GALT & TAGGART
RESEARCH

Georgia's Healthcare Sector

The First Wealth is Health

Georgia | Healthcare | Healthcare Equipment and Services
Industry Overview
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"The first wealth is health." - Ralph Waldo Emerson

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Terms and Definitions

CD - Communicable disease - An infectious disease transmissible (from person to person) by direct contact with an affected individual or the individual's discharges or by indirect means

Chronic disease - A long-lasting disease that can be controlled but not cured

Inpatient - A patient who stays for one or more nights in a hospital for treatment

The definition of an inpatient in Georgia differs from the definition given above - a patient who spends more than 24 hours in a hospital

GDP - Gross Domestic Product

GeoStat - National Statistics Office of Georgia

GP - General practitioner - A physician whose practice is not oriented on a medical specialty but covers a variety of medical problems in patients of all ages. Also called a family doctor

GPW - Gross Premium Written - The total premium on policies issued by an insurance company in a period of time

MoLHSA - Ministry of Labor, Health, and Social Affairs of Georgia

NCD - Non-Communicable disease - A disease which is not passed from person to person. It is long in duration and generally progresses slowly

NCDC - National Center for Disease Control of Georgia

OECD - Organisation for Economic Co-Operation and Development

Outpatient - A patient who visits a physician's office or hospital for treatment but does not spend the night

The definition of an outpatient in Georgia differs from the definition given above - a patient who spends less than 24 hours in a hospital

Peer group - The peer group is determined by Galt & Taggart Research and is mostly the same throughout the report

PPP - Purchasing Power Parity

Primary care - Medical care provided by a primary care physician (general practitioner or family doctor), a nurse practitioner (adult-gerontology nurse practitioner, family nurse practitioner, or paediatric nurse practitioner), or a physician assistant, who acts as the first contact and principal point of continuing care for patients, and coordinates other specialist care that the patient may need

Secondary care - Medical care provided by a specialist or facility upon referral by a primary care physician or nurse practitioner, which requires more specialized knowledge, skills, or equipment than at the primary care physician’s disposal

Tertiary care - Medical care that involves advanced and complex procedures and treatments

UHC - Universal Healthcare

USAID - The United States Agency for International Development

WB - The World Bank

WHO - The World Health Organization

Executive Summary

Over the last 13 years, Georgia's healthcare system has undergone effective reforms, which have improved health indicators and narrowed the gap between Georgian and European standards.

After Georgia regained independence in 1991, private spending became the major source of healthcare financing, as annual public per capita funding slumped to US$ 0.5 from US$ 149 in 1990. In 2002, healthcare spending per capita stood at US$ 64 and over 2002-13 it surged to US$ 350. The 5.5x growth came in ahead of the 4.6x growth rate of GDP per capita from US$ 779 to US$ 3,597 over the same period.

A new direction was set in 2003, aimed at liberalizing healthcare policy and boosting competitiveness through major changes including but not limited to easing regulations and letting private companies enter the market. In 2007, the government designed a plan to privatize the hospital sector. In the same year, the state introduced public health insurance for the neediest (21.3% of the population) and started to purchase private health insurance packages for beneficiaries. This led to a boom in the health insurance market as insurers competed for public funds. Pure private health insurance grew around 10x over the last few years to more than 0.5mn beneficiaries as of end-2014. After the hospital development plan was adjusted in 2010 to combine hospital operation and provision of health insurance, the government backed private insurers to become investors and operators. In 2012, the public insurance scope was expanded to include 41.1% of the population. By end-2014, private companies owned 84.3% of all hospital beds and health insurance generated US$ 74.1mn in gross premiums written, or 43.2% of the total insurance market.

In 2013, the Georgian government introduced a universal healthcare (UHC) system for the entire population. The reform diminished the role of insurance companies as government funds flowed directly to healthcare providers. The multistage reforms generated results and as of end-2013, up to 150 new hospitals had been built and opened for operation. The new hospital owners also invested in renovating facilities, equipping them with up-to-date equipment and improving human resources. Renewed hospital infrastructure combined with UHC improved accessibility of care as well as patient satisfaction, with 96.4% of patients satisfied by UHC.

Health indicators improved significantly as infrastructure improvements, increased public healthcare spending, and GDP growth resulted in better access to healthcare. Generally, the efficiency of a country's health system is the key to success and we see a number of related opportunities for Georgia: 1) A relative oversupply of physicians and undersupply of nurses increase costs as relatively higher-paid physicians share nursing duties, meaning their qualifications are used inefficiently; 2) Insufficiently developed outpatient/primary care facilities; improvements can help prevent chronic diseases and lower out-of-pocket costs, a large portion of which (approx. 40%) are spent on drugs for self-treatment; 3) Renewed hospital infrastructure can lead to better cost control; and 4) Insufficient technology can be addressed with consolidation in the sector to open up more investment opportunities. Keeping in mind the fragmentation of Georgia's hospital and outpatient facilities, consolidation should help capture economies of scale/scope, improve technology, and control costs.

All in all, several tides of health reforms, backed by strong political support, fostered a competitive environment in the healthcare sector by attracting private companies. The latter made considerable investments in the sector, which, combined with the MoLHSA's liberalization policy and increased government healthcare spending, create room for sustained growth in Georgia's healthcare sector.

Healthcare: Comparing Georgia

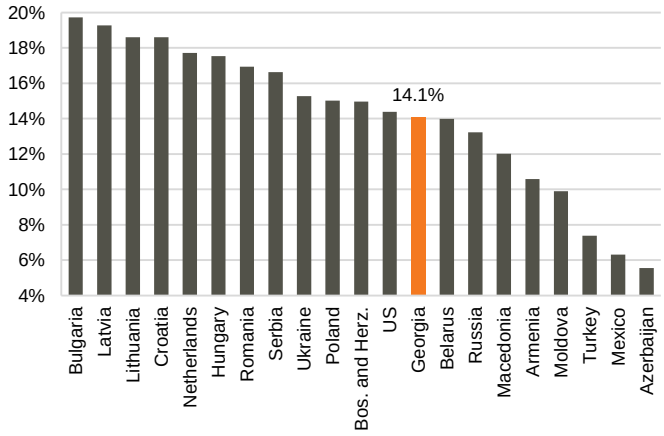
Every government in the world faces 5 major healthcare issues: aging population, chronic diseases, access to care, costs, and technology. The issues of the healthcare sector are global, even though care is usually delivered locally. And while the effects of these issues are influenced by local factors, many challenges are shared around the world to varying degrees, as are the opportunities to solve them. In addition, these challenges can push stakeholders to innovate and to generate scientific, medical, and healthcare delivery breakthroughs.

Aging Population

An aging population is a serious global challenge that burdens healthcare systems. The global population aged 60 or above has tripled over the last 50 years and is expected to more than triple again to nearly 2bn[1] by 2050, according to Deloitte. In addition, the current annual growth rate for the older demographic of 1.9% is well above that of the overall population at 1.2%. According to the UN, by 2060, for every 100 people of working age, there will be 30 people who are 65 or older. That is more than double the ratio today. Due to relatively low birth rates, the age wave is expected to be more acute in developed countries, increasing health costs dramatically.

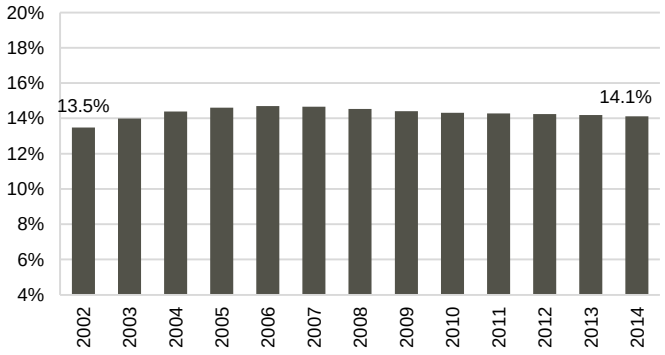
The 65 and older age group accounts for 14.1% of Georgia's population and the share is expected to grow further in the long run. That share is well above the global average of 8.1%,[2] but in line with peer countries. It came down somewhat since 2006 on the back of an increase in the birth rate.

Figure 1: 65 and older as a % of the population, 2014



Source: WB

Figure 2: 65 and older as a % of the population in Georgia

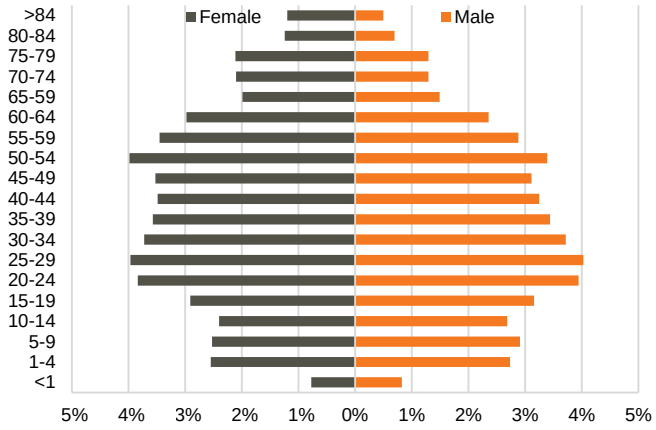


Source: WB

[1] Compared to 1.2bn in 2025, 0.6bn in 2000, 0.4bn in 1975, and 0.2bn in 1950

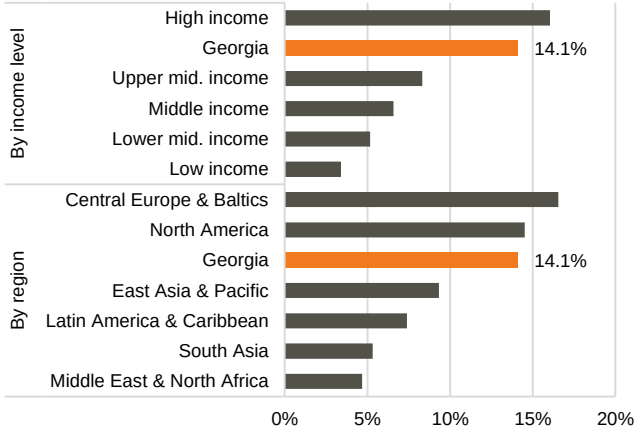
[2] The share (of the 65 and older age group in global population) was 7.6% in 2010, 7.3% in 2006 and 7.0% in 2002

Figure 3: Georgia's population pyramid, 2014



Note: Based on the preliminary results of the 2015 census, according to which Georgia's total population was 3.7mn people
Source: WB

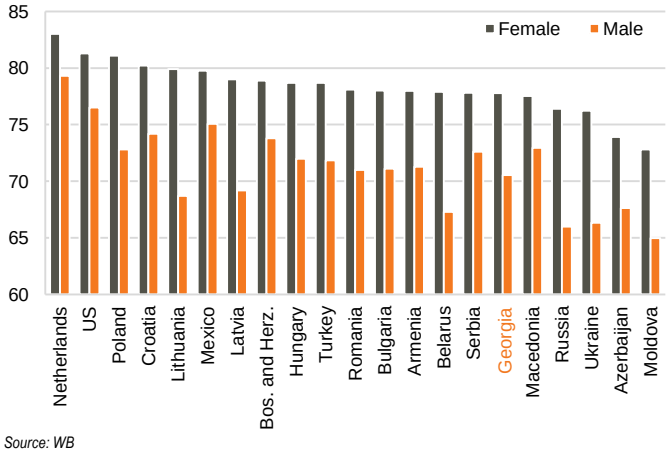
Figure 4: 65 and older as a % of the population, 2014



Source: WB

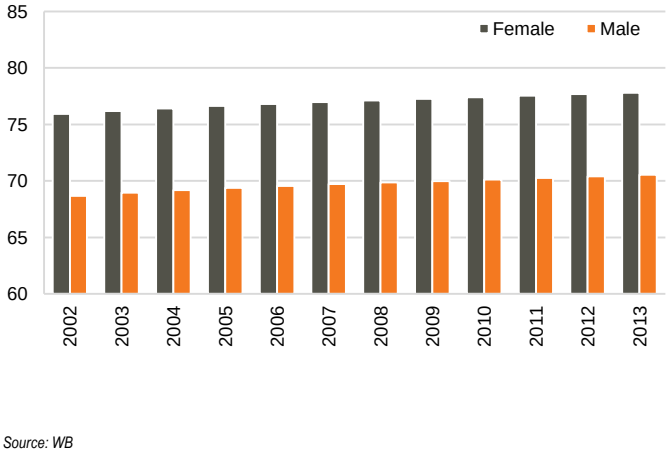
As of 2013, life expectancy in Georgia stood at 77.8 years for females and 70.5 for males,[3] up from 75.9 and 68.7 in 2002, respectively. The increases reflect an improvement in access to care, quality of care, and the population's welfare as a result of strong economic growth over 2002-13. GDP per capita increased 4.6x to US$ 3,597 (from US$ 779 in 2002, a 14.9% CAGR) and healthcare expenditure per capita increased 5.5x to US$ 350 (from US$ 64 in 2002, a 16.6% CAGR) over that period.

Figure 5: Life expectancy, years (2013)



Source: WB

Figure 6: Life expectancy in Georgia, years

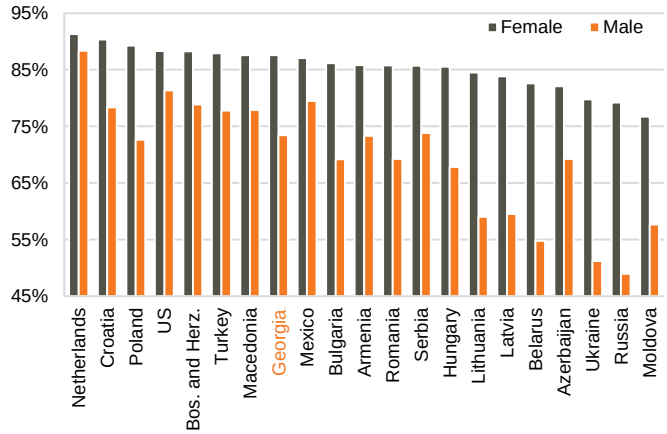


Source: WB

As of 2013, Georgia's female and male survival rates to age 65 of 87.6% and 73.5% were slightly higher than the peer averages of 85.5% and 69.6%, respectively. In 2002, the rates were at 85.4% and 70.6%, respectively.

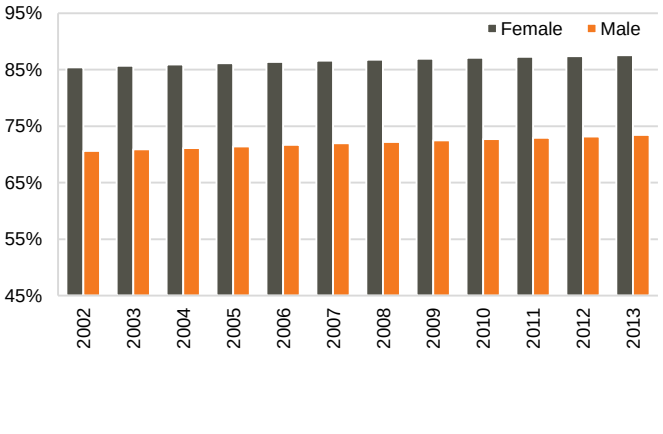
[3] According to WHO, women worldwide live an average 4 years longer than men (in Georgia, the difference was 7.3 years as of 2013)

Figure 7: Survival to age 65 as a % of the population, 2013



Note: Survival to age 65 - % of a cohort of new-born infants that would survive to age 65, if subject to current age specific mortality rates
Source: WB

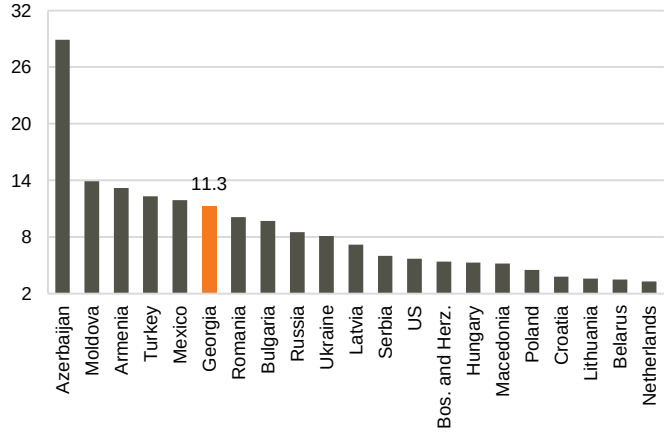
Figure 8: Survival to age 65 as a % of the population in Georgia



Note: Survival to age 65 - % of a cohort of new-born infants that would survive to age 65, if subject to current age specific mortality rates
Source: WB

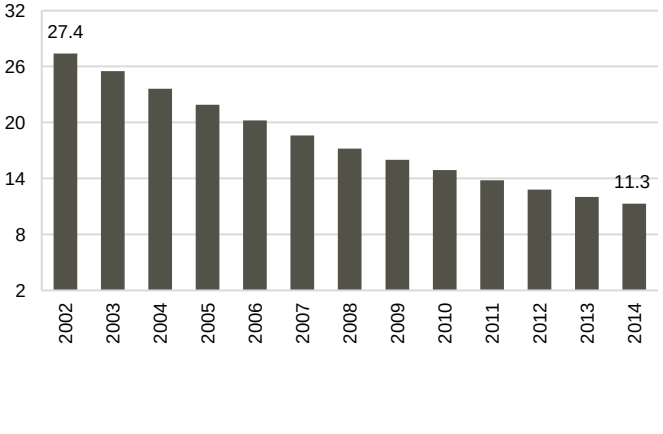
Georgia's infant mortality rate as of 2014 remains relatively high at 11.3 per 1,000 live births, although down significantly from 27.4 in 2002. This is compared to the peer average of 8.6 and the OECD average of 3.8 (2013). Given that 99.8% (2013) of births in Georgia are attended by health staff (comparative rates are 95.0% in Turkey as of 2009, 96.0% in Mexico as of 2012, and 100.0% in Belarus as of 2012), we reckon the high infant mortality rate can be attributed to insufficient technology, poor quality of primary care and reproductive health, and low awareness and number of regular check-ups (notably, the share of women receiving at least 4 antenatal[4] care visits has increased from 61.0% to 86.9% over 2002-14 and the share of women initiating antenatal care during the first trimester of pregnancy increased from 52.0% to 78.3% over 2002-14). The Ministry of Labor, Health, and Social Affairs of Georgia created a special council to study the causes of infant, neo-natal, and maternal mortality in 2013. Despite the lingering issues, Georgia's fertility rate improved over 2002-13 from 1.6 (peer average of 1.5) to 1.8 (peer average of 1.6) births per woman, ahead of peer countries.

Figure 9: Infant mortality per 1,000 live births, 2014



Source: WB

Figure 10: Infant mortality per 1,000 live births in Georgia

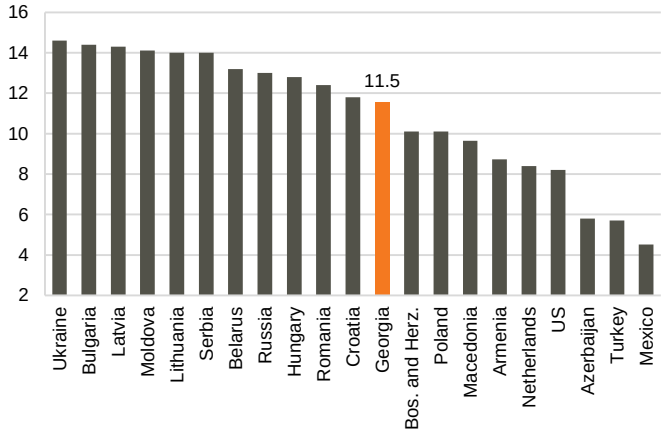


Source: WB

Georgia's death rate of 11.5 per 1,000 persons in 2013 (10.1 in 2002) is close to the peer average of 11.0 (10.8 in 2002). However, it has been increasing slowly over the last 10 years, mainly due to the aging population.

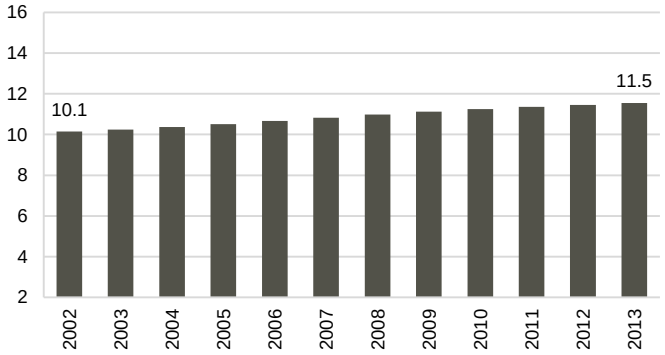
[4] Pre-birth

Figure 11: Death rate per 1,000 persons, 2013



Source: WB

Figure 12: Death rate per 1,000 persons in Georgia

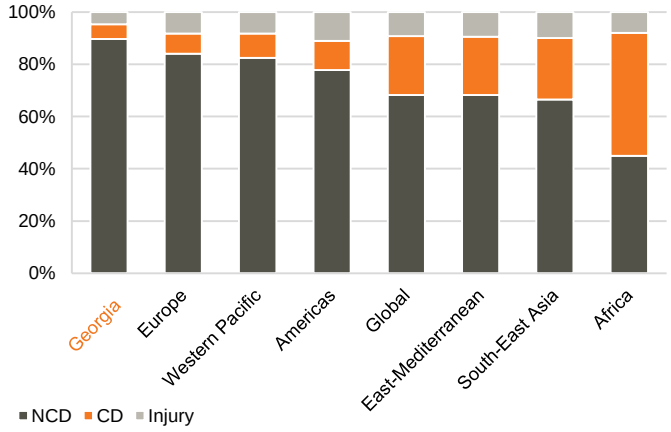


Source: WB

Chronic Diseases

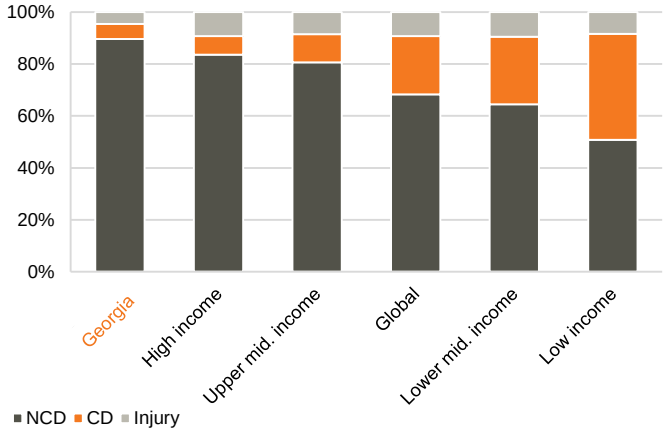
Chronic diseases are the leading cause of mortality globally, responsible for about 80% of deaths. Chronic diseases include heart disease, stroke, cancer,[5] chronic respiratory disease, and diabetes, all of which are common among the aging population. According to the WHO, about 30% of cancer-related deaths are due to 5 leading behavioural and dietary issues: a high body mass index,[6] insufficient consumption of fruits and vegetables, a lack of physical activity, and tobacco and alcohol use. Lung, liver, stomach, colorectal and breast cancers are the most frequent types of cancer, although prevalence levels differ between men and women. According to WHO, over the next 2 decades, the annual number of new cancer cases is expected to rise by about 70% to 22mn. In fact, the major causes of chronic diseases are known and at least 80% of all heart disease, stroke, and type 2 diabetes cases and over 40% of cancer cases could be prevented if diagnosed early.

Figure 13: Cause of mortality by region, 2012



Note: CD - Communicable Disease, NCD - Non-Communicable Disease
Source: WHO

Figure 14: Cause of mortality by income level, 2012



Note: CD - Communicable Disease, NCD - Non-Communicable Disease
Source: WHO

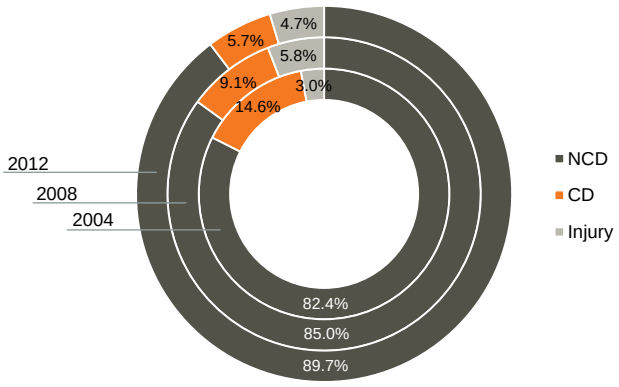
Georgia boasts the lowest mortality rate by CDs of 5.7% (22.5% globally in 2012) compared to global, regional, and income-level averages, despite having relatively low GDP per capita. Generally, real incomes and the share of CDs in mortality rates are inversely correlated - Georgia's real incomes grew 2.9x or a 14.1% CAGR over 2004-

[5] Cancer is one of the leading causes of death worldwide, with approximately 14mn new cases and 8.2mn cancer-related deaths in 2012

[6] A weight-to-height ratio, calculated by dividing one's weight in kilograms by the square of one's height in meters and used as an indicator of obesity or emaciation

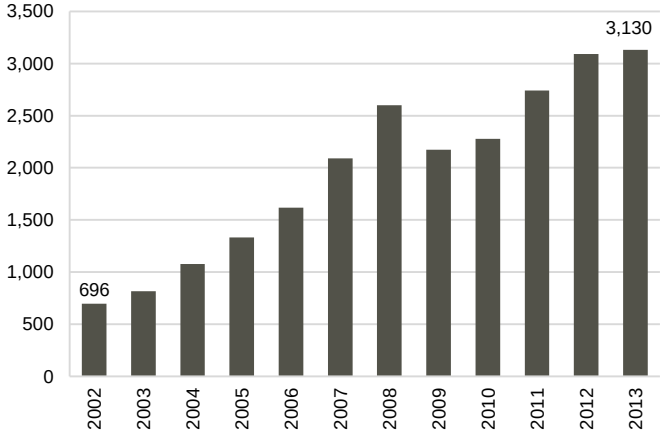
12 and the share of CDs decreased from 14.6% in 2004 to 5.7% in 2012. Georgia's share of CDs as a cause of mortality has historically been in line with that of developed countries, where NCDs are a more prevalent cause of mortality[7] as CDs are preventable in most cases.

Figure 15: Cause of mortality in Georgia



Source: WHO

Figure 16: Adjusted net national income per capita, US$

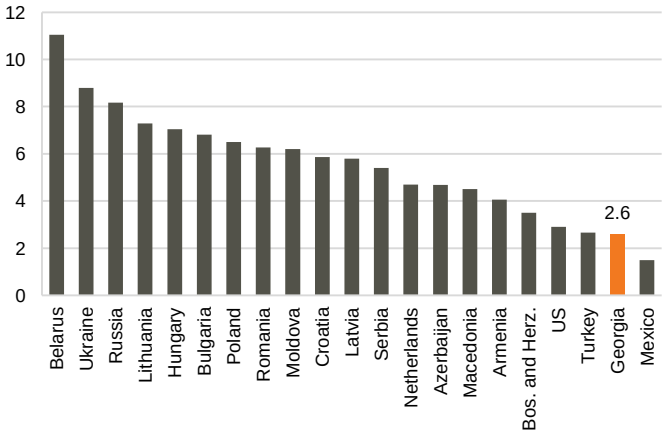


Source: WB

Access to Care

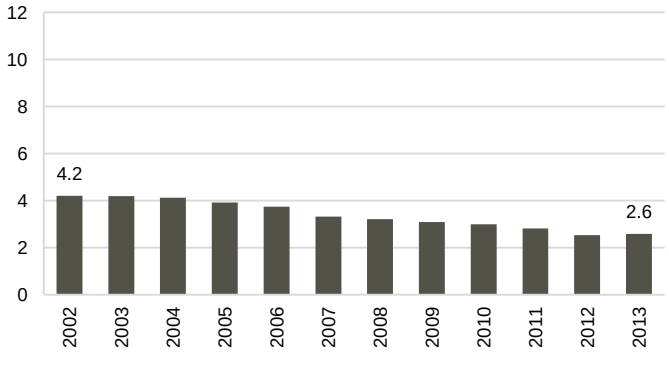
Globally, at least 1bn persons suffer from a lack of access to care. The number of hospital beds per 1,000 persons varies greatly, from 1.5 (2013) in Mexico to 11.0 (2013) in Belarus - a clear sign of the discrepancy in access to healthcare around the world. Over 2002-13, Georgia dramatically cut its excess stock of hospital beds, a Soviet legacy, from 4.2 to 2.6 per 1,000 persons. A major part of new hospital beds came from new hospitals and obsolete bed stock has been partly renovated and partly disposed of. The overstock, combined with a low bed occupancy rate of 35.7% (acute care[8] beds only, 2011), compared to the peer average of 69.4% and the OECD average of 78.2%, suggests a capacity underutilization, which could lead to inflated costs and poorer quality care.

Figure 17: Hospital beds per 1,000 persons, 2013



Note: Per latest available year. Due to the lack of consistent data, there is some variation in years
Source: WB, WHO

Figure 18: Hospital beds per 1,000 persons in Georgia



Source: WB, WHO

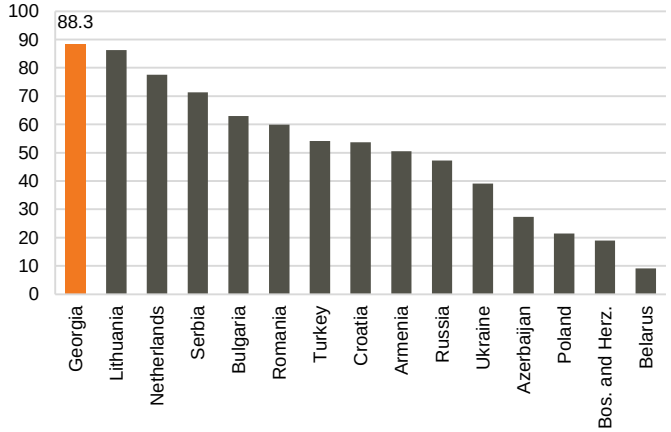
Georgia has 88.3 general practitioners (GP) per 100,000 persons, the 3rd most in Europe and the most among peers (average of 51.2). However, the number is

[7] Chronic diseases accounted for over 86% of deaths in the EU and 70-80% of healthcare costs are spent on chronic care, amounting to US$ 900bn as of 2012

[8] Short-term medical treatment, usually in a hospital, for patients having an acute illness or injury or recovering from surgery

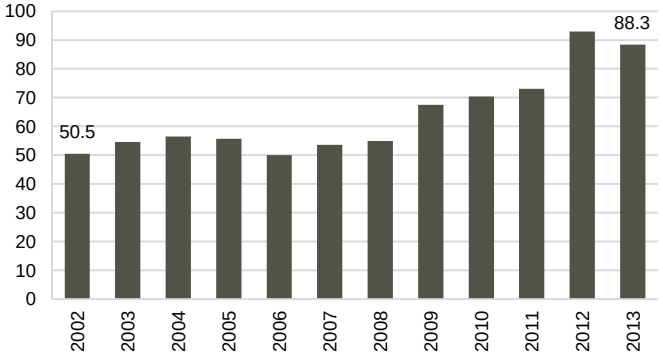
somewhat misleading as it does not accurately reflect primary care accessibility. In Georgia, a lack of primary infrastructure causes patients to head directly to hospitals, which lowers outpatient numbers at the expense of inpatient facility use.

Figure 19: General practitioners per 100,000 persons



Note: Per latest available year. Due to the lack of consistent data, there is some variation in years Data for Georgia is as of 2013
Source: WHO

Figure 20: General practitioners per 100,000 persons in Georgia



Source: WHO

In addition to the abundance of GPs, there are several tailwinds that should spur the development of primary care in the coming years: 1) Underutilization of primary care, as outpatient encounters of 3.5 (WB recommends 3.0 for developing countries) per person per year in Georgia in 2014 came in well below the OECD average doctor consultations per capita per year of 7.1 (2013); 2) High level of self-treatment, with individuals avoiding primary care and treating themselves with over-the-counter drugs (the 2014 adoption of new regulation that defines drugs requiring prescriptions[9] will help increase primary care use); 3) Increased public funding of primary care (public spending on health grew 6.9x over 2002-13, a 19.2% CAGR); 4) High fragmentation in the primary care sector (EVEX, the largest player, has only 0.7% market share), which opens the door to consolidation, which would in turn drive improvements in healthcare quality due to enhanced management and new technologies, increasing the credibility of primary care services; 5) The absence of properly developed primary care, which causes diseases (cancer, for example) to be diagnosed in the final stages, when treatment is less effective. Notably, cancer diagnoses have shifted from mostly late stage to earlier stages (the share of 4th stage in total has decreased from 48% in 2009 to 28% in 2014) - a positive sign for the healthcare sector.

Because of the underdeveloped state of primary care and the scarcity of modern diagnostic equipment, disease incidence rates[10] are low and growing slowly, while prevalence levels[11] are relatively high and growth rates are accelerating. Although the share of NCDs as a cause of mortality in Georgia is similar to that of the OECD, the incidence level of cancer in Georgia of 140.0 per 100,000 persons as of 2014 was well below the OECD figure of about 261.0 (2013). However, according to NCDC, the estimated value for 2015, using preliminary data, is likely to increase up to 287.0.

Georgia has the 2nd most physicians (4.1 per 1,000 persons) among peers (average of 3.0), well above the OECD average of 3.3. The high level is the result of two major factors, in our view: 1) Historically high graduation rates in the field of medicine, a prestigious field; 2) Oversupply of hospital beds, which drove demand for physicians.

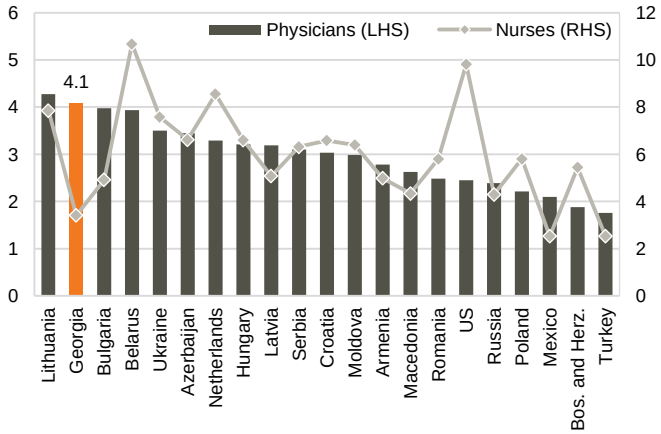
[9] The prescription drug list was augmented in 2014 and now includes over 50% of the drugs registered in Georgia compared to 2% before

[10] Incidence is the rate of new (or newly diagnosed) cases of the disease occurring within a period of time (e.g., per month, per year)

[11] Prevalence is the actual number of cases of the disease either during a period of time (period prevalence) or at a particular date in time (point prevalence)

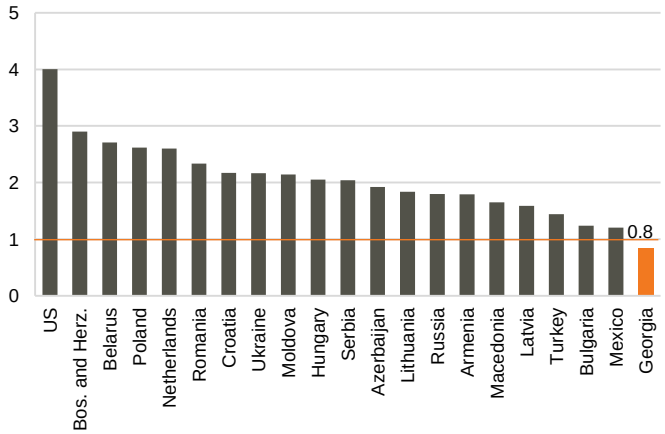
Georgia has relatively few nurses (0.8 per physician) compared to peers (2.1 average). Moreover, Georgia is the only country among peers with a ratio below 1 - a negative indicator for the healthcare sector. By 2013, the OECD average was 3.3 physicians and 8.7 nurses per 1,000 persons, or 2.6 nurses per physician. The WHO, in turn, recommends a 4 to 1 ratio. The undersupply of nurses imposes costs on the healthcare system due to the resulting inefficient use of physicians' time and skills.

Figure 21: Physicians and nurses per 1,000 persons



Note: Per latest available year. Due to the lack of consistent data, there is some variation in years
Data for Georgia is as of 2013
Source: WB, WHO

Figure 22: Nurses per physician



Note: Per latest available year. Due to the lack of consistent data, there is some variation in years
Data for Georgia is as of 2013
Source: WB, WHO

The supply of graduating physicians (26.2 per 100,000 persons, 2013) is almost double the peer average of 13.6. In addition, the nurse shortage is widening, as graduating nurses per 100,000 persons is the lowest at 0.5 compared to the peer average of 41.7. Nurses per graduating physician is at 0.02 (2013) vs. a peer average of 3.06. Possible reasons include: 1) Low demand for the profession from university entrants due to its lower prestige; 2) A lack of training facilities for nurses. An adequate nurses per physician ratio is a prerequisite for cost control improvements. The government has established special training centres for nurses, but it is still early to see the results.

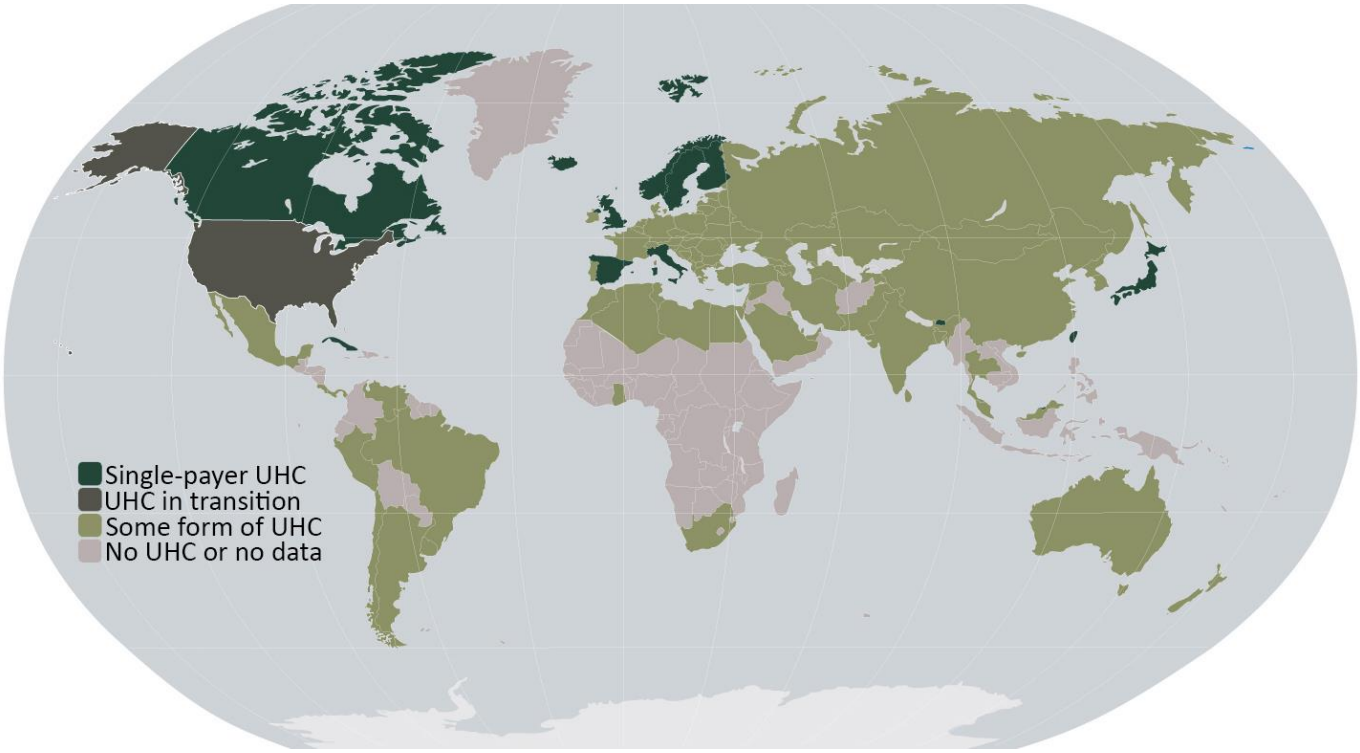
Costs

Healthcare costs are increasing rapidly, posing a serious challenge globally. Based on projected population growth rates, healthcare spending per capita is expected to grow an average of 4.4% annually through 2017, according to Deloitte.

Healthcare expenditure models vary, with no single model being systematically and definitively more cost effective. Instead, the application and management of a system determine its efficiency.[12] Many developed, industrialized countries have established healthcare systems with universal healthcare (UHC). Under UHC, healthcare is provided by the government (in most cases through private-sector providers) and financed by the government through tax receipts. Depending on the country-specific model, the government controls to a varying degree what operators can charge and defines cost-sharing agreements.

[12] Generally, there are 3 main goals of a public healthcare system: keeping people healthy, treating the sick, and protecting patients/families from burdensome medical bills

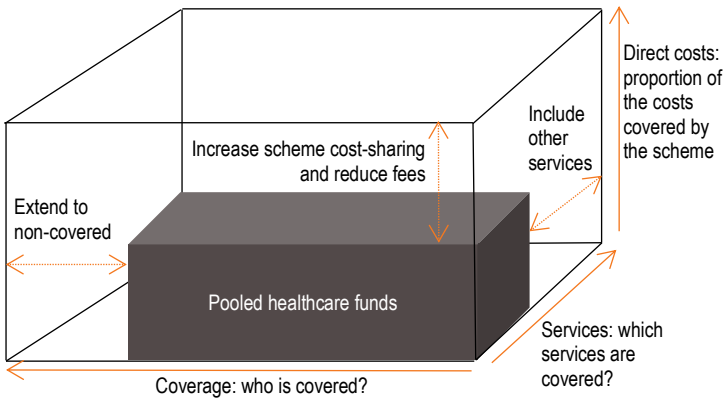
Map 1: Countries with UHC



Source: ChartsBin, Galt & Taggart Research

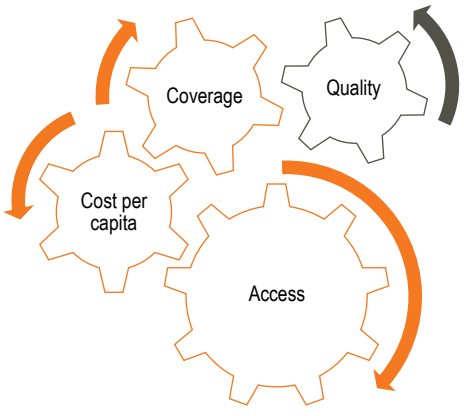
A UHC has 3 main parameters: the size of the covered population, services included in the basic package, and the level of cost-sharing between the state and the covered population. However, there is no perfect UHC, as every government faces a key trade-off between, on the one hand, access, coverage and cost per capita and, on the other hand, quality of care. The key to success often lies in management efficiency.

Figure 23: The main parameters of a UHC



Source: WHO, Harvard School of Public Health, Galt & Taggart Research

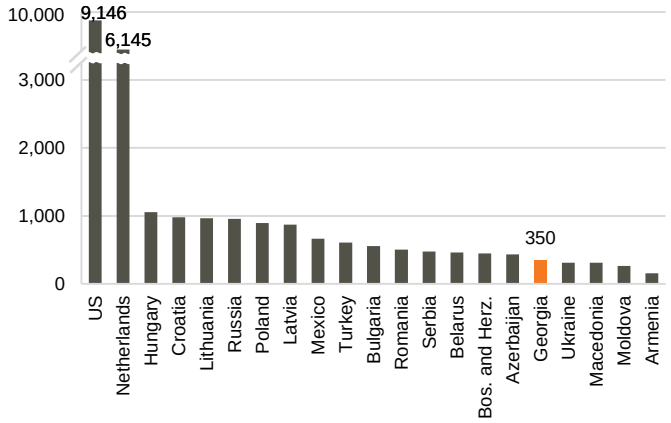
Figure 24: The fundamental trade-off of a UHC



Source: Galt & Taggart Research

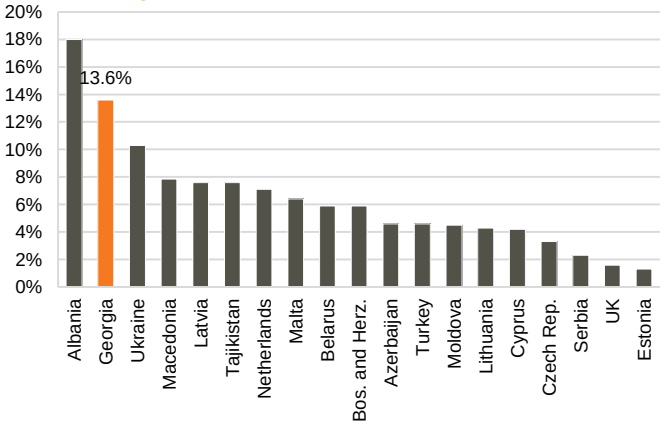
Globally, healthcare spending averages 9.9% of GDP (of which 5.9% is public and 4.0% is private). Emerging countries will generally see healthcare spending rise over the next 5 years as a result of population growth, increasing consumer wealth, and efforts to expand access to care.

Figure 25: Healthcare expenditure per capita, US$ (2013)



Source: WB

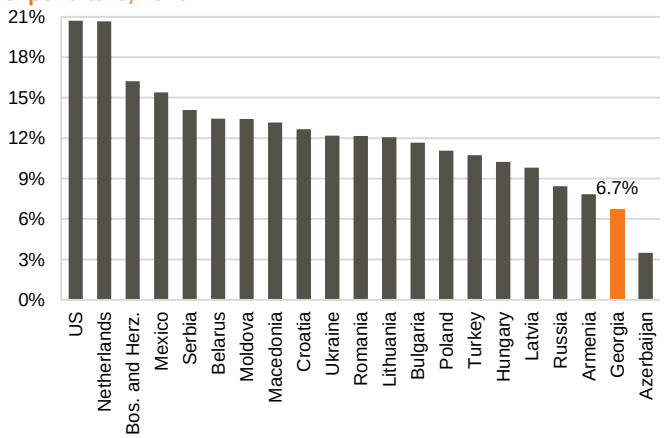
Figure 26: Capital investment on medical facilities as a % of healthcare expenditure



Note: Per latest available year. Due to the lack of consistent data, there is some variation in years
Data for Georgia is as of 2011
Source: WHO

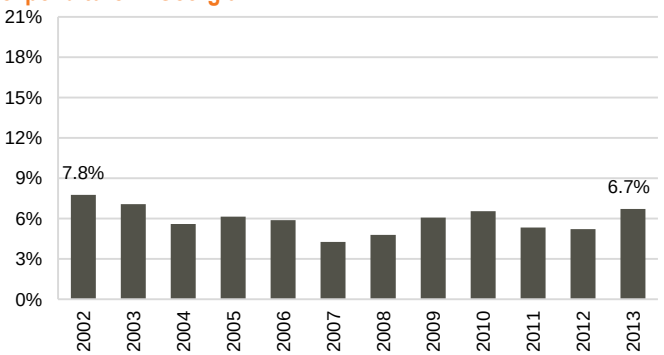
Healthcare often accounts for a country's largest or 2nd largest public expenditure. In the 2016 state budget of Georgia, healthcare expenditure is planned at US$ 359mn or 9.3% of total budget outlays. The 2015 public healthcare spending plan was revised upward in December 2015 to US$ 362mn, accounting for 9.3% of total budget outlays. The share stood at 8.0% in 2014 (US$ 369mn) and 6.7% in 2013 (US$ 289mn). We believe the growth of healthcare spending is sustainable because: 1) The share of healthcare in government expenditure is still low at 9.3% compared to the 12.2% peer average in 2013 - a sign of room for improvement; 2) Healthcare costs are shared between the patient and the government, with the latter's share capped. Therefore, we believe the government will remain committed to healthcare spending even if UHC use increases significantly.

Figure 27: Public healthcare expenditure as a % of government expenditure, 2013



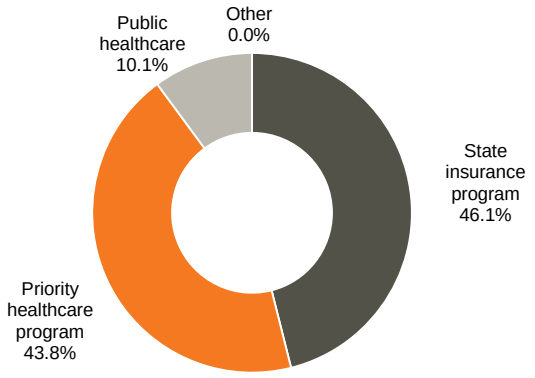
Source: WB

Figure 28: Public healthcare expenditure as a % of government expenditure in Georgia



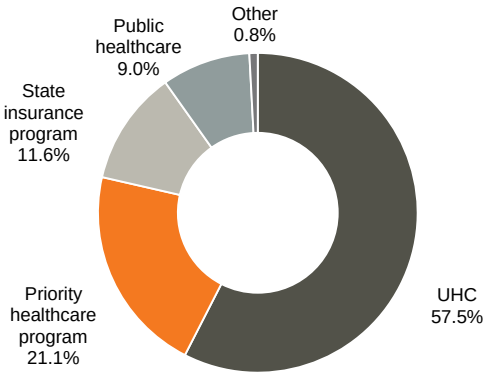
Source: WB

Figure 29: Public healthcare expenditure in Georgia before UHC, 2012



Note: Priority healthcare program's top 3 sub-programs include: emergency healthcare service, dialysis and kidney transplantation, referral healthcare service
Public healthcare's top 3 programs include: management of tuberculosis, maternal and infant care, healthcare sector's development project (WB)
Source: Ministry of Finance of Georgia

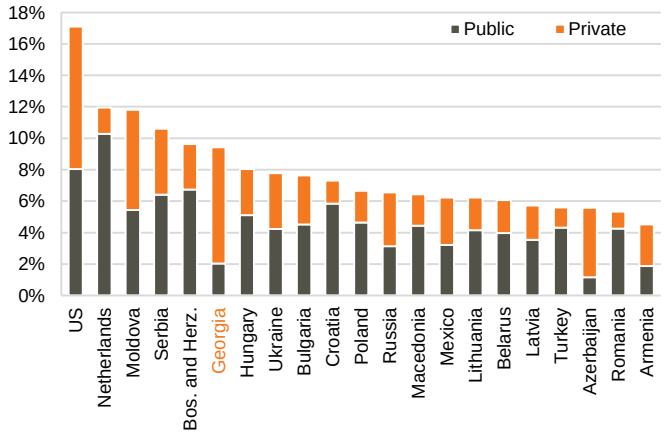
Figure 30: Public healthcare expenditure in Georgia after UHC, 2014



Note: Priority healthcare program's top 3 sub-programs include: emergency healthcare service, dialysis and kidney transplantation, village doctor
Public healthcare's top 3 programs include: management of tuberculosis, management of HIV/AIDS, management of infectious diseases
Source: Ministry of Finance of Georgia

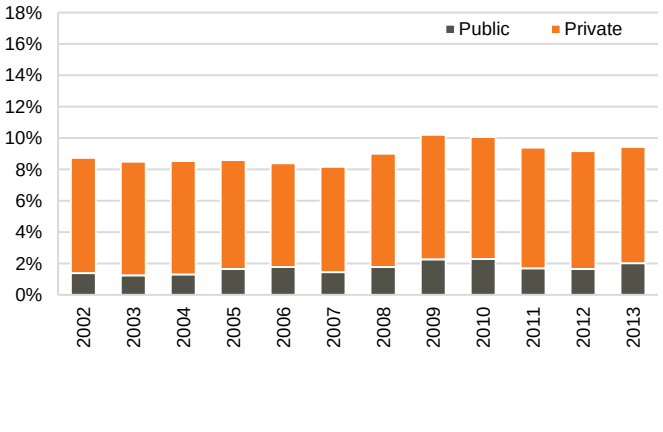
Annual healthcare spending per capita in Georgia has increased 5.5x from US$ 64 in 2002 to US$ 350 in 2013, a 16.6% CAGR. In the OECD, healthcare spending per capita has risen by over 70% (in real terms) since the early 1990s. This has resulted in longer life expectancy (by about 1 year every 4 years since the early 1990s) and lower mortality rates for many diseases. Nevertheless, the countries that spend the most do not necessarily fare best in health outcomes, suggesting that effectiveness of spending is the key to an efficient healthcare system.

Figure 31: Healthcare expenditure as a % of GDP, 2013



Source: WB

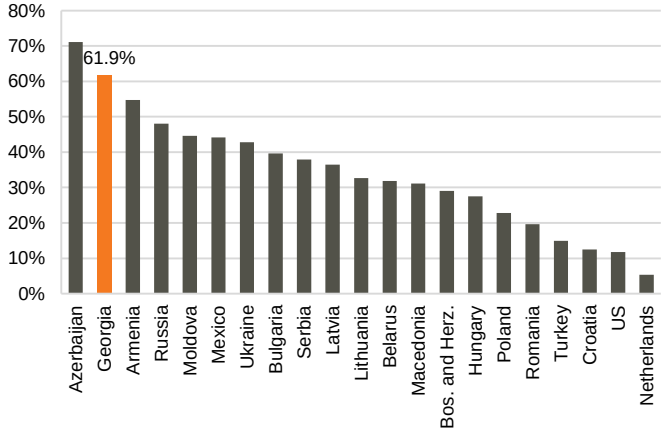
Figure 32: Healthcare expenditure as a % of GDP in Georgia



Source: WB

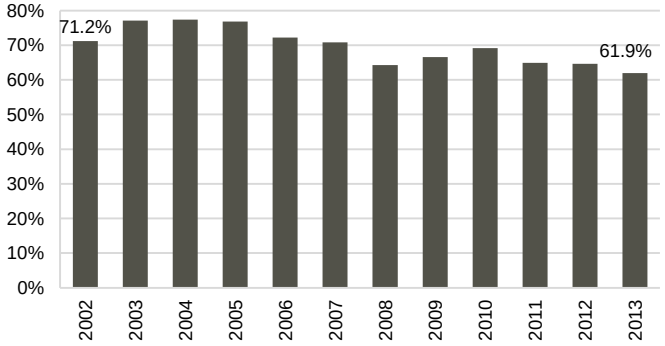
For about 5.6bn people around the world, over half of all healthcare costs are out-of-pocket. About 150mn people face catastrophic health expenditures and 100mn people are pushed into poverty annually because of mounting healthcare costs. Evidence suggests that access to care improves with a larger share of prepayment and a smaller share of out-of-pocket payments. Despite the significant increase in public healthcare spending, Georgia still had the 2nd highest share of out-of-pocket expenditure among peers at 61.9%, compared to the peer average of 34.3% as of 2013.

Figure 33: Out-of-pocket health expenditure as a % of total healthcare expenditure, 2013



Source: WB

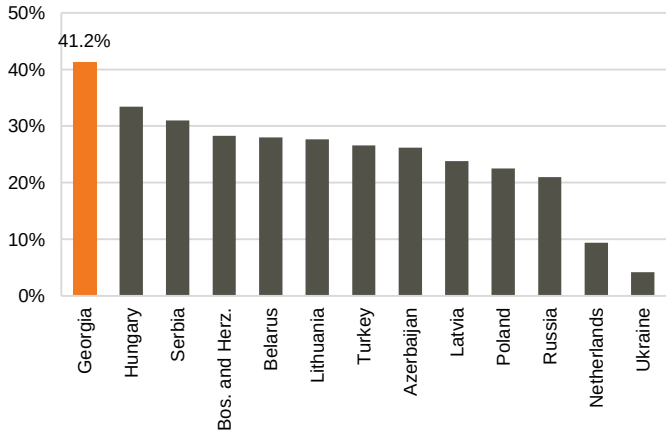
Figure 34: Out-of-pocket health expenditure as a % of total healthcare expenditure in Georgia



Source: WB

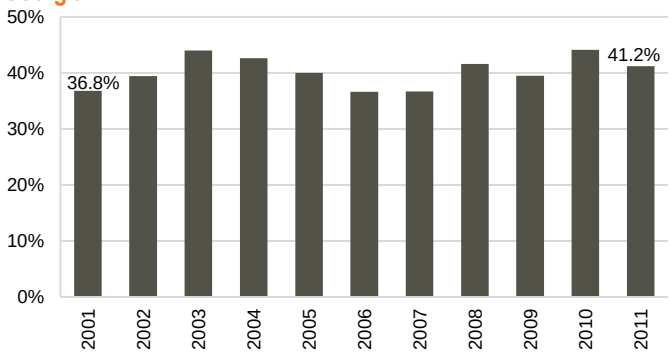
Pharmaceuticals take up the largest share at 41.2% of healthcare expenditure in Georgia (vs. a peer average of 25.8%). In September 2014, a new law regulating drug accessibility came into force, limiting over-the-counter purchase of certain drugs to reduce self-treatment and boost professional primary care. In addition, the supply side of the pharmaceutical market is shifting from a three-player oligopoly to a more competitive market structure due to the entry of new players, weighing down prices.

Figure 35: Pharmaceuticals as a % of healthcare expenditure



Note: Per latest available year. Due to the lack of consistent data, there is some variation in years
Data for Georgia is as of 2011
Source: WHO

Figure 36: Pharmaceuticals as a % of healthcare expenditure in Georgia



Source: WHO

Technology

Globally, healthcare is in urgent need of innovation to help stem the tide of rising costs. Advances in technologies[13] and data management (in some cases, disruptive to established healthcare models) can be a tailwind for the sector, facilitating cost savings and accelerating new diagnostic and treatment methods. However, R&D costs trickle down into prices. To spur the introduction of new equipment, the Georgian government, in 2010, restricted inpatient use of equipment produced before 1998. After the reforms of 2010-11, new hospitals have been opened and additional equipment has been acquired, but up-to-date data is not available. As certain units of equipment cost over US$ 1mn, consolidation in the sector would allow greater economies of scale and help improve the supply of technology, in our view.

[13] Some exciting advancements are taking place at the intersection of informational and medical technologies, such as using 3D printing in preparing tissues for transplants

Healthcare Policy: Favorable for Development

Georgia progressively developed its healthcare sector over the last decade before settling on UHC with an improved structure and legal framework. The Law of Georgia on Public Health is the main legal document regulating the healthcare system and, since 2007, health insurance. Other laws regulate patient rights, medical conduct, licensing, and the pharmaceutical sector. Altogether, the legal framework in Georgia is favourable for investors, as in most cases, the barriers to entry are relatively low.

Over the last decade, Georgia has implemented several milestone reforms including the renovation of hospital infrastructure, the launch of the state insurance program, and the introduction of UHC. Since 2003, MoLHSA has been softening regulatory control and allowing private companies to enter the healthcare sector while medical services have been exempt from most major taxes (value-added, profit,[14] and property) since 1997. In 2005, the number of required general healthcare licenses was cut from 302 to 42 as the number of overall business activities subject to licenses and permits was reduced by 84%. In March 2006, the MoLHSA established guidelines for care against which patient complaints would be examined. The old Soviet state-run centralized Semashko healthcare model was gradually softened before being shut down in 2007, when Georgia moved to an insurance-based healthcare model.

In January 2007, the government initiated the Hospital Development Master Plan with the goal of privatizing hospital infrastructure within 3 years. The reform was designed to reduce the number of hospital beds from 14,600 in 2007 to 7,800 in 2010 (of which 1,860 beds or 23.8% would remain in state ownership). Due to a lack of expertise from investors, the armed conflict with Russia in August 2008, and the ensuing economic recession, privatization efforts stalled and almost none of the privatized assets were duly renovated. In 2010, the government adjusted the plan and combined hospital operation and the provision of health insurance. The country (excluding the capital, Tbilisi) was divided into 26 healthcare districts. Insurance firms were invited to participate in tenders to provide coverage to eligible citizens. The winning insurers were obligated to build or renovate and operate hospitals in their respective regions by the end of 2011 or 2012. As of 2013, up to 150 new hospitals had been built and opened for operation by insurers and through private investments.

The government began to insure the neediest (0.75mn people or 21.3% of the population) in 2007[15] and expanded coverage to Internally Displaced Persons (IDPs) and beneficiaries of child care institutions in 2008. Under that model, public funds went to private insurers who delivered care to eligible citizens mostly through their own, privately run hospitals. This change marked a makeover of public healthcare provision as the model handed healthcare delivery over to private companies. The second stage of public insurance came in September 2012 with the expansion of state coverage to children aged 0-5, pensioners, students, and disabled individuals (an additional 0.9mn people or 19.8% of the population, for a total of 1.8mn people or 41.1% of the population). After the 2nd stage of public insurance coverage expansion, the healthcare model came closer to a UHC system.

In February 2013, the UHC was introduced to improve financial accessibility of healthcare services. The UHC reform consolidated government-funded (general coverage) healthcare programs under the UHC umbrella, including the ones administered by private insurance companies, with any citizen eligible for coverage.

[14] Applies only to reinvestment of earnings

[15] Initially, the reform was introduced in Tbilisi and Imereti regions; from 2008, government-funded health insurance coverage for the neediest was extended throughout Georgia

Implementation started in March 2013. The introduction of an extended range of services began in July 2013 and was completed at the end of 2014.

Even after the current UHC model was introduced in 2013, the delivery of care remained reliant on private operators. As a result, Georgia's current UHC model, administered by a state agency (Social Service Agency), is unique: the financing side resembles a pure universal healthcare system, with the government as the program's major financial contributor and with cost-sharing in the form of co-payments (out-of-pocket) by beneficiaries. The state now negotiates rates with and funds the largely private healthcare providers directly, bypassing insurance companies. Under the UHC, healthcare providers shifted to retail business, as beneficiaries became free to choose medical providers, while under the state insurance programme, the private insurance companies would use a preferred provider list to manage patient flows. In the future, the MoLHSA plans to expand the UHC package to include essential pharmaceuticals.

Georgia's UHC is divided into 3 major segments: urgent, planned inpatient, and outpatient:

1) In the case of urgent treatment, the healthcare provider calculates the state payment level by taking the lowest 25th percentile of historic prices that were in effect under state insurance programs with a possible 10% deviation. The government reimburses 100% of urgent treatment costs to care providers.

2) For majority of cases, the government finances 70% of planned inpatient treatment costs, determined by the average of the bottom quartile of nationwide provider prices. If a patient opts for a more expensive healthcare provider, he or she must make up the price difference. Under the UHC, any licensed hospital is eligible to be a healthcare provider.

3) Elective outpatient services are financed using the capitation method.[16] This includes services such as visiting a general practitioner, general blood tests, general urine tests, electrocardiogram exams, abdominal ultrasounds, and other limited laboratory testing. For other elective outpatient services, such as specialist visits, patients are required to pay 30% of the price charged by the particular clinic for the service.

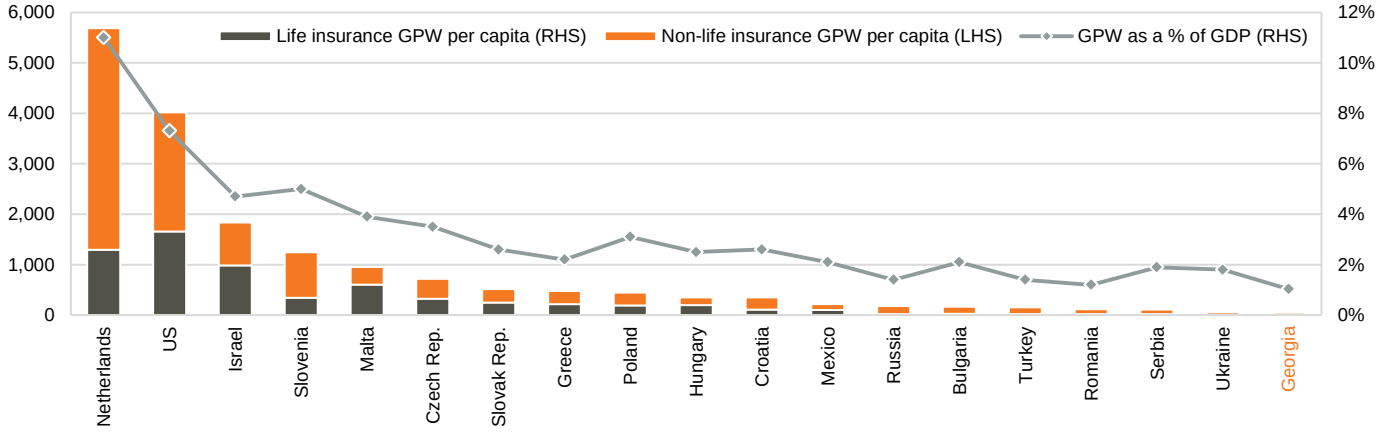
Certain services, including but not limited to health assessments, treatment abroad, cosmetic surgery, reproduction-related services other than childbirth, transplantation (excluding kidney transplantation) and elective conservative care, are not covered by the UHC.

[16] A payment method for healthcare services under which the physician, hospital, or other healthcare provider is paid a contracted rate for each patient assigned

Reform Milestones: Health Insurance Sector

Georgia's health insurance market played an important role in the development of the healthcare sector. The health insurance sector expanded in the early 2000s, as companies started to offer affordable, low-cost, low-benefit packages sold on an individual and group basis. This fuelled the early stage of growth and laid the groundwork for the government reforms that followed starting in 2007.

Figure 37: Insurance density, US$ (2014)

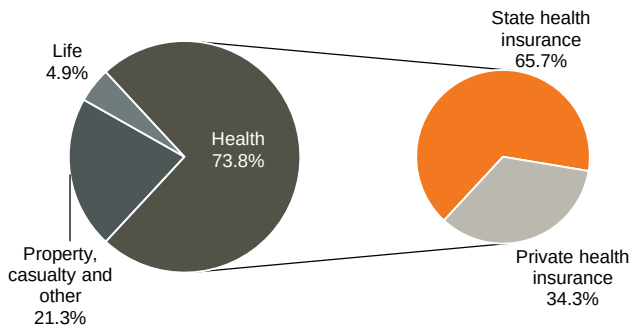


Note: GPW - Gross Premium Written - The total premium on policies issued by an insurance company in a period of time
Source: Swiss Re, Insurance Europe, WB, Insurance State Supervision Service of Georgia

In 2007, the state introduced a public insurance plan. The government started to purchase private health insurance packages for the neediest (0.75mn people or 21.3% of the population). As a result, the health insurance sector blossomed and competition in the market led insurers to offer improved services. The reform also spurred the emergence of pure[17] private health insurance, which as of end-2014 had more than 0.5mn beneficiaries.

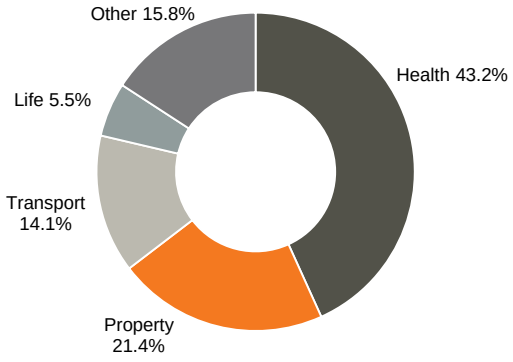
New opportunities and the growing client base attracted new players to the insurance sector, including Archimedes Global,[18] which entered in 2008, as well as Ardi Group, Alpha, and PSP Insurance. The latter two originally focused on the local pharmaceutical industry and were attracted by the potential synergies.

Figure 38: Georgian insurance market before UHC, 2012



Source: Aldagi

Figure 39: Georgian insurance market after UHC, 2014



Source: Insurance State Supervision Service of Georgia

[17] An insurance package purchased directly by an individual (as opposed to one purchased by an employer or a state)

[18] Archimedes Global could not establish itself and filed for bankruptcy in 2013 once the state insurance program was abolished and the UHC was introduced

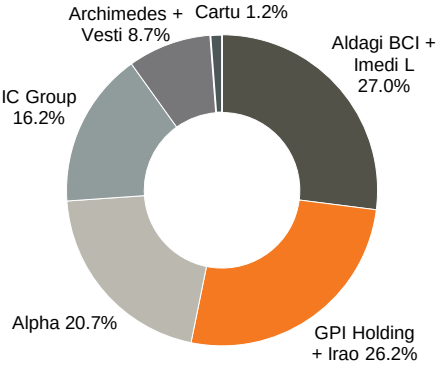
In 2010, the government adjusted its development plan for the hospital sector and combined hospital operations and health insurance provision. In order to implement the state insurance strategy, Georgia was subdivided into 26 regions. Nine insurance companies were selected through a competitive bidding process to operate in their respective regions. The firms were required to provide health insurance plans to eligible citizens within the region through a 3-year contract with the government. On the one hand, the contract guaranteed a revenue stream for the hospital (and for the insurer as insurers operated the hospitals) for 3 years through insurance premiums. On the other hand, the insurers had an obligation to build, renovate, and operate hospitals in their corresponding districts. New owners were obliged to keep an agreed portfolio of medical services for at least 7 years.

Map 2: Tender winner insurance companies by medical districts, 2010

Note: Later mergers and acquisitions and splits changed the health insurance sector landscape as Imedi L was bought by Aldagi in 2012 and Archimedes Global went bankrupt in 2013
Source: Financial Brokers Georgia

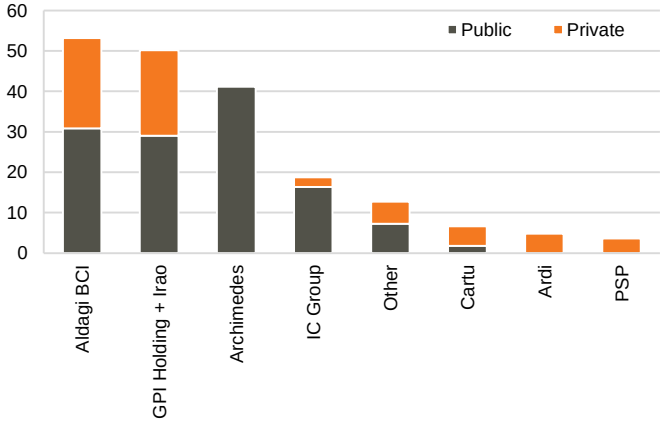
Consolidation in the health insurance sector started in late 2010 as insurance companies targeted economies of scale. Archimedes Global Georgia, one of the biggest insurers took over Vesti, a small insurer. In May 2012, Imedi L, the third largest and one of the most trusted players on the market, was taken over by Aldagi BCI, improving its leading position on Georgia's insurance market with a 27.0% share.

Figure 40: Georgia's health insurance market after the introduction of the public insurance scheme, 2012



Note: Percentages are based on the amount of beneficiaries plus the amount of premium provided by companies
Source: Transparency International Georgia

Figure 41: Georgia's health insurance GPW before UHC, 3Q13 (US$ mn)



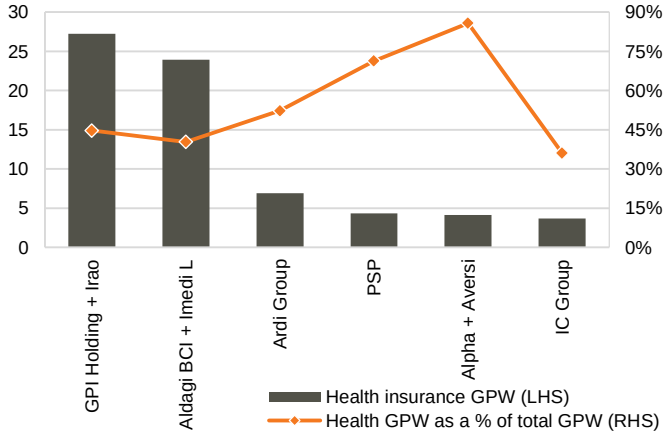
Source: Aldagi BC

The public insurance plan coverage was expanded in September 2012 to include pensioners, students, and children aged 0-5 (an additional 0.9mn people or 19.8% of the population). The package, which included basic healthcare services, was also improved with increased funding for emergency care as well as family doctor outpatient services, instrumental and laboratory research, planned procedures (annual limit of US$ 9,084 or GEL 15,000 of which 80-100% was funded by the government and the rest by the beneficiaries out-of-pocket), midwife services, and delivery. By end-2012, about 1.8mn persons, or 41.1% of the population, were covered by state-funded health insurance.

UHC was introduced in February 2013 and insurance companies were pushed out of their position as intermediaries between the healthcare facilities and the government. The remuneration model also changed and the government, through the Social Service Agency, started to negotiate rates and make reimbursements directly to the hospitals instead of the insurance companies.

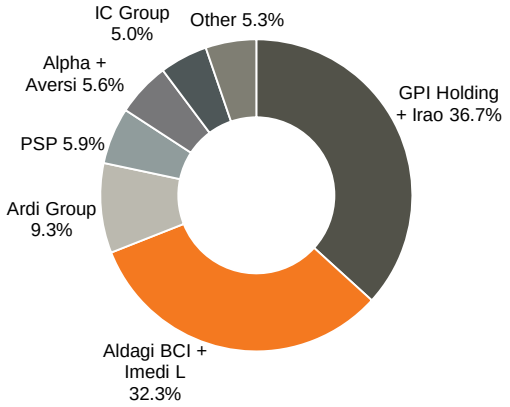
The introduction of state health insurance gave a push to the development of the private health insurance market. Prior to 2006, private health insurance only played a marginal role in the healthcare system as only 40,000 Georgians enjoyed private health insurance, mostly through group insurance policies. That number increased to almost 2mn beneficiaries and US$ 205.2mn in GPW (72.5% of the entire Georgian insurance market) right before the introduction of UHC. Once UHC kicked in at the end of 2013, a significant portion of the premiums were converted into direct payments to healthcare providers. The number of beneficiaries decreased to 0.5mn and GPW came in at US$ 74.1mn or 43.2% of the Georgian insurance market, which we believe is the new normal.

Figure 42: Health insurance GPW, US$ mn (2014)



Note: GPW - Gross Premium Written
Source: Insurance State Supervision Service of Georgia

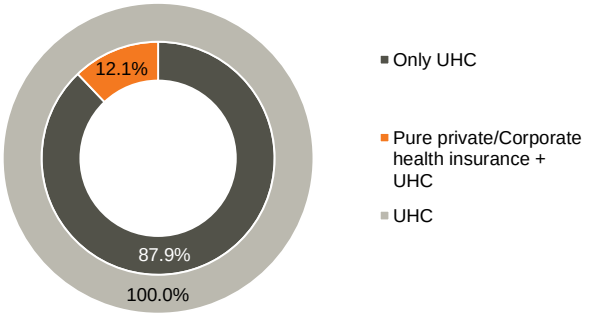
Figure 43: Georgia's health insurance market by GPW, 2014



Note: GPW - Gross Premium Written
Source: Insurance State Supervision Service of Georgia

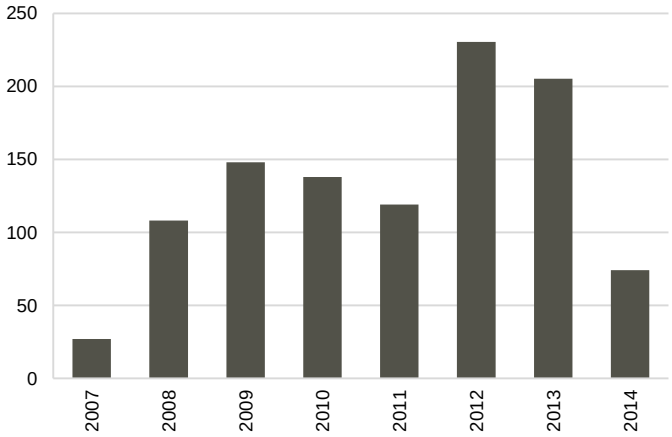
As of 2014, Georgia's entire population of 4.5mn is covered by the UHC. Of those individuals, more than 0.5mn have pure private or corporate health insurance packages (the number has been largely unchanged for the past few years).

Figure 44: Health insurance plans among the Georgian population, 2014



Source: MoLHSA

Figure 45: Health insurance GPW, US$ mn



Note: GPW - Gross Premium Written
Source: Insurance State Supervision Service of Georgia

The launch of the UHC has changed the insurance landscape. Below we present a summary of the key consequences of the UHC reform:

Diagram 1: The impact of UHC on Georgia's health insurance sector

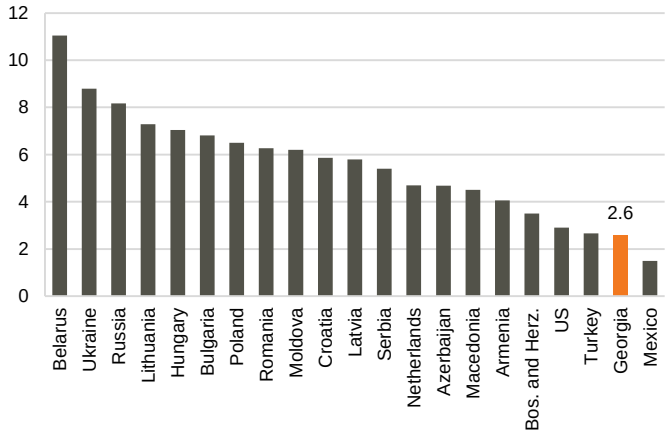
Decrease in share of out-of-pocket payments	Loss of insurance revenues on state-funded policies	Resilience of the private insurance market
The share of out-of-pocket payments in total health expenditure decreased from 64.7% in 2012 to 62.0% in 2013. We expect the share in 2014 (the first fully operational year for UHC) to be even lower, as a portion of out-of-pocket payments is displaced by insurance premiums.	As government directly funds hospitals instead of insurance firms, the latter lost a considerable share of revenues. Health insurance GPW shrank 63.9% y/y to US$ 74.1mn in 2014 from US$ 205.2mn in 2013.	After the introduction of UHC, corporates could have stopped providing insurance plans to their employees, but the private insurance market has stayed strong, as the number of policies excluding public programs has, in fact, increased.

Source: WB, Insurance State Supervision Service of Georgia, Galt & Taggart Research

Access to Care: Hospitals in Detail

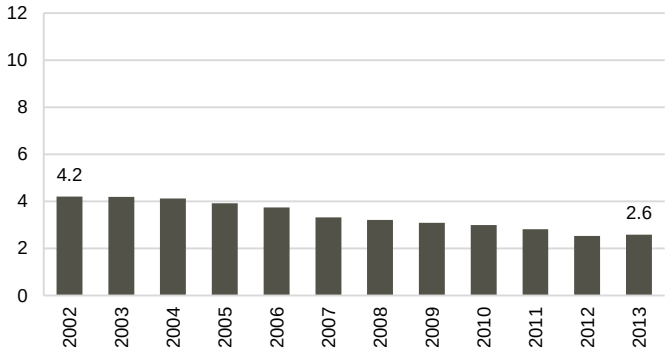
After the collapse of the Soviet Union, Georgia was left with a relatively large number of hospital beds. The government's January 2007 plan, restarted in 2010, was a game-changer for the healthcare and hospital sectors. It was designed to eliminate excess hospital beds and renovate the remaining beds. The plan enabled private insurance companies to build, renovate, and operate hospitals in order to provide healthcare services for the targeted population through contracts tendered by the government. As a result, over 2002-13, the number of hospital beds decreased from 4.2 per 1,000 persons to a sustainable 2.6. In absolute terms, the number of hospital beds decreased from about 18,000 in 2002 to about 12,000 in 2013.

Figure 46: Hospital beds per 1,000 persons, 2013



Source: WB, WHO

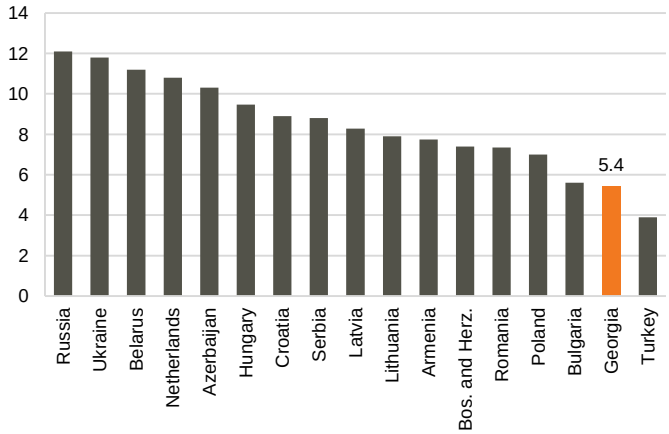
Figure 47: Hospital beds per 1,000 persons in Georgia



Source: WB, WHO

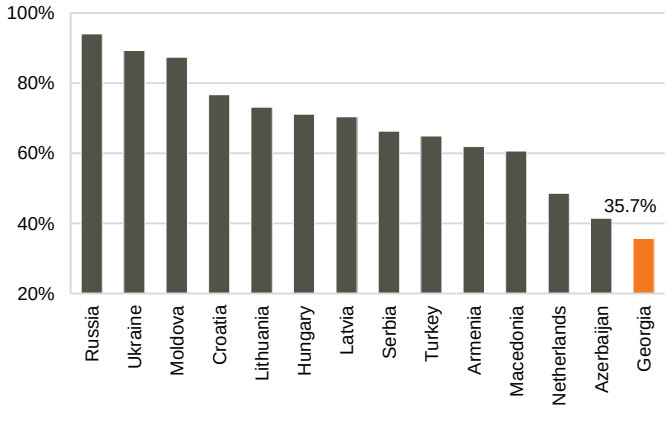
Georgia has the lowest-among-peers bed occupancy rate of 35.7% (acute care beds only, 2011) compared to the peer average of 67.2% and the OECD average of 78.2%. This suggests capacity underutilization, which leads to higher costs and poorer quality care. Most Georgians bypass primary care and seek care at specialized facilities or through self-treatment. In addition, partially owing to cultural characteristics and relatively low incomes, Georgians often skip preventive check-ups. Not surprisingly, urgent treatments account for a relatively large share of visits (emergency outpatient care has a 60% share and emergency hospital care has 20%).

Figure 48: Average length of stay in hospital, days



Note: Per latest available year. Due to the lack of consistent data, there is some variation in years
Data for Georgia is as of 2013
Source: WHO

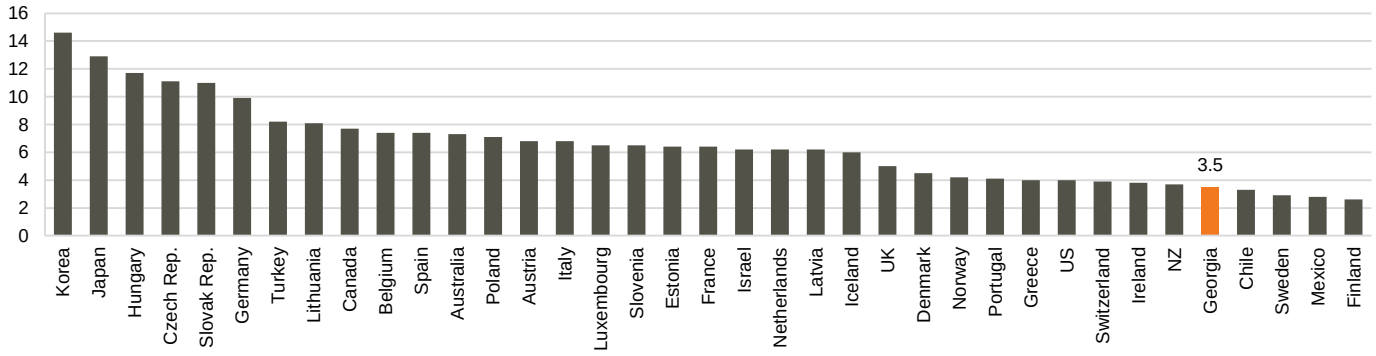
Figure 49: Hospital bed occupancy rate, %



Note: Per latest available year. Due to the lack of consistent data, there is some variation in years
Data for Georgia is as of 2011. Acute care hospital beds only
Source: WHO

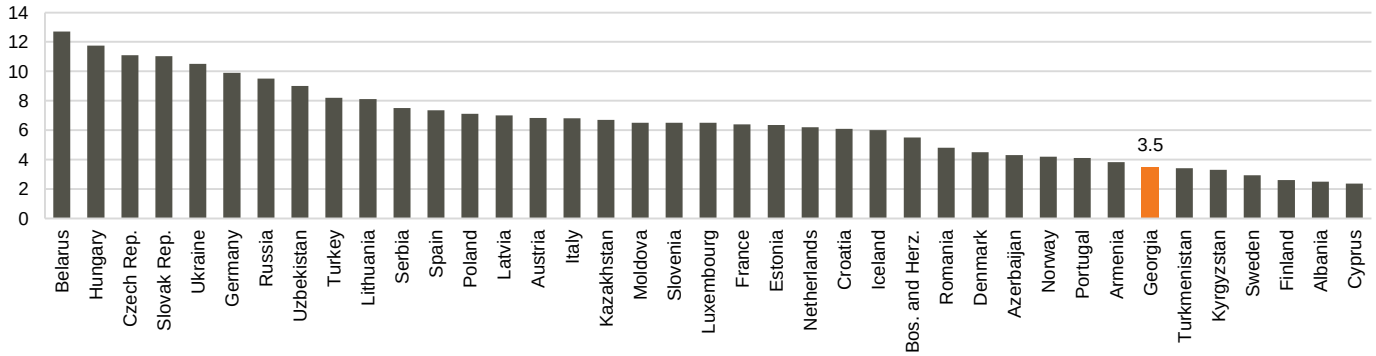
With regard to outpatient facilities, the market is rather fragmented, with no single player holding a considerable market share (EVEX, the largest player, has only a 0.7% market share). Moreover, outpatient facility utilization is low in Georgia as outpatient encounters per person per year in 2014 equaled 3.5 (WB recommends 3.0 for developing countries) compared to OECD average doctor consultations per capita per year of 7.1 (2013). As a result, there is significant development potential in the outpatient services market, in our view.

Figure 50: Doctor consultations per person per year



Note: Per latest available year. Due to the lack of consistent data there is some variation in years. Data for Georgia is as of 2014. For Georgia, outpatient encounters per person per year is used
Source: OECD, NCDC

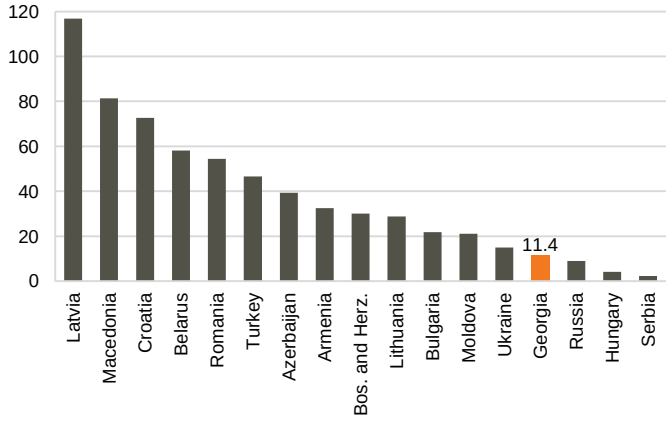
Figure 51: Outpatient encounters per person per year



Note: Per latest available year. Due to the lack of consistent data there is some variation in years. Data for Georgia is as of 2014
Source: WHO

65% of hospitals in Georgia have fewer than 50 beds, a sign of a fragmented market. Georgia also has a large number of specialized hospitals, mainly inherited from the Soviet era.

Figure 52: Primary healthcare units per 100,000 persons



Note: Per latest available year. Due to the lack of consistent data, there is some variation in years
Data for Georgia is as of 2009
Source: WHO

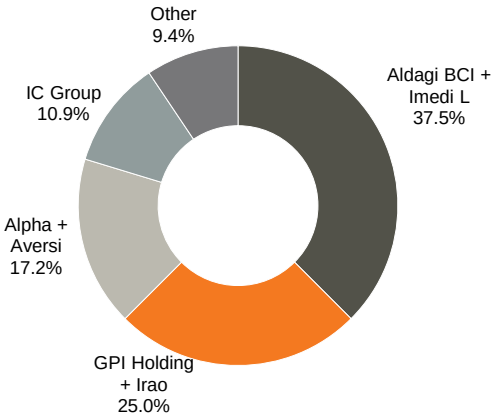
Table 1: Number of medical facilities in Georgia, 2013

Family doctor in a rural area	1,235
Dentistry office	348
Outpatient facility	310
Hospital	237
Specialized clinic	71
Women consultation centre	26
Research institute	14

Source: MoLHSA

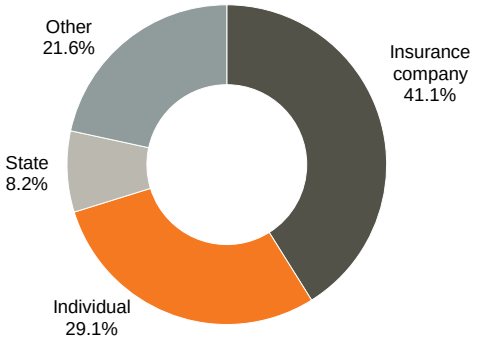
By 2013, insurance companies owned 41.1% of hospitals in Georgia and individual investors owned 29.1%. These individuals are mainly medical professionals who operate their own clinics. In terms of hospital beds, private healthcare providers owned 64.1% of hospital beds by 2013 and that figure increased to 84.3%[19] as of end-2015. The government owns the rest, including most psychiatric, tuberculosis, and penitentiary hospitals, which provide specialized services.

Figure 53: Hospitals owned by insurance companies, 2012



Note: Shares are based on the number of hospitals owned by insurance companies only
Source: Transparency International Georgia

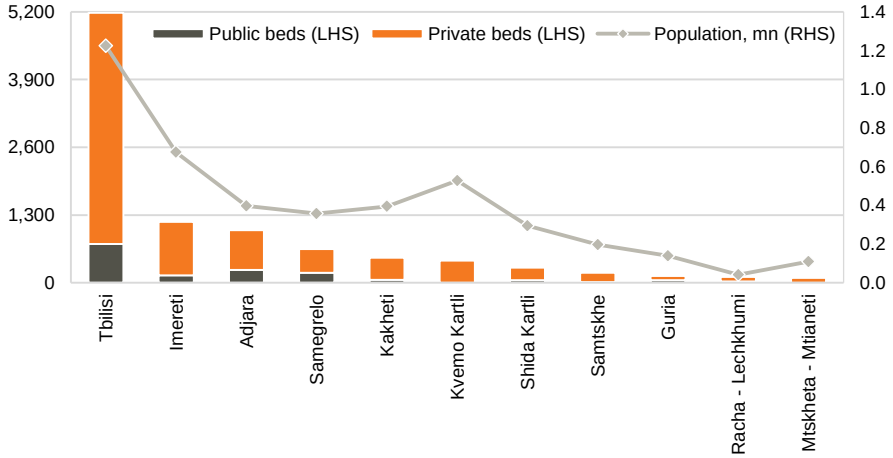
Figure 54: Hospitals by type of ownership, 2013



Note: Shares are based on the number of hospitals owned
Source: Transparency International Georgia

In terms of regional distribution, hospitals are concentrated in Tbilisi and the provincial capitals. Tbilisi accounts for more than half of the national bed stock and only about a quarter of the population.

Figure 55: Hospital bed capacity (Feb-2015) and population covered by region

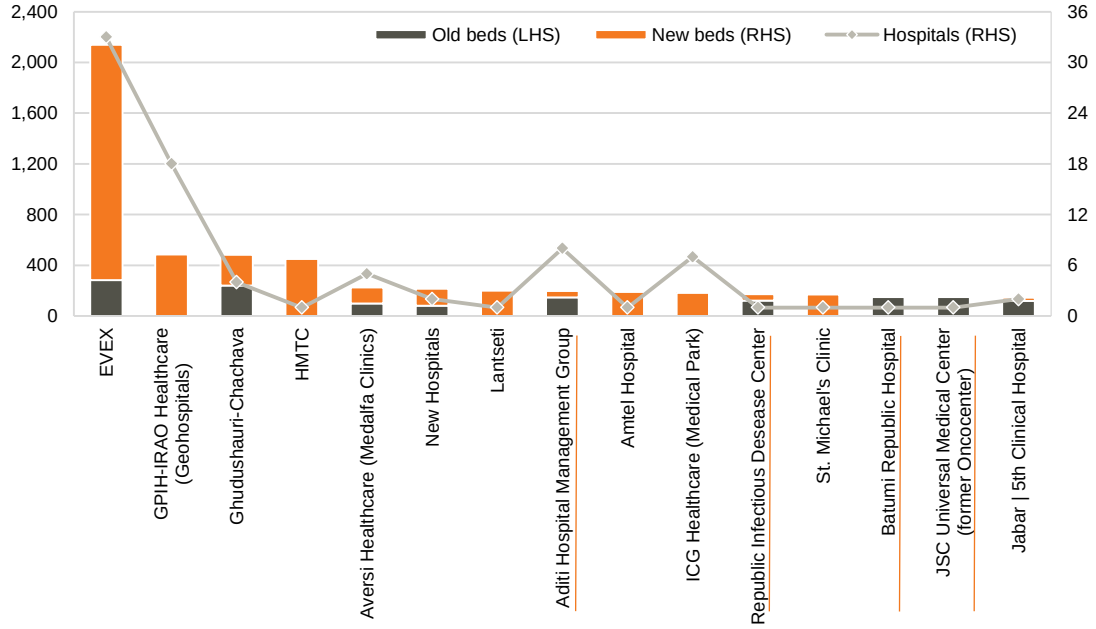


Note: Bed capacity does not include specialty beds at penitentiary, tuberculosis and psychiatric clinics
Total national bed capacity is 12,416 beds of which 2,689 are specialty beds (penitentiary, tuberculosis and psychiatric clinics)
Source: NCDC, Geostat, MoLHSA

Georgia's hospital sector is fragmented (there is a considerable gap after the largest healthcare provider EVEX), with room for consolidation. There is a prevalence of small, asset-rich but cash-poor healthcare facilities, whose owners do not communicate among each other and often lack expertise in healthcare management on a stand-alone basis.

[19] Excluding specialty beds at penitentiary, tuberculosis and psychiatric clinics

Figure 56: Top 15 providers' hospital bed capacity and number of hospitals, Feb-2015

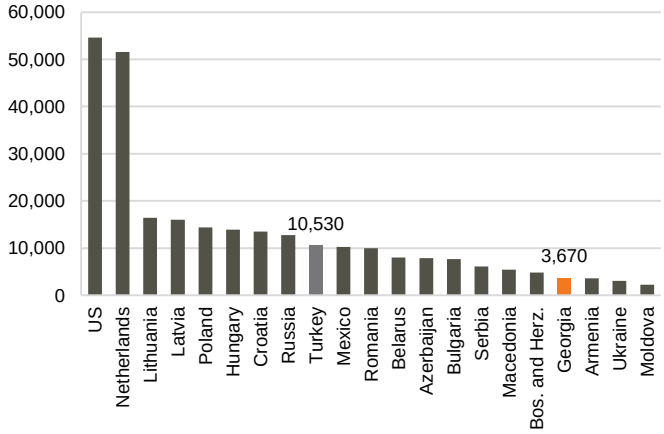


Note: Bed capacity does not include specialty beds at penitentiary, tuberculosis and psychiatric clinics
Total national bed capacity is 2,416 beds of which 2,689 are specialty beds (penitentiary, tuberculosis and psychiatric clinics)
Underlined hospitals are public
Source: NCDC, Geostat, MoLHSA

Annex 1: Case Study - Turkey

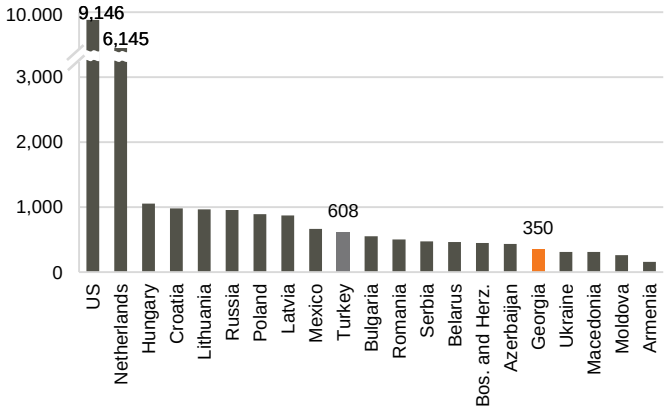
Turkey is Europe's 8th and the world's 18th largest economy (US$ 800bn as of 2014) and it has become a benchmark for building a UHC system. Back in 2000, the WHO ranked Turkey 50th out of 191 countries in fairness[20] of healthcare finance[21] (Georgia ranked 106th at the time[22]). Over the following 10 years, Turkey transformed its healthcare model into an effective UHC system.

Figure 57: GDP per capita, US$ (2014)



Source: WB

Figure 58: Healthcare expenditure per capita, US$ (2013)

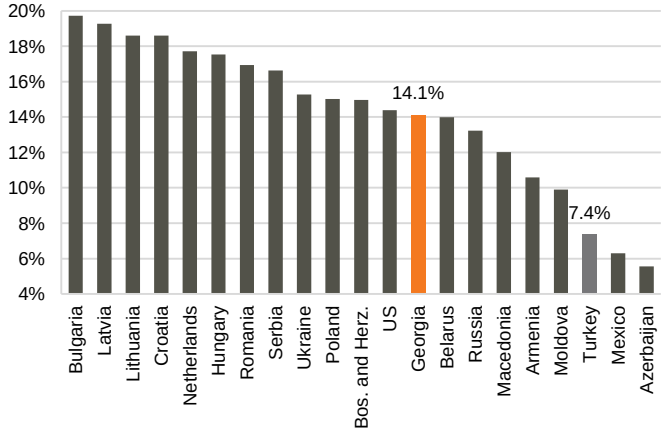


Source: WB

With just 7.8% of the population over the age of 65, Turkey is the 2nd youngest OECD nation behind Mexico (6.7%), yet circulatory diseases (a type of chronic disease) are the leading cause of mortality in Turkey (a 39.8% share) compared to Georgia's 38.5% with 14.1% of the population over the age of 65. In 2002, Turkey had the second worst (after Estonia) life expectancy in the OECD of 71.9 years compared to OECD and peer averages of 77.7 and 71.9, respectively.

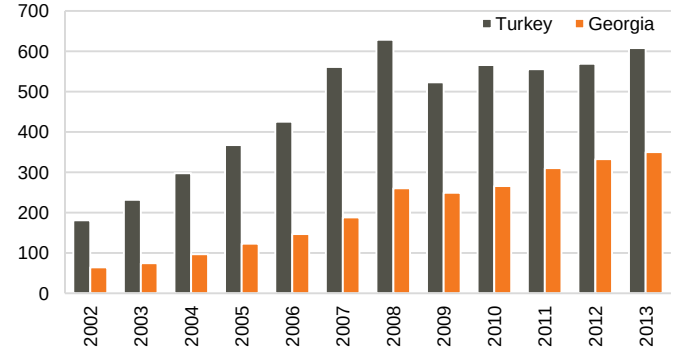
Turkey's healthcare spending per capita more than tripled from US$ 180 to US$ 608 from 2002 to 2013, an 11.6% CAGR. Over that same period, Georgia's healthcare spending per capita increased from US$ 64 to US$ 350, a 16.6% CAGR.

Figure 59: 65 and older as a % of the population, 2014



Source: WB

Figure 60: Healthcare expenditure per capita, US$



Source: WB

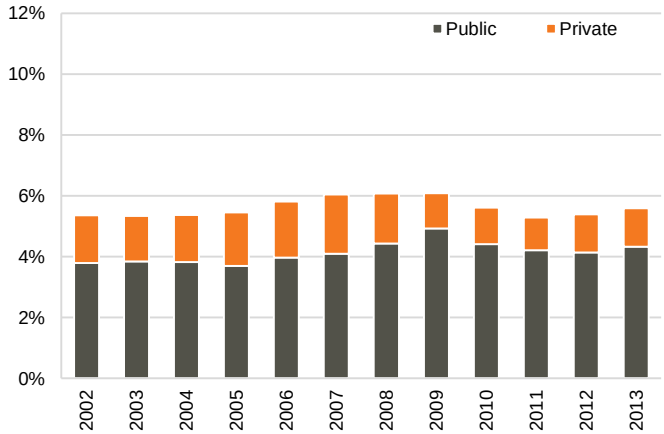
[20] According to WHO, it is not always satisfactory to protect or improve the average health of the population, if at the same time inequality worsens or remains high because the gain accrues disproportionately. The health system also has the responsibility to try to reduce inequalities by improving the health of the worse-off

[21] Turkey's healthcare system's total ranking was 70th out of 191 (WHO) by 2000

[22] Georgia's healthcare system's total ranking was 114th out of 191 (WHO) by 2000

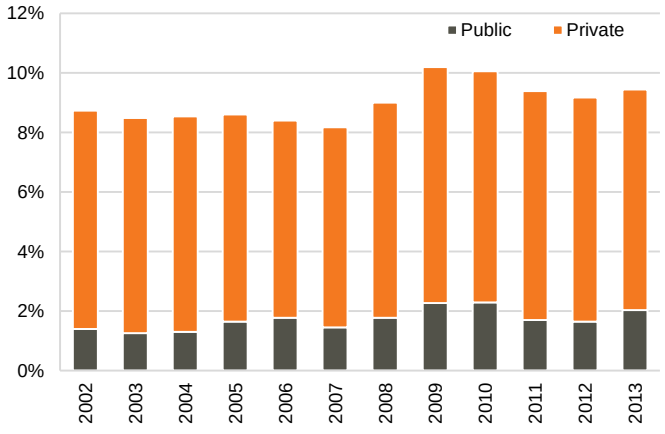
In 2003, only 24.0% of Turkey's poorest 10.0% had health insurance (compared to almost 85.0% in 2011). Moreover, out-of-pocket spending accounted for more than half of private healthcare spending in Turkey (65.7%). The situation was even worse in Georgia in 2000, as an estimated 87.0% of all health spending was out-of-pocket, the highest rate of private spending in the region. This forced many families into poverty.

Figure 61: Healthcare spending as a % of GDP in Turkey



Source: WB

Figure 62: Healthcare spending as a % of GDP in Georgia



Source: WB

Turkey, similarly to Georgia, faced up to its challenges and started reforms in 2003 with the aim of making care universally accessible. Officials studied health sector reforms in Finland, France, Mexico, and Cuba to identify relevant takeaways for Turkey. The Health Transformation Program was designed to address inequality and poor standards of care, as well as high out-of-pocket spending. A special focus was put on developing primary care as a preventive institution and over 2002-06, Turkey increased the budget allocated for preventive and primary healthcare services by 58.0% in real terms. To that end, the Family Medicine Program assigned each patient to a specific doctor. Implemented in 2004, a performance-based payment system for health professionals in hospitals fostered productivity, improved technical quality, and strengthened the focus on patients.

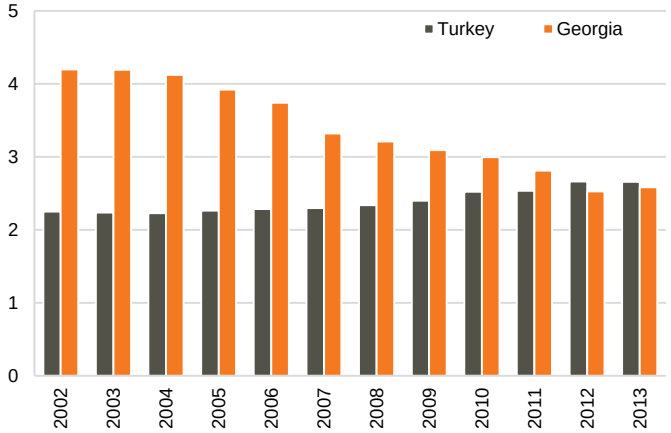
The MoH of Turkey focused initial efforts on 'emergencies' that could be fixed quickly and yield visible results. Only afterwards did the focus shift to systemic issues. In 2006, the 3 existing social security funds were merged into a single Social Security Institute that would provide a uniform benefit package to all beneficiaries. Hospitals owned by social security funds were transferred to the MoH to create a unified public hospital system. Investments were made into infrastructure, equipment, and staff training, while wage hikes helped address the issue of poor productivity.

Similar to Georgia, at first Turkey's public insurance targeted the poorest population. The number of covered individuals was then increased gradually from 2.4mn in 2003 to 10.2mn in 2011. By 2011, the publicly financed social security system played a critical role in the provision of healthcare services in Turkey - public healthcare spending came in at 79.1% of total healthcare spending compared to the OECD's 73.0% average. Furthermore, out-of-pocket payments accounted for 15.9%, below the OECD average of 19.3% and a fraction of Georgia's 64.9%. Social security coverage reached 99% in 2012. Total health spending came in at US$ 42.5bn and US$ 46.0bn in 2012 and 2013, respectively, while according to the EU, it was projected to reach US$ 58.9bn in 2013 and US$ 65.8bn in 2014.

As a result of the reforms, Turkey's healthcare system is in good standing, although there is still room for improvement. Turkey had 2.7 hospital beds per 1,000 persons as of 2013 compared to OECD and peer averages of 5.0 and 5.5, respectively. By 2013, the number of healthcare professionals in Turkey was up to 1.8

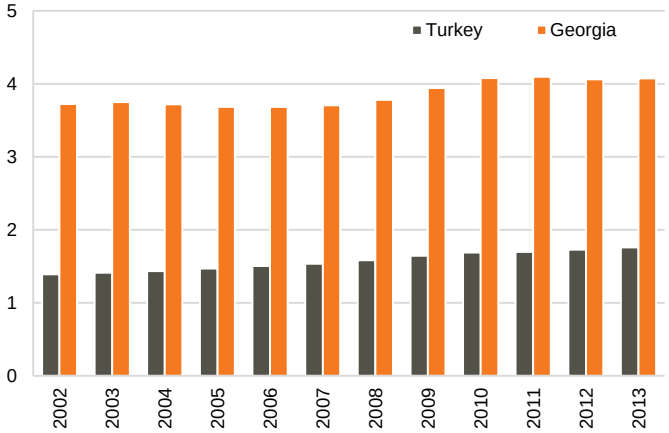
physicians (1.4 in 2002) and 2.5 nurses (1.7 in 2002) per 1,000 persons or 1.4 nurses (1.2 in 2002) per physician. This, however, still lags the OECD average of 3.3 physicians (2.8 in 2002) and 8.7 nurses (7.9 in 2002) per 1,000 persons or 2.6 nurses (2.8 in 2002) per physician. Through 2002-13, the supply of graduating nurses was higher than that of graduating physicians - a positive sign for the healthcare system. As evidence shows, the higher number of nurses per physician is important in order to achieve better cost control.

Figure 63: Hospital beds per 1,000 persons



Source: WB, WHO

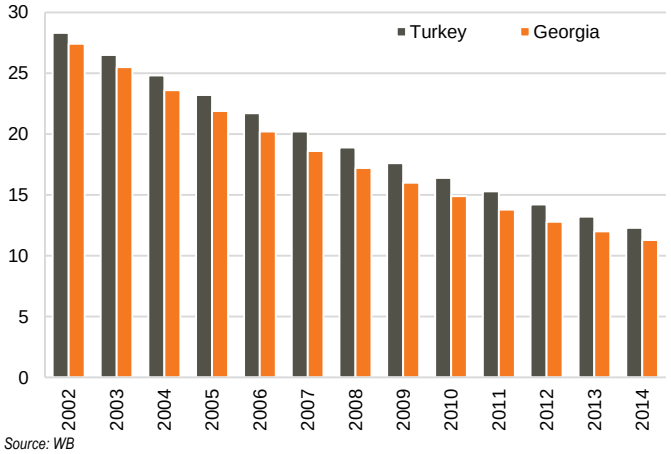
Figure 64: Physicians per 1,000 persons



Source: WB, WHO

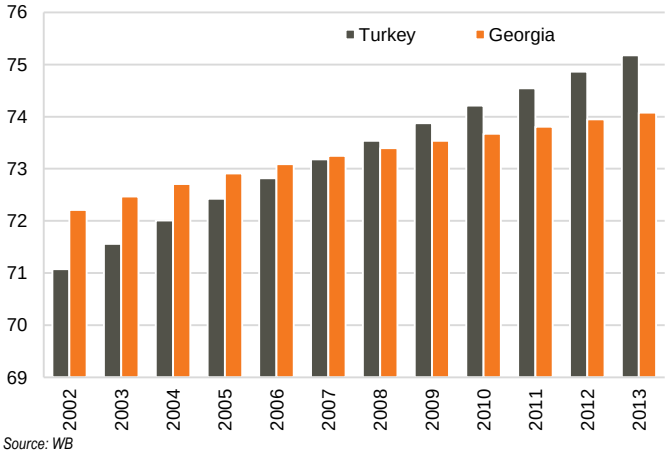
As part of Turkey's reform program, a system of medical audits for all maternal and infant deaths was introduced. As a result, maternal and infant mortality rates came down drastically to 17.0 per 100,000 live births in 2014 (74.0 in 2002) and to 12.3 per 1,000 live births in 2013 (28.3 in 2002), respectively. In Georgia, the maternal mortality rate per 100,000 live births more than halved from 52.0 in 2003 to 22.9 in 2013, as did the infant mortality rate per 1,000 live births from 27.4 in 2002 to 11.3 in 2014.

Figure 65: Infant mortality rate per 1,000 live births



Source: WB

Figure 66: Life expectancy, years

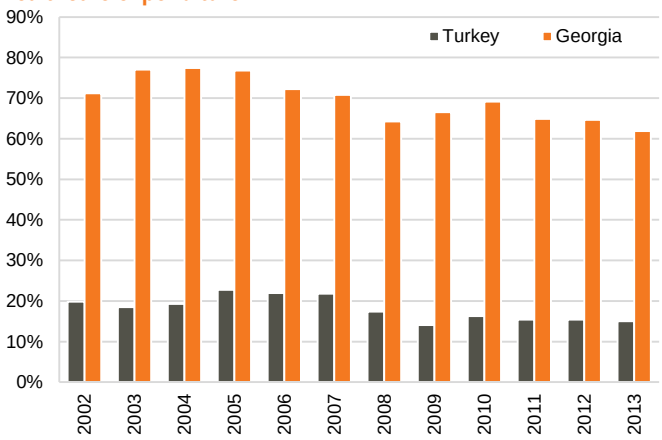


Source: WB

With increased access to care, life expectancy in Turkey increased from 74.7 for females (80.7 OECD average) and 67.6 for males (74.6 OECD average) in 2002 to 78.7 (83.0 OECD average) and 71.8 (77.8 OECD average) in 2013, respectively. As a result of the Health Transformation Program, satisfaction with primary care services increased from 69.0% in 2004 to 90.7% in 2011 and satisfaction with health services in public hospitals increased from 41.0% in 2003 to 76.0% in 2010. Moreover, the

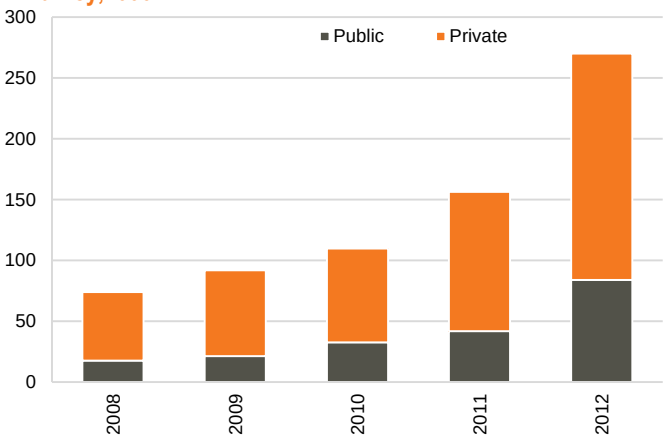
share of CDs in mortality decreased from 10.0% (28.1% global average) in 2004 to 6.9% (22.5% global average) in 2012.

Figure 67: Out-of-pocket health expenditure as a % of total healthcare expenditure



Source: WB

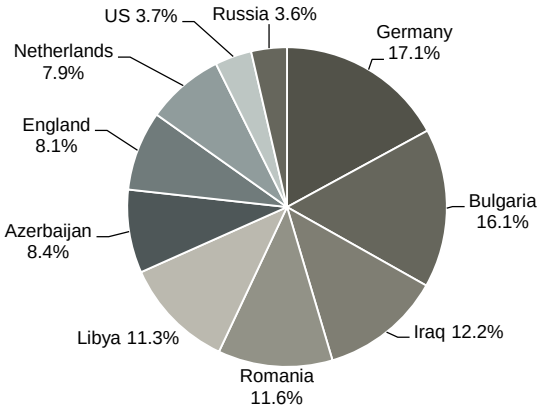
Figure 68: Number of foreigners receiving healthcare services in Turkey, '000



Source: Republic of Turkey Ministry of Health

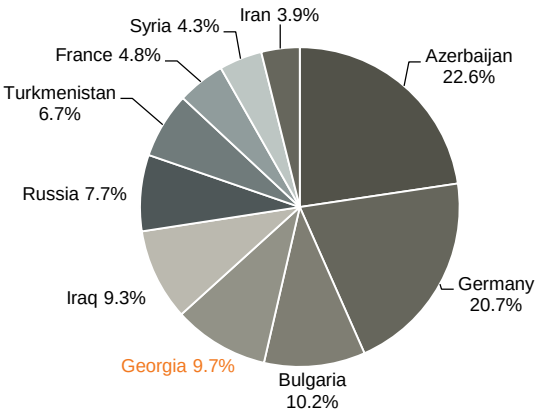
As a result of the major upgrade in its healthcare system, the number of foreigners receiving healthcare services in Turkey increased from 74,000 to 270,000 over 2008-12, a 38.2% CAGR. The attraction lies in world standard quality care, inexpensive and personalized service, short wait times, as well as the country's non-medical cultural attractions. Due to higher quality treatment, 73% of patients chose private hospitals and only 27% opted for public hospitals. Health tourists came predominantly from Germany, Azerbaijan, Bulgaria, Iraq, Romania, and Libya, as well as from Georgia. We believe if developed properly, Georgia's healthcare system would be able to not only retain internal patients, but also attract a significant number of health tourists, especially from nearby countries.

Figure 69: Health tourism by country, private hospitals (2011)



Source: Republic of Turkey Ministry of Health

Figure 70: Health tourism by country, public hospitals (2011)



Source: Republic of Turkey Ministry of Health

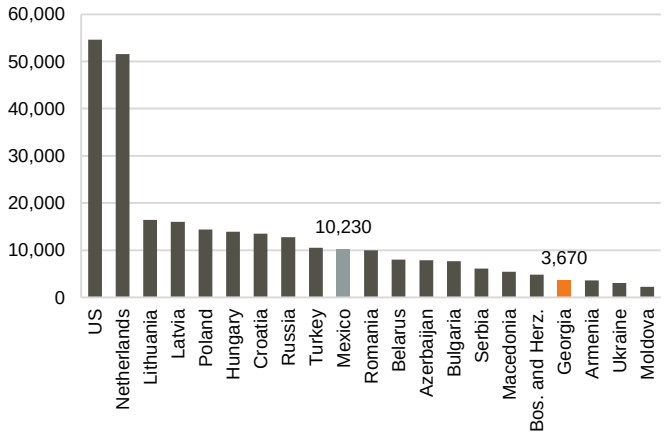
Turkey's MoH is cooperating with the Ministry of Culture and Tourism to further increase the scope of health tourism. The segment was projected to generate US$ 7bn in revenue from 0.5mn foreign patients in 2015 and US$ 20bn from 2mn patients in 2023.

Turkey's lessons are useful for Georgia: a clear statement of objectives, sequencing of reforms, strong political support, focus on visible outcomes, and monitoring of progress toward the objectives are all key to successful healthcare system reform.

Annex 2: Case Study - Mexico

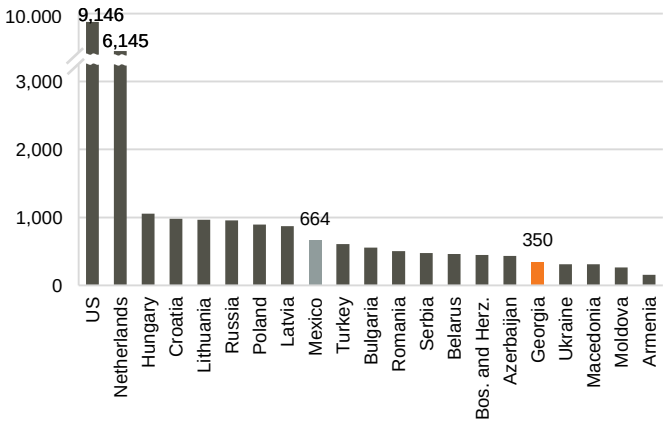
Mexico made a huge leap forward with its UHC system over the last 12 years. Economic disparity among the population is a problem in Mexico, despite it being the world's 15th largest economy (US$ 1.3tn as of 2014) and having one of the highest GDP per capita in Latin America (US$ 10,230 as of 2014). In 2012, more than half of the 113mn population lived below the poverty line,[23] compared with 9.7% of Georgia's 4.5mn population.[24] Not surprisingly, in 2000 the WHO ranked Mexico 144th out of 191 in fairness of healthcare finance[25] (Georgia ranked 106th at the time).[26] From 2002 to 2013, healthcare spending per capita increased from US$ 396 to US$ 664 (a 4.8% CAGR). Further, Mexico's healthcare spending is expected to increase by an annual average rate of 10.2% through 2017, according to Deloitte.

Figure 71: GDP per capita, US$ (2014)



Source: WB

Figure 72: Healthcare expenditure per capita, US$ (2013)



Source: WB

With only 6.7% of the population over the age of 65, Mexico is the youngest nation in the OECD. While unlike Georgia (14.1% of the population over the age of 65), Mexico does not face the problem of an aging population, NCDs were still responsible for 79.5% of deaths in Mexico by 2012 compared to 89.7% in Georgia. In response, Mexico's MoH launched a national strategy to prevent diabetes and obesity, highlighting the importance of investing in preventive healthcare to remedy the high cost of treating chronic diseases.

In the early 2000s, half the Mexican population was uninsured. Although the uninsured had access to services offered by public health facility networks, the distribution of public funds among population groups and states was inefficient and inequitable. The uninsured half of the population received only 1/3 of federal funding for health and there was a 5 to 1 difference in spending per capita across states in 2003. In addition, impoverishing health spending[27] was common and every year, 2-4mn households (9-18% of all households) suffered from catastrophic healthcare payments[28]. Public healthcare spending was below the Latin American average and was too low to address the challenges of epidemiological transition (shift in the burden of disease to chronic, long-term illness and injury). In response, in 2003 Mexico designed structural reforms to protect families from catastrophic health spending and

[23] 4.1% of the population lived under US$ 2 per day (PPP) in Mexico in 2012 (WB)

[24] 31.3% of the population lived under US$ 2 per day (PPP) in Georgia in 2012 (WB)

[25] Mexico's healthcare system's total ranking was 61st out of 191 (WHO) by 2000

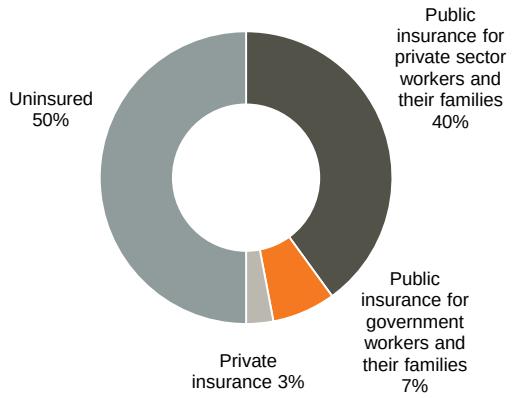
[26] Georgia's healthcare system's total ranking was 114th out of 191 (WHO) by 2000

[27] Impoverishment is measured as households falling below the poverty line equivalent to $1 per day (PPP), or deepening impoverishment if below the poverty line

[28] Catastrophic expenditure is measured as 30% or more of capacity to pay in turn proxied by total household expenditure less spending on food

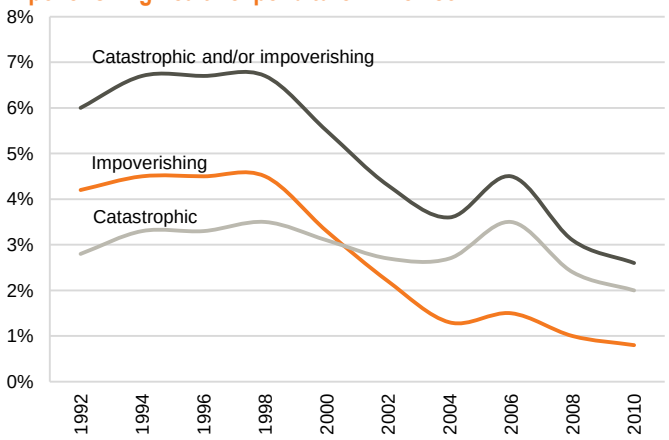
to completely cover Mexico's roughly 12mn uninsured families (54% of all households).

Figure 73: Health insurance in Mexico, 2000



Source: Department of Economics, University of California

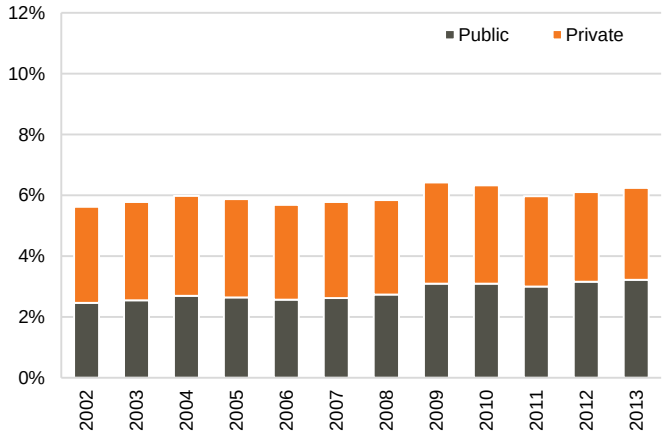
Figure 74: % of households at risk of catastrophic and impoverishing health expenditure in Mexico



Source: The Lancet

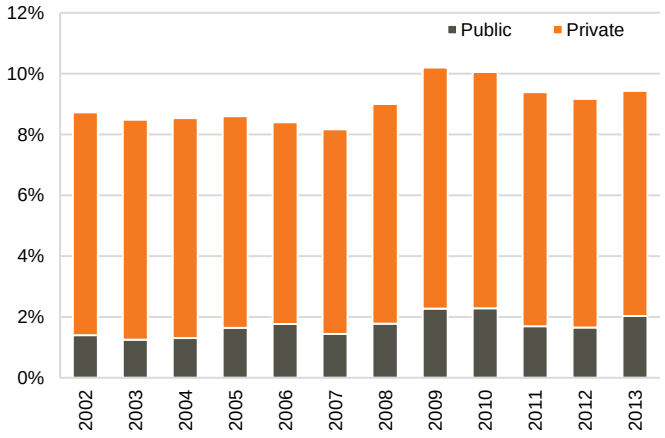
In the early 2000s, out-of-pocket spending accounted for more than half of healthcare spending in Mexico, above that of Brazil, Chile, and Colombia. The share of private spending was even larger in Georgia (4.6-5.7x that of public spending) and around 65.0% of medical care in Georgia was either self-treatment or provided free-of-charge from relatives or neighbourhood doctors.

Figure 75: Healthcare expenditure as a % of GDP in Mexico



Source: WB

Figure 76: Healthcare expenditure as a % of GDP in Georgia



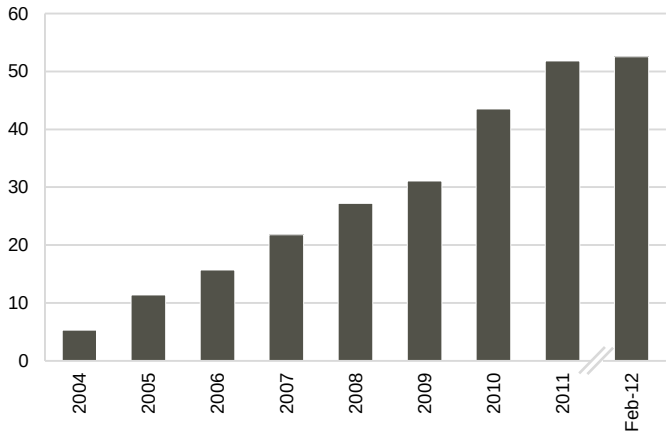
Source: WB

Similar to Georgia, the main challenge for Mexico was the disparity in allocation of healthcare financing and services among population groups and states. The Seguro Popular (SP), the new publicly funded insurance plan, took over in 2004 (Georgia started its insurance reform in 2007) with the goal of achieving 100% coverage in 7 years (Georgia introduced 100% coverage in 6 years). The program was implemented in stages, taking into account the states' individual characteristics, and enrolment was first targeted at the poorest part of the population.

Table 2: Evolution of financial imbalances in Mexico's healthcare sector	2000	2004	2010
Ratio of per-person public healthcare expenditure between covered and non-covered	2.1x	2.1x	1.2x
Ratio of federal per-person healthcare expenditure in the state with the highest figure to the lowest	6.1x	4.3x	3.0x
Variability in state contribution to healthcare financing (coefficient of variation)	1.0	0.8	0.7
% of MoH of Mexico budget devoted to investment	3.3%	3.1%	4.4%

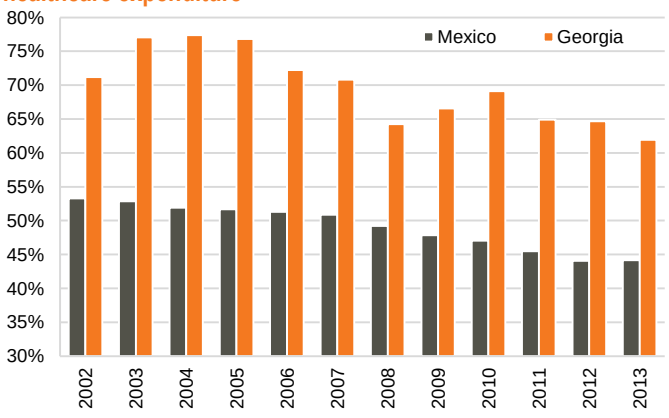
Source: The Lancet

Figure 77: Seguro Popular coverage, mn persons



Source: WB

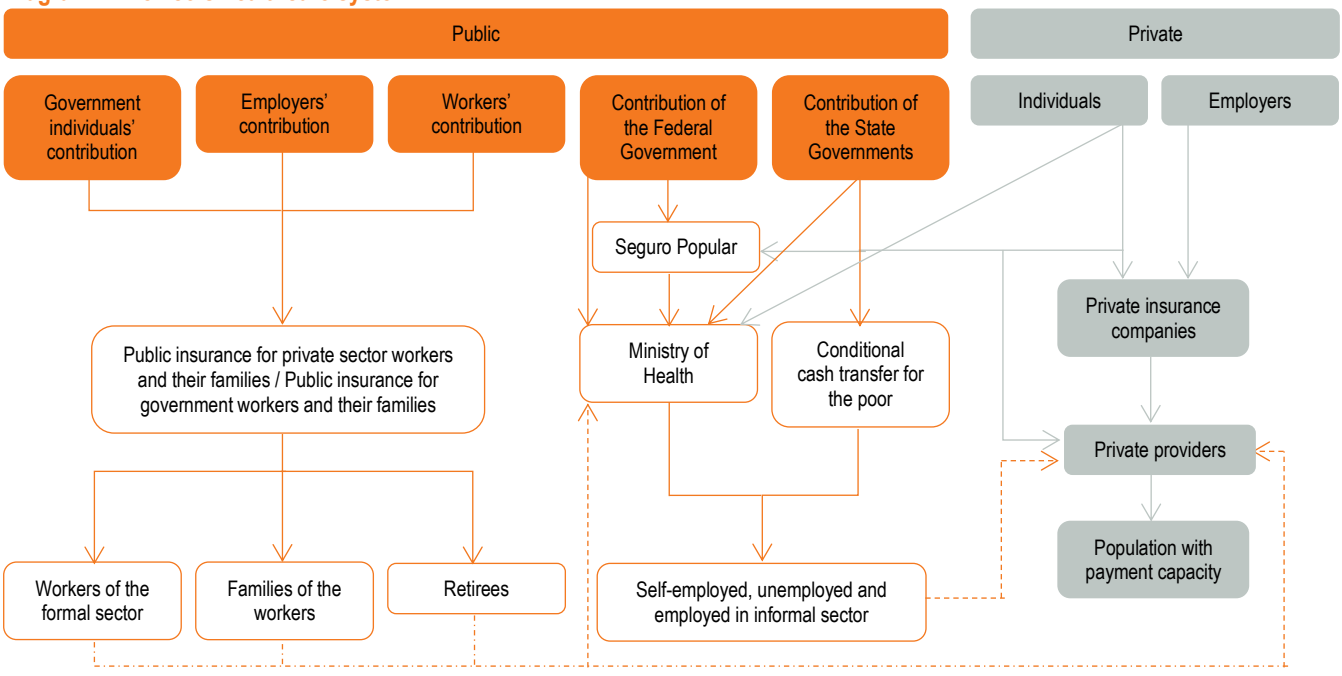
Figure 78: Out-of-pocket health expenditure as a % of total healthcare expenditure



Source: WB

SP was financed by both state and federal governments, as well as by beneficiary families. The federal government contributed a uniform amount for every family. Each enrolled state contributed an equal amount for every insured family and family-level contribution was determined by disposable income. The poorest 20% did not contribute at all, while the rest of the families paid a fixed proportion of disposable income with an upper limit of 5%. SP-covered services were provided by the public health facilities.

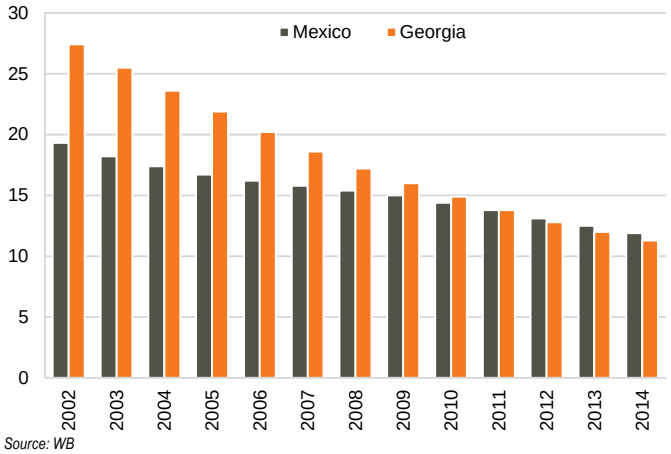
Diagram 2: Mexico's healthcare system



Note: The informal sector is the part of an economy that is not taxed, monitored by any form of government or included in gross national product (GNP)
Source: PwC

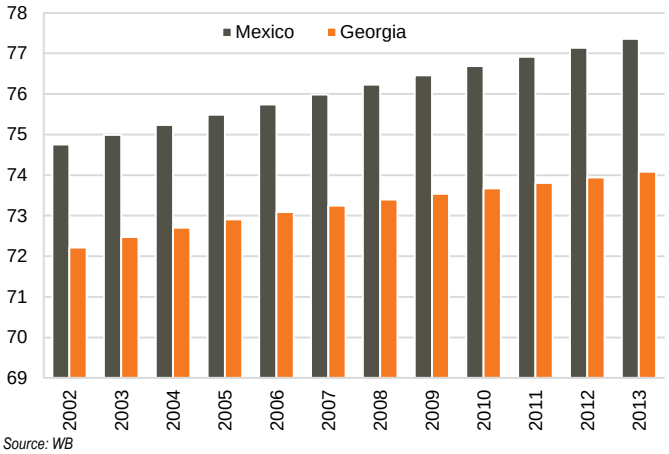
Due to improved access to and quality of care, share of CDs in mortality decreased from 11.6% (28.1% global average) in 2004 to 9.8% (22.5% global average) in 2012. With increased control over CDs and reductions in maternal and child mortality, life expectancy in Mexico increased over the last decade to 79.8 for females (OECD average of 83.0) and 75.1 for males (OECD average of 77.8) as of 2013, up from 77.2 (OECD average of 80.7) and 72.3 (OECD average of 74.6) in 2002, respectively.

Figure 79: Infant mortality rate per 1,000 live births



Source: WB

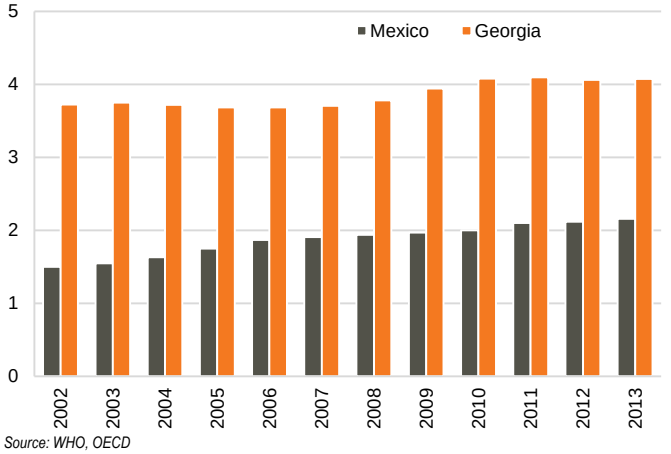
Figure 80: Life expectancy, years



Source: WB

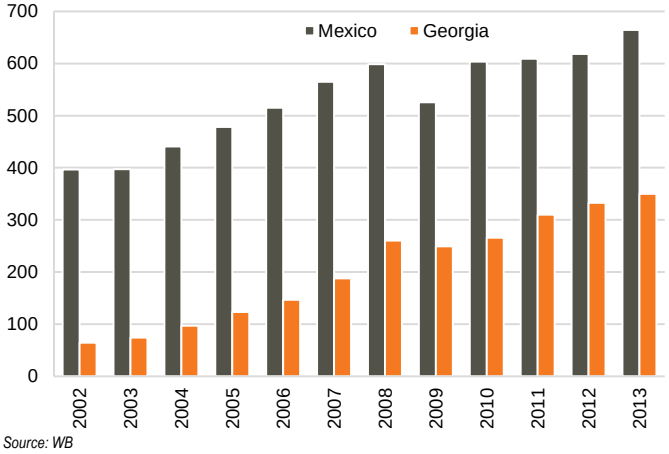
By 2013, Mexico had 2.2 physicians (1.5 in 2002) and 2.6 nurses (2.2 in 2002) per 1,000 persons or 1.2 nurses (1.5 in 2002) per physician. The OECD averages stood at 3.3 physicians (2.8 in 2002) and 8.7 nurses (7.9 in 2002) per 1,000 persons or 2.6 nurses (2.8 in 2002) per physician. As of 2013, Mexico holds last place (1.5 per 1,000 persons) among OECD countries (average of 5.0) in the number of hospital beds per person. Mexico also has the 3rd lowest annual per capita spending on pharmaceuticals of US$ 294 (PPP) compared to an OECD average of US$ 525 (PPP).

Figure 81: Physicians per 1,000 persons



Source: WHO, OECD

Figure 82: Healthcare expenditure per capita, US$



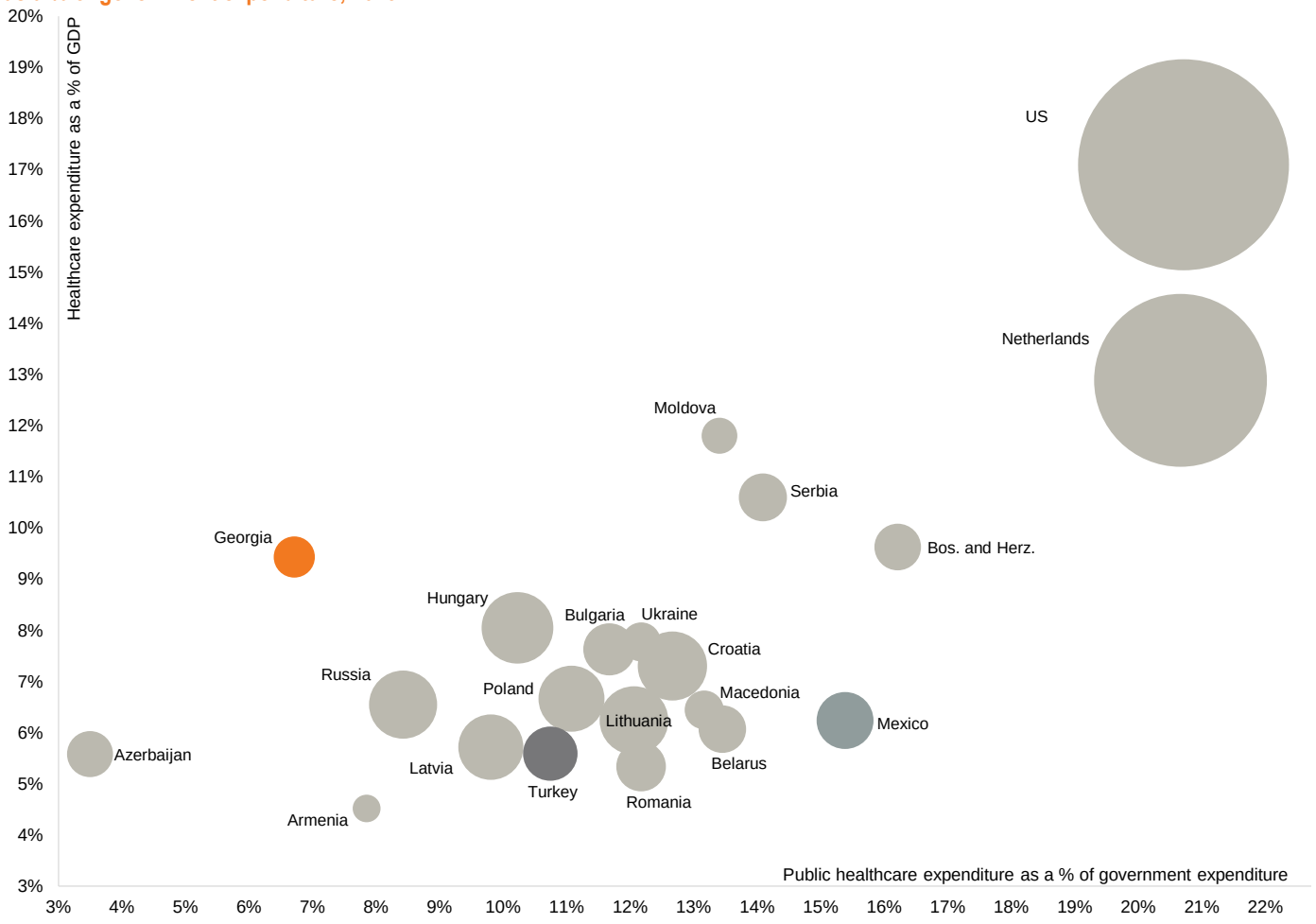
Source: WB

Despite these strides, Mexico's public healthcare system faces considerable challenges, including insufficient infrastructure, poor distribution of resources among federal entities, and limited public-private partnerships for infrastructure development. There is also little focus on wellness and prevention - only 0.6% of budget disbursements for the health sector are used for the promotion of health and prevention and control of communicable and degenerative diseases and injury. The private healthcare system has challenges as well, including a deficit of nurses, since wages and benefits are lower than those offered by the public sector. In addition, Mexico has the 2nd lowest (after Finland) number of doctor consultations per capita of 2.8 in OECD, compared to an average of 7.1 (2013).

The inefficiency of the system was the main problem hindering the development of Mexico's healthcare system. Mexico's case shows that increased government funding, equality in funding allocation, proper timing, and efficient management were the key contributors to the turnaround of the country's healthcare system.

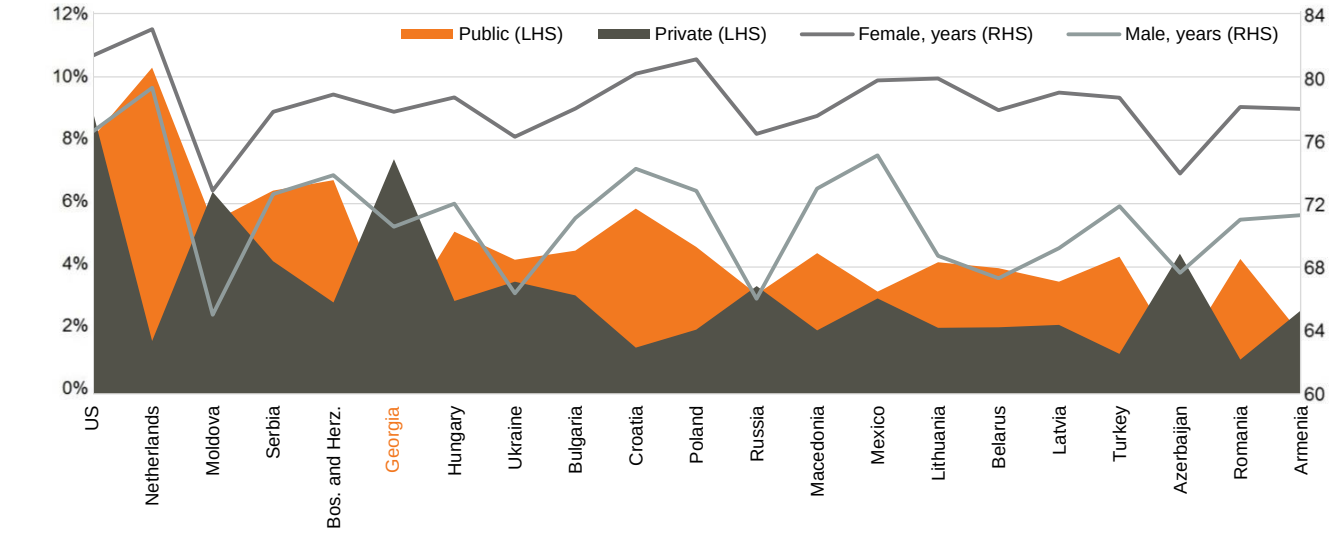
Annex 3: Countries by Healthcare Expenditure

Figure 83: Countries by healthcare expenditure per capita, healthcare expenditure as a % of GDP and public healthcare expenditure as a % of government expenditure, 2013



Source: WB

Figure 84: Countries by healthcare expenditure as a % of GDP and life expectancy (2013)



Source: WB

Annex 4: Countries by Healthcare System Efficiency

Table 3: Countries by Healthcare System Efficiency

2014 Rank	Country	Score	Life expectancy, years	Healthcare expenditure as a % of GDP	Healthcare expenditure per capita, US$	Change in life expectancy, years	Y/y change in healthcare expenditure per capita, US$	Change in healthcare expenditure per capita	Y/y change in GDP per capita	Annual inflation	2013 Rank
1	Singapore	78.6	82.1	4.5%	2,426	0.40	281.73	13.1%	2.2%	4.5%	2
2	Hong Kong	77.5	83.5	5.3%	1,944	0.06	535.68	38.0%	4.5%	4.1%	1
3	Italy	76.3	82.9	9.0%	3,032	0.30	-306.64	-9.2%	-8.6%	3.0%	6
4	Japan	68.1	83.1	10.2%	4,752	0.50	110.93	2.4%	0.7%	-0.0%	3
5	South Korea	67.4	81.4	7.0%	1,703	0.40	50.11	3.0%	1.2%	2.2%	8
6	Australia	65.9	82.1	9.1%	6,140	0.20	25.62	0.4%	8.6%	1.8%	7
7	Israel	65.4	81.7	7.0%	2,289	0.00	-84.64	-3.6%	-2.1%	1.7%	4
8	France	64.6	82.6	11.8%	4,690	0.45	-278.26	-5.6%	-6.6%	2.0%	19
9	UAE	64.1	77.0	3.2%	1,343	0.18	-32.24	-2.3%	6.7%	0.7%	12
10	UK	63.1	81.5	9.4%	3,647	0.55	-11.47	-0.3%	-0.7%	2.8%	14
11	Norway	63.0	81.5	9.1%	9,055	0.16	-852.86	-8.6%	0.5%	0.7%	0
12	Mexico	59.1	77.1	6.3%	618	0.22	9.48	1.6%	0.2%	4.1%	15
13	Ecuador	58.4	76.2	6.7%	361	0.28	-0.81	-0.2%	7.7%	5.1%	20
14	Spain	58.1	82.4	9.9%	2,808	-0.10	-170.01	-5.7%	-9.1%	2.4%	5
15	Switzerland	57.9	82.7	11.4%	8,980	0.00	-267.86	-2.9%	-5.2%	-0.7%	9
16	Saudi Arabia	57.8	75.5	3.1%	795	0.21	73.88	10.2%	7.6%	2.9%	29
17	Chile	55.5	79.6	7.2%	1,103	0.27	81.75	8.0%	5.1%	3.0%	13
18	Czech Republic	54.1	78.1	7.7%	1,432	0.20	-113.70	-7.4%	-9.2%	3.3%	24
19	Finland	53.3	80.6	9.3%	4,232	0.16	-179.44	-4.1%	-6.3%	2.8%	23
19	Sweden	53.3	81.7	9.7%	5,319	-0.10	-99.36	-1.8%	-3.0%	0.9%	10
21	Canada	52.9	81.2	11.0%	5,741	0.17	84.32	1.5%	1.2%	1.5%	17
22	Poland	52.4	76.8	6.7%	854	0.05	-61.31	-6.7%	-5.0%	3.7%	21
23	Germany	51.6	80.9	11.0%	4,683	0.15	-312.72	-6.3%	-4.0%	2.0%	30
24	Greece	49.9	80.6	9.1%	2,044	-0.10	-259.74	-11.3%	-14.1%	1.5%	31
25	Libya	49.8	75.2	4.3%	578	0.19	367.40	174.1%	134.0%	6.1%	11
26	China	49.5	75.2	5.3%	322	0.16	47.88	17.5%	11.8%	2.7%	37
27	Malaysia	49.2	74.8	3.9%	410	0.17	25.37	6.6%	3.7%	1.7%	18
28	Portugal	47.2	80.4	9.4%	1,905	-0.10	-397.31	-17.3%	-10.5%	2.8%	27
29	Thailand	46.9	74.2	3.9%	215	0.18	1.19	0.6%	5.5%	3.0%	22
30	Romania	46.8	74.6	5.0%	420	0.00	-59.92	-12.5%	-6.9%	3.3%	33
31	Slovak Republic	46.3	76.1	7.8%	1,326	0.15	-89.04	-6.3%	-4.9%	3.6%	36
31	Turkey	46.3	74.9	6.2%	665	0.32	20.54	3.2%	0.5%	8.9%	44
33	Argentina	46.1	76.0	6.8%	995	0.17	128.89	14.9%	7.2%	10.0%	32
34	Denmark	45.7	80.1	11.2%	6,304	0.25	-217.66	-3.3%	-5.9%	2.4%	39
35	Austria	45.6	80.9	11.6%	5,407	-0.05	-235.54	-4.2%	-5.4%	2.5%	16
36	Peru	44.0	74.5	5.3%	337	0.30	54.43	19.2%	11.5%	3.7%	35

2014 Rank	Country	Score	Life expectancy, years	Healthcare expenditure as a % of GDP	Healthcare expenditure per capita, US$	Change in life expectancy, years	Y/y change in healthcare expenditure per capita, US$	Change in healthcare expenditure per capita	Y/y change in GDP per capita	Annual inflation	2013 Rank
37	Hungary	42.6	75.1	7.9%	987	0.20	-108.81	-9.9%	-8.9%	5.7%	38
38	Venezuela	42.3	74.5	4.7%	593	0.16	106.51	21.9%	18.6%	21.1%	26
39	Serbia	41.4	75.2	10.6%	561	0.65	-61.31	-9.8%	-12.5%	7.3%	47
40	Netherlands	41.1	81.1	12.5%	5,737	-0.10	-260.38	-4.3%	-7.9%	2.5%	25
41	Belgium	40.2	80.4	10.9%	4,711	-0.20	-203.11	-4.1%	-6.6%	2.8%	34
42	Belarus	37.3	72.1	5.0%	339	1.41	27.54	8.8%	6.6%	59.2%	0
43	Dominican Republic	35.0	73.2	5.4%	310	0.22	17.33	5.9%	5.0%	3.7%	43
44	US	34.3	78.7	17.2%	8,895	0.10	428.07	5.1%	3.8%	2.1%	46
45	Bulgaria	33.7	74.3	7.3%	516	0.15	-6.00	-1.2%	-3.6%	3.0%	41
46	Iran	32.5	73.8	7.5%	490	0.31	7.57	1.6%	-6.1%	27.4%	45
47	Colombia	31.6	73.8	6.8%	530	0.20	64.00	13.7%	9.0%	3.2%	42
48	Algeria	31.4	70.9	5.2%	279	0.13	46.00	19.8%	0.7%	8.9%	40
49	Azerbaijan	27.3	70.6	5.4%	398	0.07	39.24	10.9%	2.8%	1.1%	0
50	Brazil	23.9	73.6	9.3%	1,056	0.27	-62.49	-5.6%	-10.0%	5.4%	48
51	Russia	22.5	70.5	6.3%	887	0.80	84.37	10.5%	5.8%	5.1%	0

Source: Bloomberg

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