numbers increased by 35%.

In 2015, 4% of the elective heart surgeries were due to congenital anomalies. Endovascular balloon dilatation was conducted in 0.8%, implanting of pacemakers - in 3.3%, coronary artery angioplasty in 47.7%. Invasive electrophysiology and ablation method was used in 168 cases.

The number of the hip and knee joint replacements, which is one indicator of the welfare of the population, increased by 45%, compared to the previous year.

The ambulance system is providing free emergency medical care for the population. In 2015, the ambulance services completed 1452857 emergency calls; this 0.4 call per capita.

Within the Safe Blood Program 83394 donations were collected, of which about 38% were free of charge.

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 good 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.

Since 2013, the Government of Georgia has laid the foundation for public health and welfare oriented health policy and in February 2013, enacting universal health care program initiated the universal state-funded medical care. More than 90% of the population is the universal health care program beneficiary, while the rest have private medical insurance.

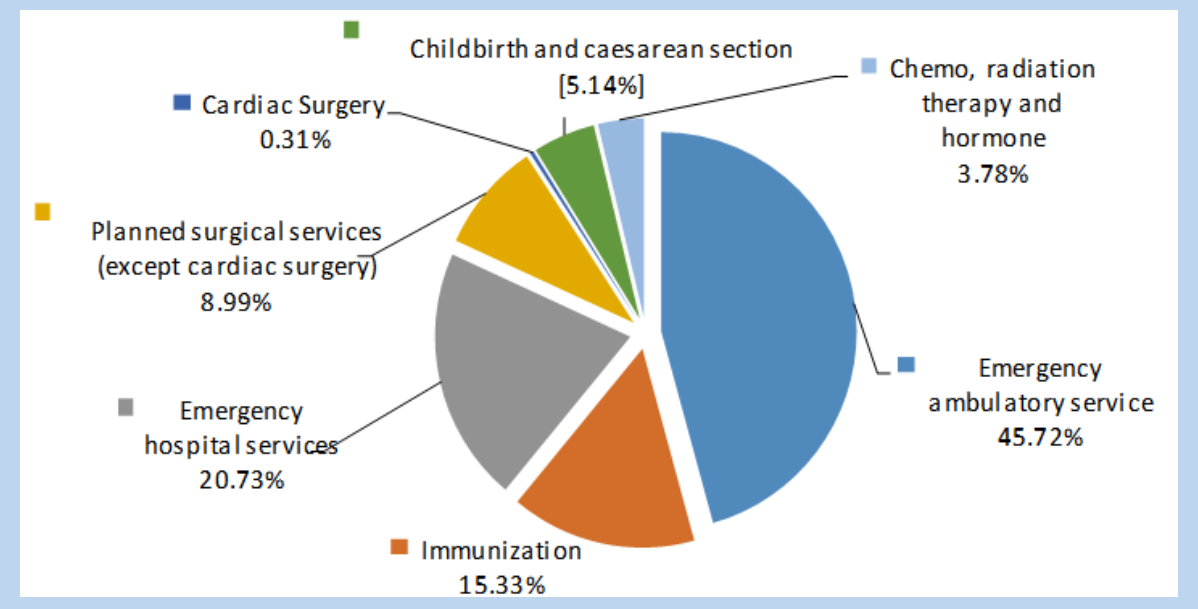
The program covers planned out-patient, emergency in- and out-patient services, elective surgery, cancer treatment and obstetrical care. The program also includes funding for essential drugs the target groups of the population. 2669541 reported cases were covered by universal health care program since February 2013 till July 2016.

The Universal Health Care reform has provided growth in access to health services and reduced financial barriers and out of pocket costs of the population (76% in 2012, 65% in 2014), it also increased financial security.

Increased financial protection of population against catastrophic health expenditures is confirmed by international organizations such as the World Health Organization, the World Bank and the US Agency for International Development. According USAID survey, 96.4% of beneficiaries the universal health care program are satisfied or very satisfied with emergency medical services at hospital level.

The government continues to carry out strategic reforms in health care sector. Main goals of this reforms are: to insure universal access of population to high quality medical services, improvement of primary health care system and to decrease the negative financing impact due to catastrophic health expenditures.

Distribution of recorded cases in Universal Healthcare Program (2013-2016 years to six months)



Source: Ministry of Labour, Health and Social Affairs

Healthcare expenditures

Financing is one of the four main functions of the health care system, on which the health status of the population, improvement of social welfare and guaranteed and equal access to medical services and as a result, customer's satisfaction growth depends.

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

Since 2013, the government of Georgia has laid the foundation for public health and welfare oriented health policy, the volume of state spendind, allocated to the health sector, has increased unprecedently in recent years (450 mln GEL in 2012, 900 mln in 2015 GEL). At the same time, the share of total public health expenditure on health care costs is growing (21% in 2012, 28% in 2014).

The share of out of pocket payments has decreased in receint years (73% in 2012, 66% in 2014), which is determined by the improved access to health services and significant growth in out- and in-patien services utilization.

In 2014 the total costs on health care per person dramatically increased, that can be explained by significant decrease of the population, according to the census 2014 and by increased state funding on healthcare as well.

In 2012-2014 healthcare expenditures according to the source of financing are distributed as follows: public health expenditures (21-28%), private expenditures on health (77-70%), international aid for health care (2-3%).

In 2013-2014 years, hospital care costs are growing slightly. For the first time in 2014, the share of state funding on hospital care (55%) exceeded out of pocket payments (45%), that can be defined as a one more important achievement of the Universal Healthcare Program and an important benefit for the population with limited consumer basket.

Since 2013, gradually declining of the share of spending on drugs is detected (47% in 2012, 43% in 2014), as a result of universal access of the population to healthcare services, reducing the self-treatment and establishment of drug recipe. The highest pharmaceutical costs among European region countries are fixed in Republic of Moldova, Georgia and Hungary.

	2012	2013	2014
GDP, mln GEL	26 167.3	26 847.4	29 150.5
The total health care costs, mln GEL	2 190.5	2 254.3	2 460.2
The total health expenditure share of GDP (%)	8.4%	8.5%	8.5%
State spending on health care, mln GEL	450.3	547.9	693.2
The share of total public health expenditure on health care costs (%)	20.6%	24.3%	28.2%
The share of public health spending of GDP (%)	1.7%	2.0%	2.4%
The share of public expenditures on health care from the state budget (%)	5.3%	6.3%	7.2%
Private spending on health care, mln GEL	1 689.7	1 655.5	1 720.4
The share of total spending on health care from private expenditures on health (%)	77.1%	73.4%	69.9%

Direct health care, out of pocket payments, mln GEL	1 608. 8	1 557.0	1 623.4
International aid for health care, mln GEL	50.5	50.9	46.5
International aid for health care share of health care costs to the total (%)	2.3%	2.3%	1.9%
Total costs on health care per person, GEL	488	502	660
Total costs on health care per person, USD	295	302	374
Total costs on health care per person, USD	571	601	772
Public health expenditure per capita, GEl	100	122	186
Public health expenditure per capita, USD	61	73	105
Public health expenditure per capita in international dollars	117	146	218
Private expenditure on health care per person, GEL	376	369	462
Private expenditure on health per capita, USD	228	222	261
Private expenditure on health per capita, international dollars	440	441	540
International aid for health care per person, GEL	11	11	12
International aid for health care per person, USD	7	7	7
International aid per person on health care, international dollars	13	14	15

Prepared by the National Centre for Disease Control and Public Health of the Ministry of Labour, Health and Social Affairs of Georgia.

The methodology of the calculation, recommended by the WHO and the UNO is applied to the calculation of the indicators given in the publication.

The publication provides Millennium Development indicators for Georgia, describes population health status, maternal and child health, and main indicators of the health care resources.

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