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# Health Care System in Georgia

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Health care reform in all countries has been a seach for the Holy Grail, Often poorly informed by evidence and driven by Sustained advocacy.

#### Alan Maynard and John Hulton

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Authors

The book covers a variety of health care issues and topics including history of Georgian health, policy, legislation, human resources, financing, medical insurance, public health, quality, strategy, delivery of care, organization services, education, research and give an overview of the nature of the changes having occurred during transition.

The aim of the book is to provide relevant comparative information to support policy-makers and analysts in the development of health care system and reform in the country. Quantitative data on health services Regional office for Europe health for all databases, OECD Health Data, World Bank, Government of the Republic of Georgia, United Nations Development Programs, Georgian-European Policy and Legal Advice Centre, State department for statistics of Georgian, Center for Medical Statistics and Information of Georgia.

Authors

## 1. THE COUNTRY

## **1.1.** Geographical Location

Georgia is usually considered Asia's foothold in Europe – a country that bridges two continents. Georgia located on the ancient Silk Road between Europe and Asia, between 40' and 47' longitude east and 41'and 44 longitudes north, along the southern slopes and to the south of the Caucasus Mountains.

The Georgia Republic (Georgia: Sakartvelos Respublika) occupies an area of 69.7 sq km (about 26 900 square miles) in the heart of Caucasian region. Georgia is surrounded by the high mountain ranges of Caucasus along its northern border with Russia, Armenian and Turkish highland along its southern borders, Black Sea to the west and high plateaus to the east, along the border with Azerbaijan. For centuries, Tbilisi and Kutaisi played roughly equal roles as the main cities in the two regions.

Tbilisi (Tiflis) is the capital of Georgia. Tbilisi is the administrative and commercial center and is located to the east of the country's geographical centre. The city is situated along both banks of the Kura River in an intermountain basin, at an elevation of 406 to 522 m's' (1,332 to 1,712 ft). The name Tbilisi derives from a Georgian word meaning "warm", reflecting the presence of hot sulfur springs.

The main ports are Poti and Batumi. Batumi is the capital of Adjara autonomous Republic.

Georgian has an extraordinary variety of charming landscapes. Three-quarters of the country lies upon the mountain, more than a third of which are heavily wooded. Mount Shkhara is the tallest peak, measuring 5068 m (16 628 feet). It is followed by many other peaks with heights of 4500 m (14 765 feet) or greater. The inter mountain depression to the south of the Greater Caucasus encompasses the Kolkheti lowland, Inner Kartli, Lower Kartli and the Alazani Plain. Still further to the Minor Caucasian ranges rise to the medium height (Meskheti, Shavsheti and other ranges), reaching 2850 m. The southernmost area of the country is covered by the volcanic South Georgian Upland (Mt. Didi Abuli, 3301 m, its highest peak), dissected by specific canyon – like river gorges.

The Greater Caucasus and the South Georgian Upland join with the Likhi Range, which at the same time divides Georgia into two contrasting climatic zones: Western and Eastern Georgia.

Georgia is viewed as the crossroad between the East and West, connecting by a system of highways and railroads the Asian countries with the Black Sea region, and thus creating the East-West Transport Corridor. The main highway runs from the Black Sea coast the length of the country to the Azerbaijan border in the east, connecting the main cities Batumi, Poti, Gori and Kutaisi with capital, Tbilisi.

The two largest rivers in Georgia, the Kura and the Rioni, flow in opposite directions; the Kura, which originates in the Turkey, runs generally eastward through Georgia and Azerbaijan into the Caspian Sea; the Rioni drains into the Black Sea to the west.

## **1.2.** Administrative Division

Administratively Georgia is divided into 2 Autonomous Republic, 9 Region, 2 city and Tskhinvali Region, the status of which has not been distinguished yet.

#### **Autonomous Republic:**

1.	Adjara A.R	(Batumi)
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2. Abkhazia A.R (Sukhumi)

#### City:

3.	Tbilis

4. Poti

#### **Regions:**

5.	Kakheti (Telavi)
6.	Kvemo Kartli (Rustavi)
7.	Shida Kartli (Gori)
8.	Mtskheta-Mtianeti (Mtskheta)
9.	Samtskhe-Javakheti (Akhaltsikhe)
10.	Imereti (Kutaisi)
11.	Samegrelo-Upper Svanety (Zugdidi)
12.	Guria (Ozurgeti)
13.	Racha-Lechkhumi & Kvemo-Svaneti (Ambrolauri)

Three ethnically based Autonomous Republic were established in Georgia during the Soviet period. Abkhazia, in the northwest, has an area of 8,600 sq. km and a population of 538,000 (1990). It is based on the Abkhazia, a Caucasian people, who, however, form less than 18% of the population of Abkhazia. The capital is Sukhumi. Adjara on the Turkish border is based on the Adjars, who are ethnic Georgians. It has an area of 3,000 sq. km and a population of 382,000 (1990). Its capital is Batumi. South Ossetia, on the Russian border, adjoins North Ossetia, a republic within the Russian Federation. Based on the Ossetians, it has an area of 3,900 sq. km and a population of 99,000 (1990). Its capital is Tskhinvali.

The capital city has an especial status (level of region). Large units are divided into districts, district towns, small towns, and village. On the whole there are 942 Village Council in Georgia. A Village Council is formed according to a population number – from 1000 to 2000 residents. The structure of Georgia Local and Regional Administration is four leveled. At the first level are village council and district towns, at the second level are district, at the third level are regions and at the top level are autonomous republics.

#### **1.3.** State System of Georgia

Georgia is a democratic state with a republican form of government, under the rule of President of Georgia, the Parliament of Georgia, and the courts of Georgia. The President of Georgia is the head of the state. Georgia is constitutionally composed of three branches of: Executive, Judiciary and legislative, which are independent, separate powers from each other. The Parliament of Georgia is the country's highest representative body, executing the legislative power.

Georgia is a member of the United Nations, the Council of Europe, the Commonwealth of Independent state and the Organization for Security and Co-operation Europe. In March 1994 Georgia joined the Russian were trying to strengthen their influence that caused partnership for Peace programs, which provide for limited military co-operation with the North Atlantic Treaty Organization.

## 1.4. Religion

The dominant religion is Eastern (Greek) Orthodox Christianity. Georgia adopted Christianity in 337 AD. Other principal confessional groups include Sunni and Shiite Muslims, Armenian Gregorian, Judaists, Catholics and Baptists.

Jewish communities have existed throughout the country, with major concentrations in Tbilisi and Kutaisi. Azerbaijani groups have practiced Islam in Georgia for centuries, as have some Abkhazians and Georgians living in Adjara. The Armenian Gregorian church has its congregation.





Source: State Department for Statistics of Georgia.

## 1.5. Climate

The climate in Georgia varies widely by region, ranging from humid, subtropical conditions in the eastern uplands. Humid subtropical climate dominants in the Western Georgia, while Eastern Georgia features a transition from subtropical to moderate. The mean January temperature varies from - 2 degree (Kolkheti) to 3 degree; in August from 23 to 26 degrees. In the mean annual precipitation varies from 1000 to 2800 mm, in Eastern Georgia from 300 to 600 mm.

#### **Natural Resources**

Georgia possesses among the richest manganese mines in the world, situated in Tchiatura and Satchkere districts in the Imereti region, first exploited in 1879. Total reserves are in the region of 200 million tones.

Non-ferrous metals include copper ore exist in Bolnisi (Kvemo Kartli). Arsenic deposits exist in Racha and Svanety, but because of outdated mining technology the arsenic is below world standard and is sold, quasi-illegally, at low prices. A significant deposit of lead-zinc, situated in the Tskhinvali region.

Georgia is rich in various resources for use in the mineral-chemical industry of which barite ores are the most important, supplying about 70 per cent of the former USSR's requirements. The largest deposit is in Gudauta in Abkhazia and in Bolnisi district.

Colitis, used mainly in the purification of natural gas, in the petrochemical industry and agriculture, are found in Kaspi and Mtskheta districts but not exploited commercially.

Bentonite clays, used to purify various liquids, including petroleum, vegetable oils, or wine, are mined in Ascane (Guria) Tskhaltubo (Imereti). Calcites, talcum, diatomite's, amdesites, dolomites and mineral paints are also found.

Georgia has large reserves of material used in the construction industry, especially high quality marble and other decorative stones, decorative gravel, clays suitable for manufacture of Portland cement.

Good quality mineral and drinking water are available in Georgia in very large quantities, needing relatively little investment for their exploitation, nor complicated equipment or yet much skilled manpower. Chemical composition varies, carbon dioxide is the most common gas content; other waters contain sulfide, methane, nitrogen, etc. used in the treatment of digestive, cardiovascular, peripheral, nervous, osseous-muscular system, skin diseases...

## 1.6. History

Since ancient times Georgia has been populates by the ancestors of Kartvelian tribes. They established agricultural traditions: sowed wheat, had highly developed viticulture of endemic species of grapes and developed cattle breeding economy.

The Trans-Caucasus region, where Georgia is located, historically has been one of the most desired geo-strategic locations for influential political powers to establish their

hegemony. The geographical location of Georgia became the reason of co-operation with different countries and at the same time, challenged the strong interest of the conquerors, as well. History of Georgia always has been characterized by the tendency of unification. The Georgian satellites were uniting, separating, and then distributing between the conquerors. From the ancient times Iran, Rome, Byzantine, Arabic State, Seljuk Turks, Mongols, Ottomans, Russians were trying to strengthen their influence, that caused unfavorable results for the country, destroyed its unity and turned Georgia into the territory for permanent military operation.

In the XII-VIII centuries BC in southwest part of historic Georgia (southeast of the Black Sea), existed Diaokh kingdom (later known as Tao, nowadays in Turkey). From about the 6<sup>th</sup> century BC, Georgia was colonized by Ionian Greeks; the western region was located on the Eastern coast of the Black Sea since the VI century BC (from Apsarosi to old Psou). In about the 4<sup>th</sup> century BC, Georgia was united into a single kingdom (Kartli's Kingdom), in Eastern Georgia, with Mtskheta as its capital. The first King of Kartli was Parnavaz.

In the first century AD Georgian was misssionered by first Christians. The Christianity was declared AD Georgia as the state religion in the beginning of the IV century (337) while the ruling of King Mirian, as a result of saint Nino Kabadokieli preaching. During this period, while fighting against Iran conquerors, Georgian Church gained the independence (Autocephaly).

Until the 7<sup>th</sup> century, the Persian and Byzantine empires contested control over Georgia. The Arabs conquered the region in the 7<sup>th</sup> century and by the Seljuk Turks in the 11<sup>th</sup> century. Since the ruling of Arabians, unity of Georgia was broke up into several small separate kingdoms: Abkhaz Kingdom (capital Kutaisi) in West Georgia, Kakheti (capital Tianeti) and Hereti (capital Shaki) Kingdom in East Georgia and South-west Georgian Kingdom (Tao-Klarjeti, capital Artanuji) under the leadership of Bagrationi Dynasty.

In the 970s Bagrat Bagrationi became the King of the country (975-1014) and by uniting separate Georgian kingdom, was formed State of Georgia, which later become United Georgian Feudal Monarchy.

King David IV expelled the Turks in the early 12<sup>th</sup> century, reuniting Georgian as a kingdom. In the XII century Georgia became the strongest Christian State in the Near East, which was laid from Nicopsia (nowadays Tuapse) to Darubandi. The most powerful Georgia was during the King David IV – Agmashenebeli (1089-1125) and the Queen Tamar (1184-1213). Despite the hard battles with Turk-Selchuks (1070s and the, beginning of the XII century) 100 year ruling of Mongols (XIII – XIV centuries) The Country was developing. It was the time of strengthening and developing Georgian politics, culture and economy. In the

period was written history of whole Georgia ("Kartli's Tskhovreba") and various philosophic tractates, was created the legal basis for jurisdiction, were built Alaverdi, Bagrati, Gelati monastery complex, Vardzia Cave Town, etc. the churches and monasteries as the same time were used as cultural and educational centers, where training of young pupils, translation of religious-philosophic literature and origin ones took place. The most popular and well-known Georgian poem Shota Rustaveli's "The Knight in the Tigers Skin" was created.

Great United Georgia existed until the XV century. The kingdom was crushed by Mongol invaders in the 13<sup>th</sup> century. Since the XVI century Georgia was separated into small kingdoms and surrounded by Muslim countries Kingdom was fighting to save its religion and to survive. Thereafter Georgia was under the control of Iran and the Ottoman Empire until the 18<sup>th</sup> century.

After the Russian Empire appeared at the Eastern politics arena, the belief for survival for Georgians was with Orthodox Christian Russian. Since the 2<sup>nd</sup> half of the XVIII century the King of Imereti Solomon (1754-1784) were fighting against Persia and Ottoman Empire. In 1801 Russian Empire Violated the "Georgievski Treaty". They occupied Eastern Georgia and abrogated the Kartli-Kakheti kingdom. In 1803 Russians conquered Imereti and other West Georgian principalities were occupied and Georgia's whole territory and divided as a Tbilisi and Kutaisi Guberny, the constitutive parts of Empire.

In 1864, there was Abolished selfdom in Georgia, which supported to develop capitalism in the country. In these difficult conditions the cultural activities were continuing. There were written historical and philosophic productions, were provided scientific observations, were existing publish-houses, theatres, libraries, etc. Leading Georgian intellectuals was fighting to improve national language and culture.

After the 1917 Revolution, Transcaucasia was separated from Russian Empire. In 26 May of 1918 the Independence of Georgia was declared. In 1920 was sign the agreement between Georgian Republic and Soviet Russia about non-aggression pact. In the 25<sup>th</sup> of February of 1921 the 11<sup>th</sup> Red Army invaded the country, and the region was incorporated into the USSR.

The Soviet dictator Joseph Stalin and his chief of police Lavrenti Beria - both Georgians by birth- were instrumental in dashing any hopes Georgia may have had for national autonomy under Soviet rule. The repression continued under Stalin's successor, Nikita Khrushchev: a brief revolt in Tbilisi in 1956 was put down by Soviet tanks, resulting in hundreds of deaths. Under the Brezhnev regime Georgia did manage to make some gains, such as the right to retain Georgian as the sole official language of the republic.

A turning point in recent Georgian history came with a brutal attack by Soviet troops on peaceful demonstrators in 9 April 1989. In the aftermath of this attack, which left 20 people dead, popular support shiefted in the direction of complete independence from the USSR. Gamsakhurdia's victory in the 1990 elections was a direct consequence of these events.

In 1991 after collapse of the Soviet Union, Georgia gained back its independence (officially declared in 26 May of 1996). Georgia was among the first republics of the former Soviet Union to declare independence.

The elections held on 28 October 1990 favored those best able to demonstrate their anti-Communist stance, namely the parties and politicians united under the auspices of the Round Table block led by Zviad Gamsakhurdia, a well – known dissident and a son of the popular historical novelist. The Round Table won the elections, with the Communists, dispirited and disoriented, in second place.

The Supreme Council called a referendum to decide on independence which received support on March 31, 1991 from the great majority of those who vote. Appealing to nationalist aspirations and anti-Communist sentiments, Gamsakhurdia continued to win the first post-Soviet presidential elections on May 26, the day Georgia had announced independence in 1918.

In 1991 President Gamsakhurdia's former allies Tengiz Sigua and Tengiz Kitovani, supported by Jaba Ioseliani, leader of the paramilitary Mkhedrioni troops, launched a coop against Government. The Government building and several other buildings in the center of Tbilisi were left in ruins after a month of fighting. Gamsakhurdia fled to Armenia and then to Grozny in Chechnya where he remained under the personal protection of President Dudaev.

Military council reformed into the State Council and in March 1992 invited the former Ministry of Foreign Affairs of the USSR Eduard Shevardnadze to preside real control over the country. Shevardnadze obtained an overwhelming majority of votes in the elections that followed in October and was confirmed as chairman of Parliament. Under his leadership, Georgia has membership in the United Nations, the Council of Europe, the Commonwealth of Independent States and Organization for Security and Cooperation in Europe.

Under both Gamsakhurdia and Shevardnadze, Georgia has been plagued by separatist movements and conflicts between political factions. Several of Georgia's minorities felt threatened by the prospect of Georgian independence. Nationalist movements in South Ossetia (starting in 1991) and Abkhazia (in 1992-93) sought independence from Georgia, and bitter fighting broke out between these groups and Georgian forces. By 1995, Abkhazia and South Ossetia were outside the control of the Georgian government, and most of the ethnic Georgian inhabitants of those territories had forced into exile.

In March 1994 Georgia joined the Partnership for Peace Program, which provided for limited military co-operation with the North Atlantic Treaty Organization. The transformation to a democratic state will be incremental and difficult given macro environmental changes that include privatization efforts, internalization with a focus towards Western Europe implementation of principles of decentralization of management structures.

#### 1.8. Economy

Half a decade ago, living standards in Georgia were quite good. During the Soviet period, Georgia's economy was tightly integrated into the Communist economic system. Most enterprises were state owned and directed from Moscow. Industrial capacity was geared to Soviet economic needs, and foreign trade was limited. In the Soviet period, Georgia was well known for its large shadow economy: this was the only possibility for private economy under the orthodox socialist state-controlled economic system. Agriculture has always been more important in the Georgian economy than industry, accounting for 42% of the Gross National Product in 1991, while industry constituted another 34%. The rest was distributed between construction, transport-communication and trade.

Reclamation of swampy coastal lowlands around the mouth of the Rioni River has added much fertile land; this region produces tea and citrus fruit. Other crops are grapes, tobacco, and silk. Food processing accounted for about two fifths of industrial activity in 1990, followed by light industries (consumer goods, such as textiles). Georgia has gained increasing importance as an industrial region because of the abundance of electric power, mineral deposits (manganese, iron ore, molybdenum and gold), and fuel (coal and petroleum). Marble, alabaster and diatomite shale are also mined. Industry produces iron and steel, cement, motor vehicles and textiles. Mining of manganese has been a major source of income in the past, but had begun to decline well before independence. Mining and metallurgy, as a whole diminished from 10 per cent of industrial output in 1970 to no more than 4 per cent by 1990.

Trade plaid a large role in Georgia's economy, imports and exports together amounting go almost half of GDP in 1988-1990. The bilk of trade was with other republics of the former Soviet Union (96 per cent of exports, 72 per cent imports in 1990).

Georgia's Black Sea coast, an important resort area, attracts visitors from around the world. Ethnic tensions near resort areas, however, reduced the number of visitors in the early 1990s. The cost of military engagement in the country's autonomous areas also contributed to a general economic decline in Georgia after the USSR was dissolved in 1991.

Georgia's industry has been depended on other suppliers, especially the Russian Federation, for raw material, spares, markets and fuel. In 1989, 25 per cent of electricity consumed in the republic was imported, almost all the fuel and gas, over 80 per cent of timber, about 50 per cent of cement, and almost 90 per cent of raw materials used in light industry. Similarly, 60 per cent of dairy products, over 50 per cent of grain and over one third of meat consumed in Georgia were imported.

The position has seriously deteriorated since independence. Trading largely ceased among the republics of the former Soviet Union. Overall production has fallen dramatically. A high rate of inflation has destroyed most of the monetary savings that had been accumulated in rubles in the pre-independence period. Real incomes of the population and hence purchasing power declined sharply.

Georgia is caught in a vicious cycle of reducing trade, production, exports and traditional sources of supply and markets, unable for the time being to compete in international markets. The breakup of the former Soviet Union disrupted traditional trade and payments links and led to a large terms-of-trade shock for energy imports. These difficulties were compounded by civil conflicts in Abkhazia and South Ossetia, resulting in large movements of refugees. As a result, Georgia suffered one of the sharpest economic declines in the former Soviet Union: between 1990 and 1995, output fell by more than 70%, capacity utilization in the industrial sector dropped to about 20% of previous levels, heavy disruptions in agriculture occurred, and tourism revenues collapsed.

Significant external debt and payment arrears were accumulated, while lax fiscal and monetary policies led to large budget deficits. By the end of 1993, annual inflation had reached 8,400%. In 1993 Georgia's gross domestic product (GDP) declined by an estimated 40%. In 1994 it to totaled about USD 2.14 billion.

After the political stabilization, started in 1994-1995, the Government embarked on a comprehensive reform program to rebuild the economy, with support from the World Bank and the International Monetary Fund. The necessity of maintaining a healthy economy has been recognized and is contingent on policies that encourage business creation, investment and trade, the promotion of an infrastructure and an educated workforce with a commitment to human rights.



Fig 2: Basic economic indicators, Georgia (1990-1994)

Source: State Department for Statistics of Georgia.

Fig3: Gross Domestic Product, Georgia (1990-1994)



Source: State Department for Statistics of Georgia.

The Government's structural reform program and accompanying fiscal and monetary policies were successful in restoring growth and drastically improving internal and external imbalances. Real GDP growth resumed in 1995 and exceeded 10% in 1996 and 1997. Inflation was reduced to single –digit levels by 1997. From 1994 to 1997, the fiscal deficit was reduced from 20% to 4.6% of GDP, and the current account deficit from 35% to 11% of GDP. A new national currency, the Lari (GEL), was introduced in September 1995, and remained broadly stable against the dollar until mid-1998.

Table 1: GDP, Georgia, 1995-1999, (GEL millions) GEL - Georgian Lari

	1996	1997	1998	1999
Gross Domestic Product (GEL)	3793	4519	4863	5513
GDP US\$	3010,5	3478,7	3493,8	2734,7
GDP deflator, per cent of the previous year	129	108	104	110
GDP (at constant prices), per cent of the	111,2	110,7	102,9	103,0
previous year				
GDP per population (GEL)	705,9	839,8	901,4	1020,5
GDP per population (US\$)	559,4	646,9	647,6	506,2
GEL exchange rate to US\$ (average)	1,262	1,298	1,392	2,016

Source: State Department for Statistics of Georgia

Table 2: Origins and Components of GDP, Georgia (1999)

Orig	in of GDP	Components of GDP			
	% of total		% of total		
Agriculture	26,8	Private consumption	89,7		
Industry, of which:	27,4	Public consumption	10,6		
Manufactory	13,3	Investment	14,4		
Services	45,8	Exports	4,8		

			Imports	-12,5
0	<b>TT</b> 7 11' C'	0	2	

Source: World in figures. Statistical dates. 2000

Tab 3: Inflation and finance, Georgia (1999)

%	Av. Ann. Increase, 1995-1999			
10,9%	Narrow money (M1)	18,3%		
4,0%	Broad money	16,1%		
5,07%				
	70   10,9%   4,0%   5,07%	70 Av. Ann. increase, 199   10,9% Narrow money (M1)   4,0% Broad money   5,07%		

Source: World in figures, Statistical service.2000.

Tab 4: Principal exports, \$ million fob; Main export destinations, % of total, Georgia (1999).

Principal exports,\$ mil	lion fob	Main export destinations,% of total		
Finished goods	106,6	Russia	18,7	
Semi-finished goods	7,5	Turkey	15,8	
Fuel	23,1	Germany	10,3	
Food, beverages and	66,2	Azerbaijan	8,1	
tobacco				
Total incl., others	33,4	Armenia	6,3	

Source: World in figures. Statistical service. 2000.

Tab 5: Principal exports, \$ million fob; Main export destinations, % of total (1999)

Principal imports,\$ million	fob	Main origins of imports,% of total			
Finished goods	238,2	Russia	19,2		
Semi-finished goods	17,1	Turkey	12,2		
Fuel	8,8	USA	11,9		
Food, beverages and	138,5	Germany	7,3		
tobacco					
Basic materials	138,5	Azerbaijan	6,9		
Total incl., others	60,8	EU countries	22,5		

Source: World in figures, Statistical service .2000.

Economic development during 1999 were somewhat encouraging, though fiscal performance remained weak.GDP grew by a moderate 3 %.But revenue shortfalls, accumulation of expenditure arrears, and unrealistic budgeting continued throughout the year.

International trade not only declined, but changed greatly in direction. Russia's share in the greatly reduced value of exports, for example, declined between 1991 and 1999 from 67 to 18.7 per cent, her share in imports from to 19,2 per cent. On the other hand Turkey became an active trading partner as well as whose shares in export increased from virtually zero to 15.8 per cent, and from 7 to 12,2 per cent in imports. The share of the other European countries increased moderately in both exports and imports. Principal exports in 1993 in terms of value were agricultural produce (mainly vegetables, tea and citrus fruit) and metals, principal imports gas, textiles and food.

Exports, which grew by over 20% on average (in volume terms) in 1996-97, declined in 1998 and 1999 (-3.4%). The sharp volume increase in imports registered in 1997 (40%) and 1998 (12.5%) was largely driven by investments for the construction and refurbishment of the "early oil" pipeline connecting Azerbaijan to the Black Sea. With the completion of the project in 1999, the volume of imports declined by 13.9%.

The Government has launched an ambitious privatization program for key infrastructure (ports, telecommunications, and the power sector) that is expected to enhance overall economic efficiency. In addition, various ongoing initiatives aimed at reducing administrative interference (public procurement and de-licensing reforms), establishing a sound legal and regulatory framework, and strengthening the judiciary are expected to positively impact the investment climate. As a result, the activity of small and medium enterprises in the manufacturing and service sectors is expected to increase and contribute to growth.

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Number of officially registered unemployed, thousands.	-	3,5	113,2	180,3	65	61,1	57,7	142,5	98,7	102,6
Persons			1 - 1 - 0	<b>a</b> a 1			• •			
Average monthly gross earning of employed in economy, GEL	214	270,3	1518	301	61521	13,6	29	42,5	55,4	67,5
Gross domestic product, million GEL	14965	19146	138295	27589 <sup>2</sup>	1806633 <sup>2</sup>	3694	3793	4519	4863	5513
Final national consumption, million GEL	11963	14846	171966	30670 <sup>2</sup>	1905120 <sup>2</sup>	3368	4311	5075	4847	5241
Gross accumulation, million GEL	4585	5400	34903	304 <sup>2</sup>	302838	887	309	715	1165	765
Industrial output, million GEL	12063	17233	89967	$2588^{2}$	242359 <sup>2</sup>	523,8	676,6	814,9	809,4	963,1
Agricultural output, million GEL of which:	5199	6573	108445	25318 <sup>2</sup>	678000 <sup>2</sup>	1851	2062	2299	2266	2650
Plants growing	3572	3780	69405	14684	395000	1081	1027	1363	1278	1506
Livestock	1627	2493	39040	10634	283000	770	835	936	982	1144
Capital investments, million GEL	2545	2689	12368	311 <sup>2</sup>	55821 <sup>2</sup>	127	170	266	512	364
Consumption of fixed assets, million GEL	1928	1314	3989	218 <sup>2</sup>	36601 <sup>2</sup>	74	116	118	149	626
Consumer price index	-	-	-	-	-	157,4	113,8	107,3	110,7	110,9
Revenues of the consolidated budget, million GEL	4978,8	6361,8	47757,2	1759,5 <sup>2</sup>	99591 <sup>2</sup>	271,3	518,1	809,6	878,9	1016,1
Per cent of GDP	33,3	33,2	34,5	6,4	5,5	7,3	13,7	17,9	18,1	18,4
Expenditures of the consolidated budget million GEL	4786,3	5939,8	45452,7	1332,8 <sup>2</sup>	91760 <sup>2</sup>	469,4	771,3	991	1002,5	1227,2
Per cent of GDP	32	31	32,9	4,8	5,1	12,7	20,3	21,9	20,6	22,3

Tab 6: Main social and economic indicators, Georgia (1990-1999)

Deficit of the consolidated budget,million GEL	192,5	422	2304,5	426,7 <sup>2</sup>	629,1 <sup>2</sup>	- 198,1	- 253,2	- 181,4	- 123,6	- 211,1
Per cent of GDP	1,3	2,2	1,7	1,5	0,3	-5,4	-6,7	-4	-2,5	-3,8
Credit investments in the economy,million GEL,of which:	-	-	-	28,9 <sup>2</sup>	40,5 <sup>2</sup>	149	128,2	172,9	229,3	324,6
Short-term	-	-	-	-	-	147,5	126,6	169,3	172,5	254,2
Long-term	-	-	-	-	-	1,5	1,6	3,7	37,9	70,4
Foreign trade turnover,million US\$, of which:	-	-	298,6	465,3	489	547,9	885,6	1183,3	1076,6	840,1
Exports	-	-	86,8	226,8	151,7	151,7	198,8	239,8	192,3	238,2
imports	-	-	211,8	238,5	337,3	396,2	686,8	943,5	884,3	601,9

Source: State Department for Statistics of Georgia.2000.

<sup>1</sup>Thousand Coupons; <sup>2</sup>Milliard.Coupons

Sustained implementation of the Government's adjustment program and adequate levels of external aid are expected to help the Georgian economy maintain real positive growth in the range of 2% to 3% over the newt years, before increasing to 4.5% per year on average starting from 2002, supported by an increase in the investment ratio from 8% to 16 % of GDP by 2005. Most of this growth would result from increasing private investment from 7% to 13% of GDP, particularly in infrastructure (oil pipeline, ports, energy, and telecommunications). Public investment is expected to triple from 1% to 3% by 2005, largely financed by foreign assistance.

The economic growth of recent years should, however, be considered against the background of the totally collapsed economy. The government finance system is still very weak. Revenues very low, while the expenditures have been cut down to a minimum. The present volume of expenditure is unable to secure adequate social security. There is still pressing need for external support for development programs and programs supported by the World Bank in healthcare, transport, energy and agriculture.

Enjoying access to the outside world through the Black Sea ports of Poti and Batumi, Georgia represents a potentially important transit point for goods or resources from Russia, Armenia, Azerbaijan, and Iran. Tourism is another potential strength of Georgia, but fighting in Abkhazia its primary resort area, has prevented this industry from developing.

Georgia occupies a favorable position as regards connecting Europe with the important deposits of Caspian oil and gas. There are several projects in progress of implementation, the most important of them the rehabilitation of the existing pipeline from Azerbaijan to Supsa terminal on the Black Sea to the south of Poti. Another project involves the construction of a large capacity pipeline from Azerbaijan to the Turkish Mediterranean coast via southern Georgia.

	1995	1996	1997	1998	1999
Total revenue and grants	271,2	518,1	593,3	621,9	650,2
Total revenue of which	202,1	446,6	568,9	591,4	600,8
Tax revenue	132,0	295,2	352,7	330,1	414,4
Income tax	20,9	43,9	28,8	39,2	44,9
Value added tax	58,5	124,3	199,9	184,6	212,7
Excise tax	2,8	13,7	49,1	27,7	110,7
Profit tax	28,6	33,2	13,5	20,4	20,2
Customs duty	5,4	20,4	58,7	58,1	26
Nontax revenue	21,9	32,2	101,2	71,6	20,9
Capital revenue	0	20,9	13,2	47,0	21,0
Extra budgetary funds revenue	48,2	98,5	101,8	142,7	144,5
Grants	69,2	71,5	24,4	30,4	49,3
Total expenditure and net lending	469,4	771,3	776,8	797,3	904,8
General purpose public service	76,5	53,9	96,8	65,6	125,1
Defense	39,6	69,4	67,5	56,5	35,7
Public order	40,3	70	93,3	65,9	75,7
Education	34,2	19,1	46,3	30,4	29,6
Culture	14,6	16,2	12,2	33,2	25,6
Public health	16,9	15,2	25,6	26,8	15,7
Social measures	22,9	78,5	190	216,1	25,0
Science	5,7	11,9	-	-	-

Table 7 : State budget of Georgia 1995-1997 (GEL millions)

Other expenditure	218,7	437,1	245,1	302,8	572,4
Surplus (+), defecit (-)	-198,2	-253,2	-183,5	-175,4	-254,6

Source: State Department for Statistics of Georgia..

Table 8: Economic growth, Georgia (1990-1996)										
Annual percentage change in real GDP (1989=100)						Real GDP (1989	=100)			
1990	1991	1992	1993	1994	1995	1996	1995	1996		
-12	-14	-40	-39	-35	2	8	18	20		

Table 8: Economic growth Georgia (1990-1996)

Source: European Bank for Reconstruction and Development

Table 9: Marco-economic indicators for the last years, Georgia (1991-1996)

	1991	1992	1993	1994	1995	1996
GDP growth rate	-20,1	-39,7	-29,3	-12,1	3,3	11,0
Industrial output growth rate	-22,6	-45,8	-26,7	-39,1	-13,5	7,7
Budget deficit/GDP	-3	-28	-34	-	-4,7	-5,6
Inflation rate	75,3	746,4	1037	7741	57,4	13,5
Debt in mil.US\$	-	-	-	-	1,100	1,400

Source: SDSG

#### **1.9. Education**

Georgia's educational inheritance is very rich, and standards are high in many areas. Education was culturally valued and universally free. Equity of access, near universal literacy has led to a well-developed human factor that could contribute significantly to the reforms in Georgia.

Universal secondary education and literacy were among the achievements of Soviet rule in Georgia. The republic had one of the highest percentages of university graduates in the USSR. Based on the statistics in 1999, 87,1% of the people over 10 years of age are literate, of which 23% has completed university or other highest education, 37,8% has secondary general education.

able 10. Educational level of population of 10 years and over.									
Total Higher		Incomplete	Secondary	Secondary					
education		higher education	special	general					
100%	23%	4,6%	20%	37,8%					
	D								

Table 10: Educational level of population of 10 years and over.

Source: State Department of Statistics 2000.

In the beginning of school year 1999/2000, 95 000 students studied in 24 state institutions of higher education (67500 among them fulltime, the rest part-time). Another 40 000 students or so attended

162 private institutions of higher education. The number of students graduating from state institutions in 1994 was approximately 15 000.

	Number of	Number of pupils
	establishments	(students)
Pre-school establishments	1229	74 000
Public general education schools	3201	714400
Primary vocational schools	84	16800
Public specialized secondary schools	85	29900
Private specialized secondary schools	58	6800
Public higher educational establishments	24	95000
Private higher educational establishments	162	40100
Establishments with postgraduate studies	69	1800
Public higher health education institutions	1	4026
Private higher health education institutions	26	5008
Public health secondary specialized schools	13	4705
Private health secondary specialized schools	46	6173

Tab. 11: Educational network, number of students, Georgia, 2000 year

Source: State Department for Statistics of Georgia.

Tab 12: number of students per 10 000 of population, Georgia, 2000

	In public general	In specialized	In higher educational
	education schools	secondary schools	establishments
Number of students per 10	1575	80	294
000 of population			
Graduates per 10 000 of	-	21	45
population			

Source: State Department for Statistic of Georgia.

As the table suggests, children complete the compulsory stage of their school education at the age of 15, the minimum period of education being nine years, from 6 to 15. Pupils can qualify for another two years of study in general secondary school by passing an examination. The final years of the full secondary cycle could be spent also, optionally, in secondary professional/technical or secondary vocational schools. All pupils who have completed the eleven years or equivalent have in principle access to higher education.

Table 13: Schools structure 1995 and school statistics 1992/1993.

Age	Grade						
18	13	Vocational	Enrolment rates	1992/199	93*		
17	12	schools** Special secondary inst.	Urban	Rural	Total	Boys	Girls

16	11	Optional secondary	34	31	33	29	36
15	10	**					
14	9	Compulsory					
13	8	secondary	97	98	97	97	97
12	7						
11	6						
10	5						
9	4	Primary school					
8	3						
7	2						
6	1						
5		Kindergarten	35	19	29		
4							
3							
2							
1	]						

\*Pupils enrolled as per cent of total numbers of children in the age group. Enrolment ratios for grades 1-8 and 9-11.

Note that total enrolment in all forms of secondary schools, vocational and special included, is around 95 per cent

\*\*Beginning at grade 10 for those leaving normal school at the end of grade 9.

Table 14: number of general schools and pupil/teacher ratio, Georgia 1999

	Urban	Rural	Total
General schools***	657	2547	3204
Pupils(1000)	406	326	732
Teachers (1000)****	39	48	87
Pupil/teacher ratio	10,5	6,7	8,4

\*\*\*Including schools for the handicapped but excluding special and vocational schools

\*\*\*\*Including part-time teachers

Source: Ministry of Education

### 2. EMPLOYMENT, INCOMES AND THE SOCIAL SAFETY NET

#### 2.1. Labor Market

According by the dates 2000, the number of economically active population is 2 064 000 (43,4%), employed - 1 890 000, hired employed - 675 000, self-employed 1 095 000. The unemployment rate is about 8.4 per cent (SDS Household Survey, 2000). The national unemployment rate is highly biased by the rural figures, which, in accordance with the existing legislation, excludes rural unemployment per se. Each farmer owing at least 1 ha of agricultural land or his/her family members are considered self-employed.

Registration-based unemployment rate is still hardly in a position to reflect the real size of the unemployment, since very few of the jobless consider it worth registering: the sum of the unemployment benefit remains purely symbolic (equivalent of approximately USD 6 per month), the eligibility lasts for the first six months of the unemployment only, and the chances of finding a job through registration are minimal

Table 15: Employment and Unemployment, Labor Force in Georgia, Thousand (1998-2000)\*

	1998	1999	2000
Population above 15 years old	3,008	3,018	3,133

Total economically active population (labor force) (1)	2,462	1,917	2,064
Total economically active population (labor force) (2)	2,555	1,975	2,181
Employed	2,283	1,633	1,890
Hired	737	710	675
Self-employed	1,546	905	1095
Unemployed (1)	179	285	174
Unemployment rate (per cent) (1)	7,3	14,8	8,4
Unemployment rate (per cent) (2)	10,6	17,3	13,4

Note: \*Date give by the end of year

(1) ILO Standard; (2) ILO "Loose" Methodology

Source: State Department for Statistics Household Survey

According by the dates 2000, from economically active population 91.6 per cent are engaged, of which 32,7 per cent are employed and 53,1 per cent are self-employed. The majority of employed population is self-employed (nearly 58 per cent).

Table 16: Structure of economic acti	ve population (per cent),	Georgia (1990-2000)
--------------------------------------	---------------------------	---------------------

	1990	1995	1996	1997	1998	1999	2000
Total economically active	100	100	100	100	100	100	100
population Of which:							
Engaged of which:	100	97,1	97,1	95,0	85,5	86,2	91,6
Employed	90,6	45,0	37,6	27,7	36,9	36,4	32,7
Self-employed	9,4	52,1	60,0	67,3	47,8	49,8	53,1
	6.0	•	2000				

Source: State Department for Statistics of Georgia, 2000.

Table 17: Distribution of employed by sectors (per cent), Georgia

	1990	1995	1996	1997	1998	1999
Total engaged of which:	100	100	100	100	100	100
State sector	75,5	42,4	31,5	28,8	34,7	31,3
Non-state sector	24,5	57,6	68,5	71,2	65,3	68,7

Source: State Department for Statistics of Georgia 2000

According to the dates employment is divided fairly evenly among agriculture (about 52.1% of total engaged population), trades and services (8.9). The proportion of employment in agriculture is high in comparison with Western Europe (where about 6 per cent of the work force were engaged in agriculture in 1999).Some 8 per cent of total engaged employment are directly related to the education sector, 4,5 per cent to the Health care sector. Agriculture still accounts for the largest share in self-employment-approximately half of the economically active population-reflecting the assumption which treats those with access to agricultural land as self-employed. As a result rural unemployment is a way below the unemployment in cities.78 per cent of total self employment is directly related to the agriculture sector, 12,9 per

cent to the trade and services sector, 1,3 per cent to the industry sector (Data from State Department for Statistics Household survey, 1998).





Source: State Department for Statistics of Georgia 2000

In Georgia the largest shares of hired employment fall on education, health care, government and defense. Salaries of teachers and medical workers, together with the salaries of agricultural workers, thought having grown in nominal terms, being the lowest. Salaries of construction workers are the highest.

The incomes of self-employed are significantly higher for all the sectors than for wage earners and salaried employees. An average monthly income of a self-employed is about 40 per cent higher than an average monthly wage/salary. This serves a very good incentive for those who have to choose, to shift to self-employment. Large number of self-employed continues to avoid registration, thus evading tax payment. In fact, there is no incentive for them to register and it is much simpler to operate in the shadow economy. At the same time, at the moment there is no mechanism of collecting taxes from them.

The vast majority of the job seekers are unemployed reflecting very little hope of finding jobs through official registration on the part of job seekers. This drives many of the potential job-seekers to shift to informal economy, which can absorb certain portion of both registered and

unregistered job-seekers, in which case impressive amounts of potential payroll tax fail to reach the government budget.

Where registration is entirely voluntary, and especially where the employment offices function only in the most populous regions of a country or are not widely patronized by employees seeking work or by employers seeking workers, the data are generally very incomplete and do not give a reliable indication of the extent of unemployment. The scope of the figures is determined partly by the manner in which the system of exchanges is organized and the advantage with registration brings, and partly by extent to which workers are accustomed to register. In many cases, persons engaged in agriculture and livings in less populous areas are scarcely represented in the statistics, if at all. The scope of employment office statistics is therefore most difficult to ascertain, and in very few cases can satisfactory percentages of unemployment be calculated. In general, these statistics are not comparable. However, if there are no changes in legislation, administrative regulations and the like, fluctuations within a country may reflect changes in the prevalence of unemployment over time.

Table 18: Distribution of employed by kind of economic activity in Georgia (per cent) 1998-1999

Sector	1998	1999
Total engaged. Of which:	100	100
Agriculture ,hunting and forestry	48,4	52,1
Finishing	0,1	0,1
Mining and quarrying	0,3	0,4
Manufacturing	7,0	6,4
Electricity, gas and water supply	1,4	1,2
Construction	1,5	1,4
Wholesale and retail trade; repair of motor vehicles,	9,2	8,9
motorcycles and personal and household goods		
Hotels and restaurants	0,9	0,9
Transport and communication	4,4	4,0
Financial intermediation	0,8	0,6
Real estate, renting and business activities	2,5	2,3
Public administration and defense; compulsory social security	6,6	6,1

Education	8,3	8,0
Health and social work	4,8	4,5
Other community, social and personal service activities	2,8	2,5
Private households with employed persons	0,9	0,4
Extra-territorial organizations and bodies	0,1	0,1
Unidentified	0,2	0,1

Source: State Department for Statistics of Georgia 2000.

#### **2.2 Salaries and Wages**

According to the SDS household survey figures ,the average monthly nominal salary of hired employees across the economy was GEL 85,4 (2000 year),which represented just over 42,2 per cent of the minimum subsistence for four-member family. Average monthly salaries of construction employees (GEL 141.5), mining and processing industry employees (GEL 115) and transport and telecommunication s employees (GEL 105) were the highest, whilst that of education employees (GEL 45,6) and health care employees (GEL 47,4)- the lowest in 2000.Monthly remuneration of other salary earners ranged between GEL 85 and GEL 100 in 2000.The minimum salary of a budgetary organization employee was GEL 20-66/month.

Many public sector employees are paid only token salaries, the cases of non-payment of salaries are widespread, arrears in the payment of budgetary employees' salaries persist and the growth in salaries is eroded by inflation. According to the data males had 20-40 % more income than females. This difference was not so obvious in the past. It is noticeable that monthly income of one household was much lower than established cost of consumer's basket.

	1990	1995	1996	1997	1998	1999
Total economy	214,0	13,6	29,0	42,5	55,4	67,5
Industry	249,0	20,5	50,3	56,7	71,9	88,6
Agriculture	196,4	4,6	10,0	15,1	16,1	26,9
Transport	215,4	32,5	68,3	79,8	95,7	101,7
Communications	186,1	25,4	43,2	57,5	67,7	96,9
Construction	334,4	38,8	79,7	102,6	118,6	142,4
Trade, public	160,0	15,7	17,7	30,8	30,5	36,9
catering,						
material and						

Table19: average monthly wages and salaries (GEL)

technical supply, sales						
Housing, public utilities and personal services	168,2	18,8	34,0	46,5	56,1	96,7
Health care, physical culture and social security	133,9	5,5	16,1	23,5	26,6	33,5
Education	156,9	7,0	14,6	26,8	46,4	41,9
Culture	144,4	4,0	15,9	28,4	33,8	49,6
Arts	147,9	5,0	25,9	43,9	62,5	65,8
Science	236,5	9,9	24,3	44,0	61,2	69,3
Finance ,credit and insurance	329,7	28,9	53,9	125,4	156,2	227,9
Government	255,9	10,4	38,7	54,5	73,8	87,1

Source: State Department of Statistics

#### 2.3. Minimum Subsistence Level

The official minimum subsistence level, being regularly published by the SDS basing on a food bucket of 2500 calories for working man, stood at GEL 115,8 (2000 year) for a working man, GEL 101,6 for an average consumer and GEL 201,6 for a family of four. The average minimum subsistence levels in Tbilisi 4 per cent higher the national average. In addition, incomes from farming in rural regions were 30-40 % less than in urban regions.

	Table 20: incomes,	expenditures	and consumption	of households,	GEL	(1999 y	ear)
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		Urban	Rural	Country
		areas	areas	areas
Average monthly	Cash income and	70,1	48,3	118,4
income of	transfers			
population	Cash total	83,3	60,3	143,6
	Cash and non-cash	93,1	96,9	190,1
	means			
Average monthly	Cash income and	114,1	92,1	104
income per	transfers			
household	Cash total	135,6	115,1	126,2
	Cash and non-cash	151,6	184,9	166,9
	means			
Average monthly	Cash income and	32,5	27,4	30,2
income per capita	transfers			
	Cash total	38,6	34	36,5
	Cash and non-cash	43,2	54,1	48,2
	means			
Average monthly	Cash expenditure on	129,5	74,8	204,4
expenditure of	consumption			
-----------------	------------------------	-------	-------	-------
population	Total cash expenditure	139,4	83,7	223,1
	Total expenditure	149,4	121	270,4
Average monthly	Cash expenditure on	210,8	143,2	179,7
expenditure per	consumption			
household	Total cash expenditure	227	160,1	196,2
	Total expenditure	243,2	231,5	237,8
Average monthly	Cash expenditure on	59,8	41,2	51,3
expenditure per	consumption			
capita	Total cash expenditure	64,3	46	56
	Total expenditure	68,9	66,6	67,9

#### Source: State Department of Statistics

According to the structure of monthly expenses calculated by the State Department of Statistics, expenses on food of the country's population made up 54 %, on transport 6,1 %, education and recreation 2,9%. It must be stressed that population spends only 3.5 % of the total expenses on health (including purchasing of medications ,covering ambulatory and hospital expenses through co-payment). This situation has negative effect on the health of population. It is interesting that expenses on health are nearly half to the expenses on purchasing tobacco and alcohol. It denotes that people are not practicing health behavior.

#### 2.4. Social Safety Net

In Georgia in the Soviet times, it is said that poverty was not so outstanding. After independence, however, with the civil war and the breakdown of economy, now poverty is widespread and even worsened in recent years. According to the statistics, 51 % of population had incomes below the subsistence minimum in the second quarter 0f 1998. The poverty rates are high in urban area than in rural areas. The reason for this is said to be the non-payment of persons and wages for the employees of the state organizations. In the rural area, n the other hand, the agricultural sector became the major source for accommodating labor surplus after the collapse of industry, although productivity in agriculture is low and it can be described as subsistence farming for many people. Anyhow those could affect the health status of population.

The level of poverty represents the general trend of poorness, but it does not reflect the condition of poor people. A more realistic and delicate is the depth of poverty, expressing the grade of poorness against the limit of poverty. In 199 the depth of poverty was 16,1 in 1999-17,7 per cent. This means that poor population became poorer and moved far away from the minimal living standard.

The severity of poorness increased as well. It shows inequity among the poor families. In 1997 it was 8,1% and in 1999- 9,2%.

Extremely high levels of poverty exist among the lonely people. These takes into consideration that elderly population mainly represents this category the state has to make big contributions in their medical care and social security.

The country's population undergoes rapid division into different social layers. The differences are not only in economic, but also in social-cultural characteristics of this layer. In 1998 the number of families with income of 800-1500Lari increased to 7,4% in comparison with the last year indicator 6,9 %. This can be compared with rich families with income of more than 1500Lari became 1,2%.

Despite the fact that the majority of IDPs had been working in different fields of national economy during the prewar period, 26% of them do not have permanent source of income, 73%- do not work by specialty. IDPs from Abkhazia being in extraordinary situation their majority is absolutely dependent on external conditions (temporary working place, social premiums, humanitarian aid). Unemployment and having only premiums determine low incomes of IDPs, which moves them beyond the poverty limit.



Fig 5: Absolute and relative poverty levels (GEL)



	Urban	Rural	Total
	Areas	Areas	
Poverty level per cent of subsistence	52,7	37	45,7
minimum			
Poverty level 60 per cent of median	29,3	18,1	24,3
minimum			
Poverty level 40 per cent of median	11,3	8,7	10,1
minimum			
Depth of poverty per cent of	20,7	13,9	17,7
subsistence minimum			
Depth of poverty 60 per cent of	9,1	6,4	7,9
median minimum			
Depth of poverty 40 per cent of	3,5	2,8	3,2
median minimum			
Severity of poverty per cent of	10,7	7,3	9,2
subsistence minimum			
Severity of poverty 60 per cent of	4,2	3,2	3,7
median minimum			
Severity of poverty 40 per cent of	1,6	1,3	1,5
median minimum			

Table 21: poverty levels, GEL by end of year (1999 year)

Source: State Department of Statistics

#### 2.4.1. State Social Allowance

The State Social Allowance is targeted as households comprised exclusively of nonworking pensioners without a legal breadwinner, and/or orphans, representing, actually, a topping-up of symbolic pensions of the poorest elderly and a modest child allowance for the most destitute children. The State Social Allowance payable to recipients was GEL 20 for a qualifying household consisting of one member, or for each orphan under guardianship, and GEL 29 for an eligible family of two or more. According to the presidential decree of 10 February 2001 increased the size of the allowance to GEL 22 for a one-member recipient household and to GEL 35 for a recipient of two or more.

#### 2.4.2. Unemployment Benefit

The payment of the standard monthly Unemployment Benefit payable for the first six months of registered unemployment is fixed at GEL 14 for first two months of unemployment, GEL 12 for the next two, and GEL 11 for the final two months of payment. To become officially eligible, a person should be registered as unemployment, therefore, should have a certain working record in the official sector. As a result, the number of the unemployed who bother to register is usually at least twice lower than the actual one and the

number of the benefit recipients is insignificant (2,5 per cent of the registered unemployment as of end of 2000)

## 2.4.3. Pension System

Under the current pay-as-you-go pension system, pensions are financed through the United State Social Safety Fund- the only pension fund provided fixed-rate, symbolic (USD 7,5 per month) old-age pensions to the majority of pensioners. The revenue of the fund is formed from payroll tax proceeds with budgetary transfers meant to compensate for the underfunding of pensions. The contributions from workers' wages, that from the United State Social Safety Fund revenue are 26 per cent of gross wages for budgetary organizations and 27 per cent for others paid by the employer and 1 per cent paid by employees.

While for a pay-as-you-go pension system to be functioning relatively smoothly the dependence ratio (the number of pensioners as a per cent of the number of people employed, or contributor to beneficiary ratio) should be at least 3:1, the current ratio 1:1,2- a ratio unsustainable for a universal PAYG scheme. In addition, the number of those who should be contributing by definition (hired employees and their employers), but in reality are not due to various reasons (budgetary organizations payroll is very often late, many of the companies are not functioning, and some contributors are not paying in full) is large.

The replacement rates (the average pension in terms of the average wage) of the current pension system is low. The average pension flat rate of the majority of pensioners was 16,4 per cent of the average hired employees' monthly salary as of the end of 2000.Monthly pensions are now GEL 14 for the majority of elderly. Pensions accounted for just 14 per cent of the minimum subsistence level of an average consumer as of end of December 2000, and for 13,7 per cent as of end of March 2001.

The severe crisis the current PAYG pension system is facing is painful economically, politically and socially. Neglecting the short-and long-term consequences of the current situation will place the vulnerable at serious economic risk and any result in growing poverty, social disintegration, and marginalization and social exclusion. Reform of the pension system is Government's top priorities, and a far reaching pension reform program is being designed, aimed at establishing a financially sustainable modern pension system suited to changing demands of a transition economy and, where possible, tailored to local conditions.

A PAYG system is based on a solidarity contribution principle, and, being an element of the social safety net, can only provide basic minimum pensions to the elderly. However, it is not in the position to provide adequate benefits to the elderly on its own. In order to provide a plurality of possibilities and availability of choice for those who can afford to make provisions for their future pensions, a multi-pillar system is being introduced that is going to increase personal responsibility and create savings funds for investment. The multi-pillar system implies three pillars: a universal state pension scheme, a mandatory private pension scheme and a voluntary private pension scheme.

The first private pension insurance company in Georgia-Georgian Pension Investment Holding (GPIH)- was founded and will offer, in addition to existing universal PAYG scheme, voluntary non-state pension insurance to the population.

Pension reform is to stabilize the pension system in the medium term and ultimately to increase the pension benefit through higher returns. However, as it is not likely that a big share of the population would be able to afford participation in private schemes, at least, in the short and medium term, and the PAYG pillar is going to be mandatory under the reformed pension system and still very important for the majority of the pensioners. The most imperative goal to aim at is it improves payroll tax collection and broadens the tax base.

#### **2.5 Social Policy**

Social policy reform aimed at rendering the existing system sustainable is among the top priorities in the country. The current social safety net system is largely the heritage of the soviet past and in the conditions of transition economy appears to be ineffective to alleviate poverty. The fundamental restructuring of the state social protection system is indispensable and should be aimed at creating economically viable, affordable and equitable social safety net, promoting growth.

The Ministry of Labour, health and Social Affairs pursues social policy, aimed at the prevention social problems. Unemployment, poverty, the problematic subject of refugees and people's fears for their personnel safety are just some of the major issues which need to be addressed.

Georgian population includes a large group of long-term unemployed and the number of people relying of minimum unemployment benefit for an extend period is on the increase. These vulnerable groups receive help in order to help them improve their social position in society. These matters find expression aspects such as poverty policy, encouraging social participation, family policy and the promotion of social independence.

Currently a growing number of people live on a minimum income. Unemployment among refugees is higher than among the indigenous population.

Quality of life is rural areas is deteriorating caused by the declining importance of agriculture to the rural economy. This is causing the local population to move away and leading to a disappearance of amenities. In these parts of the country, socially weak regions threaten to arise.

In response to the prolonged expectations of the Georgian population, poverty reduction became one of the major priorities in the country. The Government of Georgia is determined Poverty Reduction Strategy Paper. In this document, the Government of Georgia expressed its will to fight against the poverty. The major objectives of this Strategy are provision of basic needs, such as comprehensive education, normal living conditions, adequate health care and creation of middle class, to each and every poor citizen of Georgia.

The aim of this Strategy Document is to improve social conditions and economic environment, which are major elements of state's welfare. It envisages practical steps for actual implementation of defined objectives. It is impossible to achieve improvement of social conditions in the country by means of conducting structural reforms in only this direction. There is a whole set of factors that has strong influence on the life of the country.

Among the actions to be undertaken within the framework of this Strategy, the highest priority will be given to the following measures:

#### 1. In Social sector:

- Reducing the possibility of poverty risk through its prevention and softening the influence of existing poverty level;
- Reforms in Social Protection, including the Pension Reform;
- Reform of education system;
- Reform of health care system;
- Provision of unimpeded social protection to the IDPs and protection of their identification and differentiation.

# 2. In Fiscal and monetary spheres:

- Promotion of rapid and sustainable economic growth;
- While maintaining the floating exchange regime, to achieve annual average inflation at 4% level;
- Gradual repayment of accumulated arrear and external debts;
- Step-by-step reduction of the budgetary deficit;
- Orientation of the budgetary process primarily towards social issues;
- Strict control over the budgetary expenditures and centralization of the Treasury Department.
- 3. In Infrastructure sector:
  - Improvement of investment climate, promotion of foreign and domestic investments;
  - Promotion of small and medium size businesses;
  - Promotion of tourism development;
  - Fostering privatization process;
  - Restructuring of enterprises;
  - Reducing the scales of shadow economy and business legalization;
  - Implementation of relevant reforms in different sectors of Infrastructure.
- 4. Agriculture and Environment Protection:
  - Development of rural infrastructure and re-equipment and restoration of inputs and material-technical basis;
  - Preservation of soil fertility;
  - Conducting targeted rural credit policy;
  - Improvement of environment and health care protection;
  - Increasing efficiency of environment protection and control management;
  - Further development of forestry and its optimization.
- 5. In Governance, Public Administration Reforms and Anti-Corruption measures:
  - Liberalization of business environment;
  - Improvement of Public Administration;

• Reforms in law-enforcement and justice systems.

The document is drafted not only by the Government of Georgia, but it also expresses the will of the whole nation. The Document clearly defines the existing situation of country's development, as well as necessary measures to improve present conditions. The Strategy has its time framework. The timing for concrete actions is determined by 3-year (short-time), 7-year (medium-term) and 15-year (long-term) periods, efficient implementation of these actions will yield positive results for bringing the poverty rate to moderate level. The Intermediary Document envisages drafting of the final and more comprehensive strategy, which shall have a complete list of actions to be undertaken in a particular sector of economy, and then methods for their implementation.

The Government of Georgia is determined to achieve welfare for its population, to improve the living standards, and to ensure substantial social protection. The future strategy of country's development will be directed towards achievement of these values, and all the possible efforts shall be carried out to let Georgia obtain an honorable place within the International Community.

The reform of the state pension system and the social safety net aimed at improving efficiency of the social safety and at making scarce budgetary resource available for the neediest are underway, to design of a programs of social assistance to the vulnerable groups who do not qualify under any other programs. The budget resources are extremely limited and collection of payroll tax insufficient to ensure sustainable social safety mechanism even for limited number of beneficiaries.

In order for the social security system to be effective at alleviating poverty and to become sustainable in the long run, benefits need to become more generous whilst being targeted on a relatively small number of the poorest people. In the meantime, the Government's ability to run a comprehensive social security system will be limited: state pensions and other benefits for the most vulnerable will remain very low. The aim should be to allocate very modest budgetary resources as fairly and efficiently as possible.

The family Allowance targeted at only one category of vulnerable families- nonworking pensioners without a legal breadwinner living alone, in fact, playing the role of the topping up to the pensions of the poorest categories of the elderly.

Assistance to unemployed people is only eligible for the benefit for the first 6 month of unemployment. In future the Government is planning to extend the period of unemployment benefit from six months to year, and to make it easier to quality as a recipient.

Currently pension system is being financed on a PAYG basis, pensions depending on a successful collection of payroll taxes. Though some steps have already been made to introduce new categories of pensioners in order to differentiate pension rates, the pension system still provides a flat-rate benefit to the majority of pensioners. The relatively high payroll tax rate is a heavy burden on many enterprises and no doubt encourages evasion. The Government is currently considering the reduction of the payroll tax rate.

The actual tax base for the social tax is very small compared to the potential tax base. Most revenue is raised from budgetary organizations and some large companies. As a consequence, budgetary wage arrears and the widespread practice of unpaid leaves, common with the enterprises standing idle, add to the pension arrears.

The coverage of tax collection should be expanded, which is being considered by the Government. A presidential decree provided for procedures for levying payroll taxes on the self-employed and the employees of the private sector. However, it will be some time before the small private companies and self-employed actually start time before paying payroll taxes, since at the moment there is no incentive for term to do so.

Since 1998 the function of collecting payroll tax was transferred to the State Tax Inspectorate, who was preconditioned by the Tax Code, Whereby the only body having the right of collecting taxes should be State Tax Inspectorate. The authorities expect this change to improve tax collection.

The Ministry of health and Welfare aims shifting the pension system to a scheme of defined individual contributions would imply to a substantial extent loss of payroll tax collection reducing their scope as a device for supporting present commitments, which might further aggravate the fiscal situation in regard to sustaining present pension provisions.

# **3. POPULATION DYNAMICS**

#### 3.1. Population and its Distribution

Georgia is a sparsely populated country, with its population of 5,4 million (including Abkhazia and former South Ossetia). It is estimated that there are 281 804 refuges in the Georgia. Average population density is around 77.7 per square kilometer.

Tbilisi, the capital, is the largest urban area, with a population of about 1 300 000 (more than a quarter of Georgian's population). The next largest city, Kutaisi, located on the upper Rioni, has 235 000 inhabitants. Other largest groups of inhabitants are concentrated in Rustavi (158.000), Batumi (137.100), Sukhumi (120.000-by 1991 year), Zugdidi (105.000 including IDP from Abkhazia), Tchiatura (70.000), Gori (70.000), Poti (50.900). Population mainly concentrated in the coastal regions and in the west of the country.

Table 22: Number of population by regions, Georgia, 1997-1999

	1997	1998	1999	
--	------	------	------	--

Tbilisi	1325571	1327800	1185600
Achara A.R.	407655	409000	365900
Guria	161490	161400	143900
Racha-Lechkhumi Kvemo-Svaneti	57143	57100	50800
Samegrelo	476800	476500	425000
Imereti	835748	834100	743700
Kakheti	450080	450000	401000
Mtskheta-Mtianeti	140789	141300	126000
Samtskhe-Javakheti	239198	240300	214400
Kvemo Kartli	611054	612800	547100
Shida Kartli	374064	375000	334500
Poti	57517	57600	51600
Upper Svanety	17388	16800	15000
Total	5154497	5159700	4604500

Source: Centre for medical Statistic and information of Georgia 1999

# 3.2. Population by Ethnic Origin

Due to numerous external invasions over a course of history, ethnic composition of contemporary Georgian population is very diverse. Georgia is essentially a multi-ethnic country. These peoples differ from each other by cultural, religious and linguistic characteristics. Largest group with about 70% of the population, followed by Armenians (about 8%), Russians (about 6%), and Azeri's (about 6%). Significant numbers of Ossetians, Greeks, and Abkhazians also reside in the republic.

The ethnic structure and geographical distribution of the ethnic groups has changed significantly during the last years as a result of civil war and military clashes in Abkhazia and the Tskhinvali region, causing hundreds of thousands of persons to move elsewhere inside Georgia or to emigrate. Large numbers of Jews, Russians and Greeks immigrated to their historic homelands for ideological reasons or to improve their living conditions. Many Armenians and some Georgians have emigrated to Russia, west Europe or elsewhere in search of livelihoods.

There are also several ethnic subdivisions of the population that identify themselves as Georgian, but have a specific characteristic such as distinct language, used by Mengrelians (about more than million persons), or Svan. There is also a small group using the Lazy language closely related to Mengrelian (significant number of the Lazy population lives in Turkey).

Abkhazians and Ossetians have very close cultural contacts with ethnic Georgians, and mixed families are still quite common, while in Soviet period there is also significant Georgian population living in Abkhazia and former South Ossetia Oblast.

The country's official language is Georgian (Kartuli) of Kartvelian language group. The Georgian language has the largest number of speakers in the Caucasian group. Principal minority languages are Abkhazian, Armenian, Azeri (Turkish), Ossetian, Russian; languages of ethnic sub-groups of Georgians include Mengrelian, Svan and Lazy.

Ethnic Origin	1959	%	1979	%	1989	%
Armenian	442,9	11	448,0	9	437,2	8,1
Russian	407,9	10,1	371,6	7,4	341,2	6,3
Azeri's	153,6	3,8	255,7	5,1	307,6	5,7
Ossetian	141,2	3,5	160,5	3,2	164,1	3
Greec	72,9	1,8	95,1	1,9	100,3	1,9
Abkhaz	62,9	1,6	85,3	1,7	95,9	1,8
Ukrainian	52,2	1,8	45	0,9	52,4	1
Kurd	16,2	0,4	25,7	0,5	33,3	0,6
Assirian	-	-	5,3	0,1	6,2	0,1
Jewish	51,6	1,3	28,3	0,6	24,8	0,5
Georgian	2600,6	64,3	3433,0	68,8	3787,4	70,1
Total	40444,0	100	4993,2	100	5400,8	100

Table23: Population by ethnic origin Georgia, thousands

Source: State Department for Statistics of Georgia. Statistical year-book of Georgia. Tbilisi, 2000

#### **3.3 Urbanization**

Demographic transition involves the movement of the population into cities. In 1920, the urban population is estimated at about 20%. After 1980 year has been increased number of urban population. During the period 1980-1999 the urban population has grown from 52,1% to 60,9%. According to the date in 1999 year 60,9% of the population are settled in urban areas and the remaining 39,1% in the rural areas.

In some regions rural areas have experienced negative growth. In last ten years urbanization has generally been an unmanageable. The major parts of IDPs from Abkhazia are migrated from other rural regions concentrated in cities. This process, due to unemployment and social disarrangement, negatively affects the demographic behavior of this quite a big group of population and there are substantial implications for the health sector in such improvised urbanization. Most rural-urban migrants experience an improvement in living conditions after migration, for others, problems related to deficient or absent housing. Prevalence of different social diseases TB, drug abuse, and psychical deviation is high in this contingent.

During the period 1920-1989, population in Tbilisi has grown from 234 000 to 1 150 000 and became largest urban agglomeration in Georgia.

Years	Urban	%	Rural	%	Total
1960	1 744 400	42,2	2 384 800	57,6	4 129 200
1965	2 026 300	45,5	2 423 700	54,5	4 450 000
1970	2 239 800	47,8	2 446 600	52,2	4 686 400
1975	2 434 000	49,7	2 461 400	50,3	4 895 400
1980	2 634 800	52,1	2 418 000	47,9	5 052 800
1985	2 837 003	53,8	2 430 400	46,2	5 264 100
1990	3 058 200	56,1	2 397 900	43,9	5 456 100
1995	3 015 000	55,7	2 402 700	44,3	5 417 700
1999	3 321 000	60,9%	2 412 600	39,1%	5 444 700

Table 24: Number of population according to the urban and rural areas, Georgia, 1999

Source: State Department for Statistics of Georgia.

#### 3.4. Refugees and Displaced Persons

In the early 1990s the separatist local government of Abkhazia has initiated separatist movements to create independent state. Started to force ethnic Georgians living in these autonomies to either comply with the separatist ideology or to leave the region. Civil conflicts in Abkhazia and South Ossetia, resulting in large movements of refugees. About 400000 Georgians left their homes. Some went to Russia, other have disappeared from the records leaving, as of the beginning of 1995, an estimated 260 000 to 280 000 Internally displaced persons in Georgia (5,2 % of total population). Furthermore, there are 118.00 Georgian refugees in Russia. The majority found shelter in areas adjoining Abkhazia, with 180 000 in Samegrelo and 35 000 in Imereti, 69 000 in the capital Tbilisi. The great majority of those that remain are from Abkhazia; only about 5000 are said to be internally displaced persons from the Tskhinvali region. Woman predominates in number: 145 000 as against 118 000 men. Children to 15 make up about one quarter of the total (as in the total population), the elderly, aged 65 and over seven per cent compared with ten per cent in the population (especially elderly woman are less represented among Internally displaced persons than in total population).

The refugees are living in Georgia mostly Georgian nationals. By moving to the new places of living, the refugees have found themselves in a different social and cultural environment, adaptation to which requires acquisition of new socio-behavioral patterns. Poverty and economic deterioration are the major problems in the region and are shared equally by both the refugees and the local population.



Fig6: Refugees and displaced persons, Georgia

## 3.5. Population Growth

The social-economic situation, existing in recent years in Georgia, greatly affected the heath of the population. The rapid increase in population from 1960 year slowed in the 1990s. Between 1991-1999 number of population decreased from 5 420 900 to 5 100 700. The last census of the population was conducted in 12 January 1989 year. Information available since then has worsened it is not clear whether the de factor or de jure population is being counted.

Table 25: Population size\*, (thousands) Georgia(1960-1999 year)

Year	By the Beginning of the Year	Average Annual
1960	4 129,2	4 185,1
1965	4 450,0	4 501,2
1970	4 686,4	4 723,3
1975	4 895,4	4 903,4
1980	5 052,8	5 102,4

1985	5 264,1	5 303,6
1988	5 356,3	5 377,3
1989	5 443,4	5 405,9
1990	5 456,1	5 417,6
1991	5 464,2	5 420,9
1992	5 462,8	5 412,4
1993	5 447,1	5 397,7
1994**	5 433,5	5 383,0
1995**	5 417,7	5 374,3
1996**	5 416,0	5 377,2
1997**	5 423,6	5 388,5
1998**	5 437,5	5 387,9
1999**	5 444,7	5 100,7
2000	4604,2	

\* Hereafter population data are given: for 1959 and 1970- according to the Census of January; for 1979 the Census of January; for 1989- the Census of January, for other years- at the beginning of the year. Population for 2000 is given excluding the population of Abkhazia and Tskhinvali region and including the expert's evaluation of non-observed migration of population outside the country.

\*\* Because of the lack of information the data for 1993 is used for the next territories: Abkhazia- 516,6 thousands, city of Tskhinvali- 41,6 thousands, Djava district -7,6 thousand Person.

Source: State Department for Statistics of Georgia. Statistical year-book of Georgia. Tbilisi. 2000

Equilibrium between births and deaths is radically changed during the process of economic crisis. High rates of mortality are matched by low rates of birth, so since 1990, population growth rate decline from 8,6% to 0,1 %.



Figure 7: Population growth rate per 1000 population, Georgia (1990-1999)

Source: State Department for Statistics of Georgia. Statistical year book of Georgia. Tbilisi.2000

The number of the Georgian population is caused by many reasons. These reasons were influenced by a variation natural indicators and mechanic movement of the population. This has resulted in the difficult situation in some regions. Depopulation tendencies of population is marked in Racha-Lechkhumi (growth rate -5), Kakheti (growth rate - 2,6), Guria (growth rate-2,3) and other regions.

Year	Live birth	Deaths	Natural increase
1960	102,9	27,0	75,9
1965	94,9	31,3	63,7
1970	90,2	34,3	55,9
1975	89,7	39,3	50,4
1980	89,4	43,3	46,1
1985	97,7	46,1	51,6
1988	91,9	47,5	44,4
1989	91,1	47,1	44,1
1990	92,8	45,9	46,9
1991	89,1	46,5	42,6
1992	72,6	46,7	25,9
1993	61,6	48,9	12,7
1994	57,3	41,6	15,7
1995	56,3	37,9	18,4
1996	53,7	34,4	19,3
1997	52,0	37,7	14,3
1998	46,8	39,4	7,4
1999	40,8	40,4	0,4

Table 26: Birth, deaths and natural increase of population,(thousands), Georgia(1960-1999)

Source: State Department for Statistics of Georgia. Statistical year-book of Georgia. Tbilisi. 2000

Table 27: Population growth rate by regions, Georgia (1998-1999)

	1998	1999
Georgia	1,4	0,1
Tbilisi	0,3	-0,1
Achara A.R.	5,5	4,7
Guria	-0,1	-2,3
Racha-Lechkhumi Kvemo-Svaneti	-3,1	-5
Samegrelo-Upper Svaneti	1	0,3
Mtskheta-Mtianeti	4,1	1,3
Samtskhe-Javakheti	3,8	1,1
Kvemo Kartli	3,6	1,5
Imereti	0,1	-1,1
Kakheti	-0,4	-2,6
Shida kartli	2,1	0,3

Source: State Department for Statistic of Georgia.

## 3.6. Structure of the Population by Age Groups

Another important demographic trend in Georgia is the again of the population. Demographic trends affected the age structure of population and stimulated the process of "again" of the population, which will have negative influence on the economy of country.

The percentage of people over 65 years of age continues to rise. The proportion of the population comprising children has been declining and now stands at about 5% for children under 5 years of age and below 25% for children and young people under 18.

	1989	1995	1996	1997	1998	1999	2000
Total	5400,8	5375,1	5373,4	5381,0	5394,9	5402,1	5100,5
0-4	465,7	365,6	330,4	295,8	275,6	261,3	246,7
5-9	440,7	444,3	439,9	435,8	421,0	394,9	372,8
10-14	432,1	435,0	442,9	448,2	447,7	447,6	422,6
15-19	419,3	416,7	416,6	415,8	421,0	424,7	401,0
20-24	413,7	391,8	391,8	397,9	403,0	411,2	388,2
25-29	467,6	391,8	388,9	387,4	388,7	382,4	361,1
30-34	416,8	448,3	434,5	420,0	405,1	397,2	375,0
35-39	362,4	402,3	415,8	424,9	435,4	440,4	415,8
40-44	261,0	350,6	357,6	366,7	374,3	385,9	364,4
45-49	296,6	273,3	297,5	315,4	326,7	334,0	315,4
50-54	345,6	244,4	212,4	198,6	206,3	236,0	222,8
55-59	303,9	332,8	340,9	335,1	311,4	268,8	253,8
60-64	297,4	262,2	261,7	273,7	281,0	298,6	281,9
65-69	160,6	263,9	266,7	261,3	261,1	249,0	235,1
70+	317.4	352,1	375.8	404,4	436.6	470,1	443,9

Table 28: Population by age groups at the beginning of the year; thousands, Georgia 1989-2000

Source: State Department for Statistics of Georgia. Statistical year-book of Georgia. Tbilisi. 2000

During the 1989-2000 years, the number of people aged 70 years and over has increased from 5,9% to 8,7% while the percentage of the population aged under 15 years has decreased from 24,7% to 20,4% (see table).

The aging of the population is an ineffectively process. The increasing numbers of older people in the structure of the inhabitants have a significant impact on the health care needs, social requirements and expenditures, as a rising amount of elderly populace will live with their diseases, plus the inability-related dependence. An increase of the prevalence of chronic diseases and handicaps is therefore to be expected.

Table 29: Percentage of population 0-14 and 7- and over years old, Georgia (1989-2000)

	1989	1995	1996	1997	1998	1999	2000
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Total	5400,8	5375,1	5373,4	5381,0	5394,9	5402,1	5100,5
0-14 year	1338,5	1244,9	1213,2	1179,8	1144,3	1103,8	1042,1
Per cent	24,7%	23,2%	22,6%	21,9%	21,2%	20,4%	20,4%
70+	317,4	352,1	375,8	404,4	436,6	470,1	443,9
Per cent	5,9%	6,6%	6,9%	7,5%	8,1%	8,7%	8,7%

Source: State Department for Statistics of Georgia.

Figure 8: Percentage of population 0-14 and 70 and over years old, Georgia (1989-1999)



Source: State Department for Statistic of Georgia.

The weight to dependency of the population aged 0-14 years decline consistently from last years. The weight to dependency of the population aged 60 years and older years has grown steadily (see table). At the time the radio of young to old dependency decrease from 1,7/1 in 1990 to 1,1/1 in 1998.

Table 30: ratio of young to older dependency, Georgia (1990-1998)

	1990	1992	1994	1996	1998
Ratio of	1,7/1	1,6/1	1,4/1	1,3/1	1,1/1
young to old					
dependency					

Source: Centre for medical statistics and information of Georgia, 1998.

During the last years number of population of the age working decline consistently from 3 039 300 to 2 876 600. At the same time, number of population of the age over working has grown steadily from 938500 to 1 100 300.

Table 31: Number of population of the age under working, working, over working, Georgia (1989-2000)

1989 1995 1996 1997 1998 1999 2000	
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Under working	1423,0	1328,2	1298,3	1264,2	1230,7	1190,1	1123,6
Working	3039,3	2991,6	2985,8	3302,7	3314,9	3331,4	2876,6
Over working	938,5	1055,3	1089,3	814,1	849,3	880,6	1100,3

Source: State for Statistics of Georgia. Statistical

Figure 9: Percentage of the population 65 and more age in selected countries (1998)



Source: Ministry of Health of Georgia.

The weight of dependency worldwide due to the population aged 0-14 years grew consistently from 1950s to the second half of the 1960s. It then began to decline as birth rates decline worldwide. The weight of dependency of the population aged 65 years and older has grown. The ratio of yang to old dependency in the period 1990-1995 was 5 to 1.

Table 32: Ratio of young to old dependency (1990-1995)

Georgia	1,1/1
World	5/1

Source: World Health Organization. Provisional agenda item 7, 1994

	1960	1970	1980	1990	1995	1996	1997	1998
Austria	12,2	14,1	15,4	15,1	15,1	15,3	15,4	15,4
Belgium	12	13,4	14,4	14,9	16,1	16,1	16,4	16,5
Canada	7,6	8	9,4	11,3	12	12,1	12,2	12,3
Czech Republic	9,6	12,1	13,5	12,5	13,2	13,4	13,5	13,7
Denmark	10,6	12,3	14,4	15,6	15,3	15,1	15	14,9
Finland	7,3	9,1	12	13,4	14,2	14,4	14,6	14,7

Table 33: Population: 65 and over- % total population

France	11,6	12,9	13,9	14,1	15,2	15,4	15,6	15,8
Germany	10,8	13,2	15,5	15,3	16,1	16,3	16,5	16,6
Greece	8,1	11,1	13,1	14	15,6	15,8	16,2	16,6
Italy			13,2	14,9	16,6	17	17,3	17,6
Japan	5,7	7,1	9,1	12,1	14,5	15,1	15,7	16,2
Netherlands	9	10,2	11,5	12,8	13,2	13,3	13,4	13,5
New Zealand	8,7	8,4	9,7	11,1	11,5	11,5	11,6	11,6
Norway	10,9	12,9	14,8	16,3	15,9	15,8	15,7	15,6
Poland	5,8	8,2	10,1	10,1	11,1	11,3	11,6	11,8
Slovakia	6,7	9,2	10,4	10,3	10,9	11	11,1	11,2
Spain	8,1	9,4	11,2	13,6	15,3	15,6	15,9	16,3
Sweden	11,8	13,7	16,3	17,8	17,5	17,5	17,4	17,4
Switzerland	10,2	11,4	13,7	15	14,7	14,8	15	15,1
Turkey	3,7	4,4	4,7	4	4,7	4,8	5	5,2
United	11,7	13	15	15,7	15,7	15,7	15,7	15,7
Kingdom								
United States	9,2	9,8	11,2	12,4	12,5	12,4	12,4	12,4

Source: OECD Health data, 2001

# 3.7. Structure of the Population by Sex Groups

In 1999, 53% (2 662 086) of the population was female. Among older people, there are far more women. In 1999 year, 29% (19 186) of the males was 85 and over years old, in comparison with 71 % (47 939) of females. The males from 60 to 85 and above years old was 40,7 % (391 359), females was 59,3% (569 485).

Table 34: Resident population structure according to the age and sex groups, Georgia, 1999

Age	Male	Female	Total
0-4	131145	115569	246714
5-9	191497	181330	372827
10-14	215953	206605	422558
15-19	204285	196711	400996
20-24	197957	190275	388232
25-29	187436	173626	361062
30-34	181228	193820	375048
35-39	197556	218222	415778
40-44	173486	190908	364394
45-49	148411	166948	315359
50-54	103574	119260	222834
55-59	114499	139327	253826
60-64	129404	152493	281897

65-69	104104	130998	235102
70-74	86536	124238	210774
75-79	33903	68459	102362
80-84	17626	45358	62984
85+	19786	47939	67725
Total	2438386	2662086	5100472

Source: State Department for Statistic of Georgia. Statistical

Figure 10: Population structure according to the sex groups, Georgia, 1999



Source: State Department for Statistics of Georgia

#### 3.8. Fertility, Abortions and Family Planning

The current two-child family is a very marked change from the typical four-child family two generations earlier. It is more and more common to have one or two children in the family planning process of the Georgian population. This is more prevalent after the first child. Taking into consideration the reasons causing the increase of the number of families with one child, it become clear that; in conditions when enlarged reproduction of the country's population needs each family to have 2,5 child, i.e. there should be 3 children in each second family. In general, emphasis shifted from quantity to quality. Large families began to be considered less important than the need to assure that child had reasonable conditions of life, including a good education. The average number of children in 1989 was 2.2 for those with special secondary education, and 2 with higher education. Woman in employment had fewer children on average than without employment.

It should be stressed also that the tendency of large families is maintained in several regions of the country (Adjara, Kvemo Kartli), but it has no significant influence on the general indicators. According to the data of 1980 the number of second, third and fourth children made up 60% of the total number of children born during the year. In the 1990 there chare decreased to 45 %, while according to the data 1997 it reduced by 38%. It means that in case of maintaining the existing tendency, the family is unable to provide enlarged reproduction.

Marriage apart, many women came to prefer smaller families for reasons mainly related to work, income opportunities, practical difficulties of raising children when both parents were fully occupied and the often unsatisfactory accommodation in pre-school institutions. The cost of raising children also played an important role.

According to the data of the general census of population carried out in 1979 150 woman per thousand had one child, 240-2 children, 329 - three and more children. The census of the population carried out in 1989 revalued the trend of reducing of the number of women with three or more children (300 per 1000 married women), but at present the number of families with three children twice reduced. This is a real danger in regards to depopulation of the country's population.

The decrease of birth rate is closely bound with the decrease of the number of marriages. The number of marriages declined gradually in the 1980s and there was a sharp drop in 1992 (explained in part by the civil conflicts). The number of marriages dropped from 50 500 in 1980 to 13 800 in 1999.

The activity rate has fallen, but other reasons (cost of health care, lack of baby food, scarcity of fuel, the stress and strain generally) render pregnancies and child erasing hazardous. Although recently the indicator of registered divorces reduced, different studies confirm that the number of unregistered divorces is high enough. Increase of the share of incomplete families denotes the same fact.

Years	Marriages thsd	Divorces thsd	Per 1000 population		Average length of marriage before	Averag first ma	e age at arriage
			Marriages	Divorces	divorce	Males	Females
1980	50,5	6,8	10,0	1,3	10,1	28,8	26,1
1985	44,2	6,5	8,4	1,2	9,8	27,0	24,2
1990	36,8	7,8	6,7	1,4	10,6	27,0	23,7
1991	38,1	7,4	7,1	1,4	10,2	26,5	23,4
1992	26,9	4,9	5,5	1,0	9,3	26,5	23,2
1993	24,1	3,2	4,9	0,7	-	-	-
1994	21,9	3,1	4,5	0,6	11,7	26,8	23,5

Table 35: Marriages and divorces, Georgia.

1995	21,5	2,7	4,4	0,6	11,7	27,2	23,7
1996	19,3	2,3	4,0	0,5	11,3	27,3	23,8
1997	17,1	2,3	3,5	0,5	11,6	27,8	24,0
1998	15,3	1,8	3,0	0,3	11,4	28,0	24,4
1999	13,8	1,6	3,0	0,4	11,5	28,3	24,6

Source: State Department for Statistics of Georgia.

Figure 11: Number of marriages and divorce per 10000 residents, Georgia(1990-1999)



Source: State Department for Statistics of Georgia.

Figure 12: Number of marriages divorces per 1000 residents in selected countries (1994)



Sources: Bruyniks N.P. Reproductive Health in Central and Eastern Europe.23(3), 205 15, 1994. State Department for Statistics of Georgia. Tbilisi, 2000

Decline in fertility has been more marked in Georgian community than among some of the ethnic minority groups living in Georgia, especially Azers, who continue to have larger families than Georgians.

The total fertility has decreased from 2.59(1959) to 1.07 (1999), which is far below replacement level.



Figure 13: Fertility rate, Georgia (1960-1999)

Source: State Department for Statistic of Georgia

Table 36: Age-specific birth rates, total fertility rate, Georgia (1958-1999)

	Live bi	rth per 10	000 fema	les of age,	years			Total fertility
Years	15-19	20-24	25-29	30-34	35-39	40-44	45-49	rate
1958-1959	22,2	124,3	172	112,2	58,7	21,5	6,4	2,59
1965-1966	28,2	163,7	154,1	99,8	54,1	15,6	3,7	2,6
1970-1971	35,8	189,5	154,7	94,2	46,5	12,3	2,2	2,68
1975-1976	36,3	179,4	156,3	82,5	35,9	11,0	1,8	2,52
1980	45	184,5	121	61,6	21,1	7,0	0,8	2,21
1985	49,1	183,7	124,9	63,0	26,0	4,8	1,1	2,26
1990	60,2	177,4	110,5	61,7	24,4	5,8	0,3	2,2
1995	58,2	108,9	64,8	32,4	13,7	3,6	0,5	1,41
1996	51,9	101,6	64,8	33,0	14,0	3,3	0,5	1,35
1997	46,6	95,0	65,0	33,2	14,3	4,2	0,6	1,29
1998	40,4	84,9	60,2	30,2	12,9	3,5	0,4	1,16
1999	34,8	76,5	56,0	30,1	12,5	3,5	0,5	1,07

Source: State Department for Statistics of Georgia

It is widely believed that in Georgia induced abortion is often used more than contraception to prevent unwanted birth. Contraception was discouraged in the former Soviet Union, while births were encouraged by taxing childless families or unmarried men. Majority of women's are not aware of modern methods of contraception and keep to the traditional methods, which do not always prevent them from undesirable pregnancy. As the table below shows, the number of abortions reached a peak in the 1970, than declined before leveling out at around 39 per 100 live birth in 1999. The number of abortions rose from 55,7 in 1992 to 64,1 in 1994( per 100 live birth). After 1994, there has been a slight decrease the number of abortions, which reached 46,6 in 1996. At the same time the number of unwanted children in the family and the number of children in residential institutions dropped.

Most reported abortions were performed in medical facilities. Mainly obstetriciangynecologists executed induced abortions. Little per cent of abortions were executed by nurse's nonmedical personnel out of medical facility.

	1995	1996	1997	1998	1999
Total	43,5	31,9	23,4	21,0	18,3
Mini-abortions	8,6	6,0	5,5	6,8	6,5
By the age of women under 15 years	178	11	2	14	3
15-19 years	3803	1676	1320	1009	866
20-34 years	34579	24597	17690	15919	14271
35 and older	4989	5658	4388	4076	3166

Source: State Department for Statistics of Georgia.

Figure 14: Number of abortions per 100 newborns, Georgia (1990-1999)



Source: Centre for medical statistics and information of Georgia, 1999

There is now growing appreciation that family planning is not a device only to limit population size but a means rather to allow couples to decide in which circumstances and when to have children. Emphasis in family planning has thus shifted from the treatment of infertility to contraception. According to figures provided by the institute of Human Reproduction in Tbilisi only one woman out of four in the relevant age-group used some form of contraceptive device in Tbilisi in 1990/1991 and, according to the Institute's staff, the figure for Georgia as a whole could be as low as 8-10 per cent.

It is important that the family planning programs help the families make adequate and suitable decisions on the number of wanted children, avoid unwanted pregnancies and reduce abortions by means of way to avoid unwanted children than abortions.

Figure 38: Demographic trends and structures (1995)

	Georgia (thousands)	%	European Union (thousands)	%
Population	5375,1		371 563	
Urban Population		55,7		78
0-14 years	1244,9	23,2	65 423	17,6
15-64 years	3514,2	65,4	249 000	67
65+ years	616	11,5	57 140	15,4
Total fertility rate		1,41		1,5

Source: Council of Europe 1995

# 4. Environmental and behavioral determinants of health

Who defines health as "a condition of complete wellbeing from the physical, mental and social points of view and not only the absence of illness or disability".

Health is therefore multidimensional. It can only be achieved through a multisectorial effort of the society, the State, the local communities and each individual. However, health is not a purpose in itself, but only a requirement of the quality of life and means through which the people can engage in the social and economic developments. In its turn, development depends on health of participants in the process of production and the social and cultural life.

Health is conditioned by a complex set of factors: biological (genetic, human reproduction), environmental (physical and social), behavioral and health services .

# 4.1. Environment

# 4.1.1. Air Pollution

Atmospheric air pollution has always been the environmentally most sensitive issue in the Country. It was the unfortunate fact that in terms of urban air quality problems Georgia's most industrialized cities: Tbilisi, Kutaisi and Rustavi ranked at the top of the list of most polluted cities of forms Soviet Union.

Despite the sharp decline in transportation and industrial activities in recent years, this unfavorable condition in urban areas has hardly improved. The highest concentrations were normally recorded in Kutaisi (dust, CO, NO2, NO, PHENOL), Zestaphoni (MNo2), Rustavi (ammonia)

	1990	1995	1996	1997	1998	1999
Emission of pollutants to air-total		274,3	323,8	342,1	388,8	199,8
From statutory sources	354	25,4	14,6	15,3	13,9	15,1
By motor transports	894,4	248,9	309,2	326,8	374,9	184,7
Capture of pollutants from stationary sources	412,6	15	13,9	11,7	8,1	10
Capture pollutants in per cent to total emission	53,8	37,1	48,6	43,3	36,7	39,9

Table 39: Emission of pollutants into air in Georgia (1000 tons per year)

Source: State Department for Statistics of Georgia.

	1990	1995	1996	1997	1998	1999
Emission of pollutants to air- total	354,5	25,4	14,6	15,3	13,9	15,1
Solid	110,1	10,9	3,7	2,6	2,6	3,1
Gaseous and liquids	244	14,5	10,9	12,7	11,3	12
Sulfur dioxide	75,8	2,1	1,6	1,5	2	1
Carbon monoxide	119,5	7,1	5,1	4,7	3,1	3,8
Nitrogen oxides	23,6	4,3	3,3	3,4	1,5	1,1
Hydrocarbon	17,7	0,5	0,2	0,2	4,4	5,3
Other	7,4	0,5	0,7	2,9	0,3	0,8

Table 40: Air polluting emissions from stationary sources by ingredients in Georgia (1000 tons)

Source: State Department for Statistics of Georgia.

Tbilisi, which lies in a topographic depression and has little natural ventilation and few parks, suffers from high discharges from motor vehicles (5-6 times the permissible limit). Kutaisi was polluted mainly by dust (5-20 times the limit). Zestaphoni had an index as high as 27 in 1991 due to the high concentration of MnO2 from the local ferroalloys factory. The index dropped to 13 in 1992. The soil is heavily polluted inside a radius of 30 km around this town. Rustavi's main pollutants are dust and ammonia, with the latter 4-5 times the limit.

Industrial discharge into the air is highly concentrated. Two third of the discharge is produced by only three plants: Tbilisi power plant (25%) Rustavi Metallurgical Factory (20%), Kaspi Portland cement (19%), another 16 per cent by only a further six plants.

Acid rain is minor problem .Gamma radiation was measured daily in 442 meteorological stations. In the mid 1980 s, radiations was within acceptable limits of about 5-20 mkr/hour, as were precipitation of radioactive dust and concentration of radioactive components. After Chernobyl disaster in 1986, radiation reached 500mkr/hour, radioactive dust precipitation 2-4300 Bk/m<sup>2</sup> and radioactive components 17 500 to 40 500 bk/m<sup>2</sup> Radioactive pollution grew 30 000 times. Conditions returned to normal almost everywhere during the following years, but the contents of radionuclide's are now different insofar as concentrations of cesium (137) and strontium (90) are now much higher. Nevertheless very high levels of radiation (officially recognized by authorities recently) remained in Abkhazia and part of Samegrelo, exceeding

normal levels by some 500 times. Air pollution levels are expected to rise again when normal economic activity is resumed.

Air quality has a particularly strong impact on respiratory and cardiovascular diseases. Air pollution is associated with exacerbation of chronic bronchitis and bronchial asthma and the increased number of lung cancer. The collapse of public services has resulted in uncollected garbage and health hazards to the people.

# <u>4.1.2. Soil</u>

Spatial distribution of soils in Georgia is characterized by vertical variability. Ten heavy metals are recorded in the soil, but they do not occur in dangerous concentrations.

More than 10 million ha of agricultural lands are subject to erosion, including 370 thousands ha arable and 550 thousand hays and grazing. For the last 7 years total area of arable decreased at least by 11 thousand ha. 10 thousand ha landslide and 1000 hectare mud flow-prone basins were registered (major causes of landslides are believed to be the incorrect exploitation of agricultural and forest covers).

Water and wind erosion processes in Georgia is intensive. That is a reason for the country's arable territories (9%) which are distributed on the slopes with an angle of more than 10 degrees (19 % in Western Georgia and 5% in the East of the country). Approximately 205 thousand hectare is subject to water erosion. Wind erosion processes are mainly happening in Eastern Georgia – 105.5 thousand ha of arable lands (1988). The abrasion is also intensive (155 km in the year 1961, 201 km in 1990).

Data of 1990 suggests that total eroded hay areas constitute 50.2 thousand ha and eroded grazing land area -496.2 thousand ha.

Total agricultural territories are the subjects to other to other types of soil erosion, which constitute 785.8 thousand ha in Eastern Georgia and 328.3 thousand ha in western Georgia.

Unfortunately, there is no systematic monitoring of industrial pollution of soils performed in the country. Generally, it is already recognized that heavy metals are major industrial pollutants of soils (vanadium, cobalt, manganese, copper, molybdenum, nickel, lead, zinc, tin, and brome).

In 1992, 160 samples of soils were analyzed within the territories Tbilisi and Rustavi urban agglomerations, which had not demonstrate dangerous levels of soil pollution.

## 4.1.3 Water Supply

Water is Georgian's most abundant natural resource. The most amount of water discharge per sq.km. (820 thousand t) is 2.5 times the world average. The country's stock of water is 56.5 Cubic kilometer (km<sup>3</sup>)/year. Transboundary waters influx equals to 9.3 Cubic kilometer (km<sup>3</sup>)/year. 33% of water resources are ground waters, which are of highest quality for potable consumption.

There are some problems and constraints on the way of effective use of these resources. Primary reason is that the water is unevenly distributed between the Eastern and the Western parts of the country -78% of water resources are concentration in the West, while 60% of industrial facilities, 85% of irrigated land and 62% of population is concentrated in the East of the country.

There are approximately 26, 060 rivers in the country with total length of 59.00 km. Most of these rivers (97,3%) are less than 10 km long Largest rivers are Rioni (12,6 km<sup>3</sup>), Mtkvari (7,2 km<sup>3</sup>) Chorokhi (8,9 km<sup>3</sup>), Enguri (5,9 km<sup>3</sup>), Kodori (4,1 km<sup>3</sup>), Alazani (3,1 km<sup>3</sup>). There are about 860 lakes and reservoirs in Georgia, with total area equal to 170 square kilometers Reservoirs are used mainly for irrigation and energy production. Their annual discharge volume is 2184 85 mill. km<sup>3</sup>, including 1297.6 (35 reservoirs) in Eastern Georgia and 851,25 (8 reservoirs) in the Western part of the country.

Major pollutants entering the country's water bodies are oil products, nitrous ammonia, organic substances, and heavy metal ions. Major contributions are the metallurgy, oil refining, and coal mining, chemical industry and energy sector. Nitrogen compounds, organic substances and suspended particulate matter are entering water bodies trough communal sewers (for instance, ammonia- 8 t/y, organic substances- 8370 t/y, suspended particulates - 9,28 Th. t/y.).

The country is rich of ground water resources (fresh, mineral, industrial and thermal).Total resources of fresh ground water are 560  $m^3$ /sec of which 100  $m^3$ /s is used. Major factors affecting the quality of groundwaters are the use of chemicals in agriculture and pollution of groundwater from industrial facilities.

Georgia has numerous thermal and mineral water resources. Their exploitation capacity is 329.5 thousand cubic meters in 24 hours. The main source of underwater pollution is use of agrochemical and spilling of wastewater from industrial sources. In former period active use of fertilizers 250 thousand tons annually, half of them was nitrogen containing. Additionally thousand tons of toxic chemicals were used. Big part of them is washed into the soil, because of the contrasting landscape and high precipitation and spill into the sea or underground horizons. Over 500 sights of is an underground pollution were monitored.

The most polluted rivers in Georgia are the Mtkvari, Rioni, Kvirila, Galidzga, Tkibuli, Enguri, and Gubistskali. In most of these rivers, concentrations of phenols, hydrocarbons, copper, manganese, zinc and nitrogen are considerably higher than the national and international standards. Most water treatment plants are not operating or work at a very low level of efficiency. It is stated that more than 60% of the sewage treatment plants is obsolete and in urgent need of replacement. Coliform bacterial levels in reservoirs and water supply systems have reached dangerous levels in many areas.

According to the information collected in 1994, some 55.7% of the population lives in urban areas. That is the main reason why many of the country's pollution problems are concentrated in several municipal areas, which are also industrial centers.

Fertilizers and pesticides, exceeding permissible levels heavily pollute watercourses by a factor of 5-10. Only 13% of domestic and industrial sewage is treated prior to discharges into the river and in many rural areas only contaminated water is available for domestic needs. The worst affected are Batumi, Poti and Sokhumi. Draining the wetlands in this region for agricultural purposes has overloaded the area with these pollutants.

Sewage accounts for about 60% of the total volume of waste water. Sewage systems function only in 45% of the populated areas, while 32 sewage systems are equipped with some kind of purification plant abstracting approximately 50% of the organic substances.

About 3337 million m<sup>3</sup> of water resources was abstracted in Georgia in 1991 for industrial, communal and other uses (in 1992-3575 million m<sup>3</sup>). Out of this amount, 2867 million m<sup>3</sup> had been used, including 888 million m<sup>3</sup> in the industry, about 1145 million m<sup>3</sup> were discharged into water bodies, of which 90,5 million m<sup>3</sup> has not been treated at all and 21,4 million m<sup>3</sup> treated only partially. As a result more than 100 thousand tons of pollutants were released into the environment. Water pollution comes mainly from communal and industrial sources,

57.6% (58.42 thousand tons) and 40.0% (42.58 thousand tons) respectively. The major sources of pollution are the metallurgy, coal mining chemical industry and energy sector.

The system for the management of toxic chemical substances is not capable of function effectively without major changes in existing practices. During the Soviet era there was a centralized system of distribution and use of pesticides and fertilizers. The law, regulating the activities in this field did not exist. Separate agencies and organizations were acting in according with guidance's, instructions and government standards, issued by central Union-wide authorities.

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Tab 41: waste	water	discharge	(million m	), Georgia

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	1990	1995	1996	1997	1998	1999
Waste water discharge	1671	375	632	624	504	435
polluted	227	13	81	103	50	53
Pure(corresponding to standards;	964	124	300	266	200	125
without treatment)						
Purified according	480	238	251	255	254	257

Source: State department for statistics of Georgia

Georgia has well-developed infrastructure for drinking water and sewage disposal. Almost 97% of the urban population and 72 % of the rural population have access to piped drinking water. The remainder of the rural population have uses both protected and unprotected wells. The ever present lack of funds for maintenance and rehabilitation of this extensive infrastructure over the past ten years has resulted in serious decay of the system. Water supply systems countrywide are in dire need of major upgrading. The defective condition of the pipes contributes also to the deterioration of the quality of water, particularly the inflow of contaminants, including sewage.

Water supply systems in rural areas tend to fall into three main categories: piped water supply systems, surface water from irrigation canals which is filtered and chlorinated and household or community shallow wells. In addition people drink unimproved water from surface sources including canals and rivers.

However, the lack of funds for maintaining and rehabilitating this extensive infrastructure for the past ten years has resulted in serious corrosion of the system. Over 80% of all water supply systems are in dire need of major upgrading. Leakage and discontinuity of public water supplies reduce their quality and increases the risk of contamination.

Some numbers of the water pipes are not in accordance with sanitary and technical standards. Most of them are worn out and rural water pipes use to function 2-3 hours per day, which is conductive to lower pressure and water pollution.

Industrialization has been one of the factors responsible for degrading Georgian's water resources. Chemical plant's direct discharge to surface waters has to some extent polluted the rivers to the extent that is now unsuitable for drinking or irrigation.

In rural areas some people have only simple pit latrines, constructed outside of the houses. Latrines may be situated close to the water source. Sometimes the latrine is suspended over the canal and excreta drops directly into water regardless of the legislation prohibiting water contamination.

Immediate causes of the deteriorating water quality problem include the lack of coagulants and chlorine to address the problem of suspended particles and to facilitate water purification. The lack of clean drinking water appears to be results of contamination from pesticides, fertilizers, industrial waste, inadequate sewage treatment systems and open distribution systems. Some households prefer to use canal water for laundry, dish washing or body cleansing as well as drinking purposes.

In some areas the inadequate supply of clean drinking water appears to be one of the greatest health hazards. Even in areas with piped water supply high level of water –borne diseases are common and suggest poor quality of drinking water.

The sampling results are discouraging. More than 65% of the samples throughout Georgia exceed the standard limits for fecal coliform, and there is also evidence for groundwater pollution with nitrates, phosphates, other pesticides and fluorine.

The major water-borne diseases are cholera, dysentery and other diarrhea diseases, viral hepatitis as well as typhoid. Outbreaks of leptospiroses are also directly related to contamination of drinking water sources.

Several outbreaks of waterborne infectious diseases have occurred in recent years : bacillary dysentery in Rustavi with 200 cases of shigellosis (1997), amoebiasis in Tbilisi (1998) and

intestinal diseases in southern Georgia and among internally displaced people in the Zugdidi region.

The sewerage system (21% of the rural population and 81% of urban residents have access to public sanitary services) has significantly deteriorated during the ten years of crisis and represents a major risk to drinking water because of leakage of sewage into the water pipes. The rehabilitation of the water supply and sewerage systems are prime targets of the Municipal Development Social Investment Fund in 1996-1998 set up by the World Bank (USD 35 million).

#### 4.2. Social–Economic Determinants of Health

The state of health status of the population reflects the level of the socio-economic development of the country. Some researches attribute more than half of all illness to these determinants. Difference in basic health indicators became very obvious as well, especially between the poorest and comparatively well of layers of population spend 20-30% less on treatment and purchasing of medications. It is quite understandable as poverty is always accompanied by high level of morbidity and correspondingly with the increase of medical expenses. At the same time, the representatives of the higher social class are not only healthier, but are characterized with high medical activities. Their major part refers to a physician not only in the case of illness, but on purpose of prevention as well, and pursue healthy life style. (O. Vasadze, Otar Gerzmava. The main trends of demographic and health status development of the Georgian population).

The poor class is not an invariable part of population, as they are part employed in some instance. Income is closely connected with social-economic situation existing in the country. This group includes public workers, IDPs and pensioner. Variation of their incomes is connected with timely and full paying of salaries, pensions and premiums from the state budget.

The absolute poverty line in Georgia assumes a basket of goods valued at GEL 10 (USD 51) per month per male adult equivalent in 1998; 50% of households consumed less than this and are therefore assumed to be poor. The two relative lines of poverty are calculated at 60% and 40% below national median income, yielding respectively 23% and 11% of households in what is defined as severe poverty.

The most widespread occupational hazards are dusty and gas-polluted microclimate as well as noise, vibration, etc. The work related diseases most often are osteoarthritis and labyrinthine neuritis. On the other hand, when work is associated with health hazards it can cause not only occupational diseases but also be one of multiple causes of other diseases or aggravating existing ill-health of non-occupational origin.

Chronic exposure to noise in general, and from transport in particular, causes hypertension and Ischemic heart disease, as well as sleep disturbance and annoyance (both of which may contribute to mental illness). Transport impacts health via: accidents; emissions; reduced; exercise; severance of communities. An estimate of the total health effects of traffic in London suggest that a 10 per cent reduction in traffic volume might avoid 80-100 fatalities and 1,300 hospital admissions per year for total population of seven million.

During the forthcoming years an expected deterioration concerning occupational health is expected due to lack of financial resources for provision of safe working conductions, laboratory equipment for regular check-ups as well as provision of supplementary food and milk.

# 4.3 Determinants Related to Personal Behavior

#### 4.3.1. Life Stile

The life style refers to the general way of living, the relation between the living conditions in the largest sense of the world and the individual behavioral patterns, as determined by the social–cultural factors and the individual's personal features. In determining the level of the population's health status, some counties have described the following picture of the factors influencing the level of health: life style-40%; environment-20%; biological-25%; health services-15%. However, with respect to the health needs of people in ill health, the contribution of the health sector to the diagnostic, treatment, cure, remedy or recovery is obviously the highest.

Lifestyle patterns such as nutritional habits, physical activity, and smoking or heavy drinking of alcohol play an important role in premature mortality, mainly from cardiovascular diseases and cancers. These diseases are responsible for the largest share of deaths under the age of 65 years. Most of the numbers of deaths are attributable to life style-related diseases, therefore avoidable or delayable through behavioral changes. Lifestyle is also influenced by collective
behavioral patterns, common to a person's social group, and by the more general socioeconomic conditions.

The promotion of healthy lifestyles has been accepted as one of the best investments for health gain. Georgia have established nationwide healthy lifestyles programs, integrated strategies which incorporate healthy public policy, Georgia have also made plans to promote nationwide activities for health lifestyles.

The national health promotion program has defined clear actions focused on the life style of various groups of population, from correct information about behavioral health hazards to concrete actions addressing specific risk factors. Another objective refers to Georgia's participation in a series of international projects, i.e. Healthy Cities and Healthy Villages Networks etc.

It is obvious that the success of a complex intervention in favor of a health-oriented outlook and practice largely depends on both the degree of awareness of the non-medical sectors and legislative and financial support.

### 4.3.2. Nutrition

The impact of nutrition on health in the late 19 century and early 20 centuries was matter of sufficient calories and essential nutrients. Today the focus is on excessive or ill-balanced diets. There are clearly demonstrable relationships between excessive or ill-balanced diets and chronic disease. The WHO Global Burden of Disease Study showed that in developed countries nutrition-related diseases account for 36 per cent of disability adjusted life years lost (DALYs lost in EU countries might be attributed to poor diets – a similar effect to that of smoking . Unfortunately, research into the effectiveness of population-based interventions to improve health via nutrition is weak.

Diet is also likely to be an extremely important factor in life style. Among peristaltic factors, diet has a major share in determining health status, by the quality of available food and the daily food consumption (quality and structure). The microbial contamination of foods during processing and an inadequate storage lead to food poisoning. Food contamination with various chemicals (Heavy metals, nitrites, nitrates) favors intoxications. The food industry's failure to observe recipes-either because of the scarcity of raw materials, or the use of substitutes of inadequate nourishing value, or the poor quality of raw material-lead to an inadequate diet .

While the daily food consumption is good in caloric input, its structure is deficient and unbalanced. The main deficiencies identified consist of a low daily consumption of animal-origin proteins in favor of vegetal-origin proteins; a lower share of animal-origin ones; the prevalent use of animal fat as a source of calories; a low consumption of milk and milk derivatives.

Longevity directly related to high levels of consumption of fresh fruit and vegetables. Life expectancy at birth in the Georgia has exceeded the average for the Soviet Union Republics. This is largely believed to be due to differences in diet. The good transport system at that time-enabled farmer to market fresh produce throughout the country. Usually all households, even in urban areas had kitchen gardens and fruit trees. Consequently the diet of Georgians was rich in fresh fruits and vegetables for most seasons of the year and dried fruits and nuts for winter. The rural population had direct access to livestock (milking cows, cattle, poultry, goats and sheep). Traditional protein sources were beef, mutton, milk products eggs and to a beans. It is seen from Table and charts that during the Soviet period Georgians consumed less meat, milk and sugar compared to the population of other republics. They were in a better position concerning oil, vegetables and fruits consumption. At the same time in the country bread was consumed in comparatively high quantities (183 kg/per person)

	Meat	Milk	Sugar	Oil	Vegetables	Fruits	Bread
Russia	67	329	47,2	10,2	89	35	119
Ukraine	57	331	52,8	11,6	102	47	141
Belarus	61	369	48,7	8,6	78	38	126
Uzbekistan	30	185	24,7	12,6	107	23	170
Kazakhstan	61	275	38,9	10,9	75	23	146
Georgia	29	309	39,1	6	82	49	183
Azerbaijan	32	281	36,4	2,5	67	33	151
Latvia	60	415	40,1	6,7	81	39	111
Moldova	50	265	48,9	14,1	112	79	171
Lithuania	74	403	48,1	7,8	69	33	107
Kyrgyzstan	45	177	36,7	10,6	78	16	139
Tajikistan	23	164	27,9	12,1	95	30	167
Armenia	41	432	38,9	3,1	132	41	129
Turkmenistan	39	174	31,5	8,4	123	19	165
Estonia	75	453	44,5	7	64	39	77

Table 42: Consumption of staple food in FSU Republics (kg/per person), 1990

Source: State Department for Statistics of Georgia

After the collapse of the FSU and the Civil War, Georgian has been economically paralyzed. The government of the country has not had the resources to pay on regular basic wages, compensations, child subsidies or pensions. Food products are unaffordable for most part of local population because of their high prices. The nutrition of the population has become irrational.

Purchasing power has diminished to near nothing. Most of the population was particularly vulnerable to price fluctuations and inability to procure traditional protein and vitamins sources in their diet.

Unfortunately, changes in diet and lifestyle present serious challenges on health services. The spread of European diets to Georgia and especially "fast food" containing high levels of animal fat are likely to lead to increasing diet- related diseases.

With children, an unbalanced diet raises the prevalence of protein and caloric malnutrition and anemia, and lowers the natural resistance; with adults, it favors dyslipidemia, atherosclerosis, cancer and obesity.

All this is enhanced by the population's poverty and the high cost of foods .Most of family's average income is spent on food.

The consumption patterns of food products have drastically changed recently in Georgia .The consumption of bread and bread products has increased (for various social groups from 65 % to 85% according to the different social groups), vegetables (including potato)from 8% to 14% , fruit (by seasons) - 2-12 %. Consumption of milk and dairy products has significantly reduced from 8% to 2% and meat products from 12% to 5%, sugar and confectionery from 6% to 2 per cent. The daily intake of calories has decreased markedly. Besides, caloricity of diets in South-Caucasus countries is lower than established physiologic standard (according to some authors it makes up 3200-2800 calories).

Making up for the deficiency of meat and dairy products ingredients amino acids, proteins and vitamins, the traditional Georgian diet includes beans, different vegetables and fruit. However, impoverish of the diet conditioned by lack of meat and dairy products significantly effects health of population. This situation partially conditions the process of deceleration (retardation of children's and adolescent's physical development). It has reflected in low indicators of physical development of young population. Besides, pathologic conditions

connected with malnutrition became very frequent. In this regard the condition of IDPs from Abkhazia is extremely severe.

Unbalanced diets and the insufficiency of animal protein could ultimately cause more widespread metabolic disorders (especially diabetes mellitus) and anemia.

Low levels of exclusive breast feeding and introduction of inappropriate solid foods for infants to early put young children at increased risk of mortality, infection, anemia and stunting. As food security in Georgia has been threatened by the economic collapse, unbalances diet lack of animal protein is considered as a main cause of anemia in children.

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Table 43: Calorific	c of everyday	diet of population	in Georgia (kg	(per capita during the year)

	1990	1995	1996	1997	1998	1999
Bread, flour, legumes	184,6	163,5	161,3	154,2	151,4	141,1
Potatoes	37,3	26,8	42	44,7	47,3	47,6
Cabbage, fresh and pickled	11,7	10,1	19,1	10,3	12,1	11,6
Vegetables and melons	81,2	60,8	97,7	93,4	58,2	55,2
Fruit and grape	48,3	36,7	66,3	60,2	57,8	43,5
Sugar, confectionery, canned fruit	20,8	6,7	23,6	25,9	25	24,8
Meat and meat products	36,5	12,5	14,6	15,6	20,8	19,8
Fish and canned fish	8	0,6	1,3	1,4	1,8	1,3
Milk and milk products	311,3	97,9	178,4	217,7	202,5	209
Eggs, pieces	140	66,1	105	107,7	122,5	124,6
Margarine and other fats	0,7	0,3	0,8	2,5	1	0,8
Vegetable fats	4,5	3,3	10,6	11,2	8,3	8,2

Source: State Department for Statistics of Georgia 2000

### 4.3.3. Tobacco Consumption

Tobacco consumption remains a significant lifestyle concern, because responsible for a whole range of severe diseases, such as cancer, chronic pulmonary diseases. Passive smoking and other forms of tobacco consumption are isolated with cancers, acute respiratory disease, cardiovascular disease, prenatal disease and mental disorders. About 3 million of premature deaths a year worldwide are attributable to smoking. Considering the World Bank data if the current trend continues, deaths from tobacco worldwide will reach 10 million a year that accounts to more than 10 per cent of total deaths, by the second quarter of 21 century.

Carrying out the active measures against tobacco abuse conditioned decrease of demand for such products in developed countries (e.g. in 1990-1995 tobacco consumption decreased by 9% in Sweden, by 6% in Australia and New Zealand). Therefore, attention of tobacco producing traditional companies was shifted to markets of developing countries, where neither legislation nor public opinion is ready for carrying out effective anti-tobacco propagation. Moreover, marketing of tobacco production in these regions is more profitable.

The table 45 shows the growth in tobacco consumption in Georgia. The rate of smokers went up to 33.6% in 1995. Smoking rate continue to rise, in particular with teenagers and young people (the age group 20-45 years old registers the most smokers). The most significant result is an increasing number of people with lung cancer and cardiovascular diseases.

Georgia has formulated anti- tobacco intervention policies and plans. Anti-smoking measures being implemented include declaration of smoke-free zones and public places, organization anti-smoking campaigns, regulations dealing with tobacco production, advertising, sale and use. Georgia has implemented tobacco control policies and legislative measures.

	1980	1990	1995
Europe	1856	1679	1678
Belgium	1842	1751	1403
China	1489	1436	1019
Georgia	700	950	1583
Turkey	1088	1304	1607
Sweden	1569	1254	985

Table 44: Average annual cigarettes consumed in some countries (per capita)

Source: Tbilisi State Medical University

Smoking in general and among adolescents in particular represents a great health problem in Georgia because of the high prevalence. 53.1% of males and 14,7% of females aged 10 to 74 years smoked in Georgia in 1998 (data from National Tobacco Control Centre). This is a 10% increase in both genders compared with 1985.

During the last years tobacco consumption among adults and children and adolescents continuous increase. This dramatic increase rapidly closing the gap between ages in cigarette smoking may be explained with the consequences of the socio-economic crisis: deterioration of living conditions, spectacular growth of poverty and large number of refugees, lack of social support, a great number of varieties of social stress etc. Tobacco, the most widely used substances is used to social life and to symbolize maturity.

According to a survey among 220 children 12 to 1 years of age 55% of the boys and 45% of the girls smoked. Among pregnant women aged 17 to 25, 28% smoked. This epidemic of tobacco consumption is directly associated with the increased mortality and morbidity related to cancer, cardiovascular diseases and respiratory diseases.

Government policies contribute to anti-smoking efforts by requiring health warning on tobacco products and advertisements. Some more rigorous strategies were launched in recent years, including banning on promotion and advertisement of tobacco products and putting restrictions on smoking in public places. For many years tobacco was taxed basically for providing good revenue rather than following health needs. However recent strategies in many countries encourage earmarked tobacco taxation for specific, in particular health care purposes.

Strategies for preventing tobacco use are mainly directed towards adolescents, based on average age of onset for the majority of smokers. These strategies encompass health education programs carried out through mass media campaigns and the school settings.

Tab 45 :	Tobacco	consumption	-% of	population	daily	smokers
		1		1 1	2	

	1970	1980	1985	1990	1991	1992	1994	1995	1996	1997	1998
Georgia								33,6			
Belgium			38,4	32	28,5	26	26	28,5	30,5	26,5	26,5
Canada	39,5		30,4	28,2	25,9		25,5		24,5		23,8
Denmark	57,5	50,5	46,5	44,5	44	42,5	37	35,5	34	32	31
Finland		26,1	22,8	25,9	27	26	22,7	24	22,4	24,1	25,1
France		31,4		28,5		29					
Germany						26,7		26			
Greece				38,5	39,5	40,5	37				
Iceland			34,5	30	28,5	30	28				27
Italy							25,4	25,6	26,4	25,7	24,7
Japan	46,6	42,3	39,2	37,4	37,7	36,9	36,9	37	35,9	35,3	34,3
Netherlands	58,5	43	38,5	37	38	37	37	36	36	36	35
Norway		36	37	35	34	35	33	33	33	34	33
Spain								33,7		33,1	
Sweden		32,4	28,5	25,8	25,1	25,9	22,7	22,8	22,3	19,2	19,1
Switzerland		42		34		30				33	
United Kingdom	49,5	39		30		28	27		28		27
United States	37,3	33,5	30,3	25,6	25,8	26,6				20,3	19,9

Source: OECD Health data, 2001

Measures assisting adults in quitting their habit are of particular importance, because those are the people who in the nearest future will be suffering or even dying from the diseases caused by tobacco. A variety of intervention strategies are aimed at helping people in making their decision to quit or assisting them their quitting efforts. Discussion around the above presented interventions is focused on the comparison of the effectiveness of each presented interventions is focused on the comparison of the effectiveness of each presented strategy. Analysis is based on the compliance of the intervention, its acceptance bu public and factors influencing the outcome.

### 4.3.4. Alcohol Consumption

Georgia is an ancient country of viniculture, where ever before BC viniculture had been well developed. Ancient tradition of moderate consumption of wine and other alcohol drinks conditioned low level of alcoholism until 90s. But, at the same time so called "everyday" consumption of alcohol, mainly of wine is very characteristic for Georgian reality.

One of the principal causes of problem aggravation about alcoholism is also network of addiction establishment existing in health system at the beginning of nineties and cancels the addiction establishment of closed type depending on Ministry of Internal Affairs.

Alcohol consumption and related problems is a one of major behavioral risk factor. It accounts for whole range of digestive diseases, car accidents... important factors of morbidity and mortality. Recent data indicate that more than 7% of all road accidents reportedly involve alcohol.

The numbers of alcoholics in the general population and among adolescents have decreased progressively. So, for instance, a number of chronic alcoholics has significantly diminished compared with 1982, especially those patients who were diagnosed first stage of disease. Although there is relatively reliable condition, usage of strong rinks is continually increasing, number of crimes committed in intoxicated state is rising.

Tremendous stream of refugees from Abkhazia and Samachablo, aggravation of political and especially economic situation, declining living conditions, general frustration and pessimism contributed to increasing the problem about much usage of strong drinks, which are not totally reflected in statistical data. About 90% of females respondents under 18 consider that alcohol consumption is a bad habit, 50% of them consumed alcohol irregularly, 80% from 300 female respondents above 18 consumed alcohol (70% periodically, and 10% systematically) 70% of them also considered that it was a bad habit.

The total number of registered patient with chronic alcohol disease in Georgia in 1998 was 8341.

Table 46: Number of patients with chronic alcohol disease in Georgia (1997-1998)

1997		1998		
Number	rate	Number	rate	
9428	182,9	8341	161,6	

Source: Centre for medical statistics and information of Georgia, 1999.

Years	Alcoholic psychosis	Chronic Alcoholism	1 stage	2 stage	3 stage	Alcoholics In all	Man	Women
	F - J							
1982	961	15282	2736	10932	1554	16243	1166	15077
1983	746	15437	2764	11014	1659	16183	633	15550
1984	700	15530	2740	11120	1670	16230	1151	15079
1985	589	15890	2369	12204	1317	16479	1149	15330
1986	448	1438	1933	11689	816	14886	1095	13791
1987	308	14424	1870	11758	736	14723	1066	13666
1988	343	14620	1917	11548	1155	14963	107	13892
1989	245	13813	1887	10844	1087	14063	936	13127
1990	288	13072	1907	3902	1263	13360	305	13055
1991	290	12476	1471	10012	993	12766	288	12478
1992	222	10548	1079	8661	808	10770	146	10624
1993	32	10416	1165	8304	947	10736	513	10223
1994	401	10034	1195	8101	828	10435	543	9892
1995	539	9241	1272	7056	913	3780	727	9253
1996	493	3238	1339	7034	865	9731	525	9206

Table 47: Number of drug addicts in Georgia, 1983-1996. Evidence

Source: Journal of health sciences management and public health, volume 2, 2002.

Alcohol consumption and related problems is a one of major behavioral risk factor. It accounts for a whole range of digestive diseases, car accidents, important factors of morbidity and mortality. Recent data indicate that more than 7% of all road accidents reportedly involve alcohol.

Table 48: Number of traffic accidents caused by alcohol, Georgia (1995-1999)

	1995	1996	1997	1998	1999
Number of traffic accidents	1567	1627	1644	1752	1782
Of which caused by alcohol		136	131	148	120

Source: State Department of Statistics of Georgia.

The deterioration of addiction services functioning till 1991 was a great harm for anti-alcohol and anti-drug abuse activities. During the last years Georgia has formulated ant alcohol intervention policies and plans. Anti-alcohol measures being implemented include health promotion with intensive public information campaigns, and education through programs in schools.

## 4.3.5 Drug abuse

Drug abuse is not a new problem in Georgia. Figures from 1990 give Georgia, with about seven cases per 100 000 population, as having the third highest incidence of new cases of abuse among the 15 republics of the former Soviet Union, well above rates in Russia and below only Turkmenistan and Ukraine (Human development report. Georgia 1995).



Fig15: Number of clinical examined drug addicts in Georgia, 1983-1996.

Source: Journal of health sciences management and public health, Volume 2. 2001.

According to evaluation of international experts Georgia nowadays is harmed by drug addiction. Recent information from the National Bureau for drug abuse And Narcotics gives the number of registered addicts as app. 4000. Estimates of those not registered vary from "several tens of thousands: to 150000. In the bureau's experience there is a preponderance among drug addicts of young men in the 18 to 25 age range, while the number of women is said to be increasing (according to one estimate women addicts are 10 to 15 per cent of the total). Addiction in the late 1980s was more commons in the large cities through one effect of the civil conflict in recent years has been to spread it more widely.

	1980s	1990s
Morph	13,5	17,8
Opium	32,6	51,5
Codeine	13,0	2,1
Hashish	19,6	6,7
Barbiturates	8,3	4,9
Antihistamine drugs	2,6	1,8
Sedative drugs	7,8	3,6
Other	0,4	2,8
Unknown	1,3	0,5

Table 49: Percentage distribution of registered drug addicts according to the types of consumed drugs

Source: Tbilisi State Medical University.

Table 50: Numbers of drug addicts in Georgia, 1983-1996. Evidence

Years	Registered first	Clinical exanimate	Man	women
1893	307	1279	1208	71
1984	400	1347	1276	71
1985	604	1649	1579	70
1986	200	1440	1370	70
1987	367	1607	1535	72
1988	443	1707	1635	72
1989	223	1482	1411	71
1990	411	1617	1545	72
1991	754	2143	2069	70
1992	394	1835	1761	70
1993	394	2820	2773	47
1994	673	3278	3266	12
1995	1018	4181	4110	71
1996	310	4873	4776	97

Source: Journal of health sciences management and public health, Volume 2, 2001.

Different from other republics of USSR drug addiction situation in Georgia remained rather stable over many years. The most commonly used hard drug until the mid-1970s was morphine because it was relatively cheap and easily obtainable. Morphine is still used by the more affluent among the addicts, while others have taken to hashish, marijuana and some

opiates, including poppy (poppies are grown in the more inaccessible part of Svanety). In 90s new, extremely drastic drugs (cocaine) appear in an illegal turnover. In 90s the types of consumed narcotic means obviously changed. Opium and morphine have leading position in this regard .It denotes that narcotic substances enter from Central Asia. Their range (hashish, codeine) enlarged due to activation of the North-Caucasus way.

The problem is not only drug abuse as such, but also the crime that goes along with the lucrative traffic in narcotics. Georgia, perched between Europe and Asia, has become aroute of transit between Russia and Turkey, if only because there is little effective control along its numerous borders. The area's most affected in Georgia are Gardabani district on the road from Azerbaijan, and the Tskhinvali region, and Kazbegi district which receive the traffic from Russia through North Ossetia. Cars stolen in Georgia are said to be exchanged near the Russia border for narcotics. This is clear narcomafia tries to prepare support points, which the transportation of drugs is facilitated, concerned with bringing customs officers or with attracting sellers of part of the population. Speed rate of drug addicts increase is characteristic to Svanety, Kvemo Kartli and Racha-Lechkhumi which is contributed by the remoteness from the center, existence of sufficient area for making own raw material, means of activating less concentrated routes of drug transportation with neighboring countries.

	e	U U		•	-
according by regions j	per 100000 p	oopulation evidence	(1995-1998)		
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Table 51: Number of registered drug addicts and users of narcotic means in Georgia

Regions of Georgia	1995		1996		1997		1998	
	Drug	Users	Drug	users	Drug	users	Drug	users
	addicts		addicts		addicts		addicts	
Tbilisi	11,3	20,5	12,6	23,9	14,1	26,6	15,4	29,2
Adjara	3,6	7,8	3,6	7,9	3,6	8	3,7	8
Poti	1,6	3,8	1,6	3,9	1,7	4,4	1,7	4,4
Kakheti	1,7	3,8	2	4,6	2,1	5,5	2,2	6
Guria	2,2	6,6	2,2	7,0	2,3	7,6	2,4	8,2
Imereti	1,7	2,8	1,8	3,1	1,9	3,4	2,0	3,7
Samegrelo	2,1	4,0	2,1	4,3	2,2	4,6	2,4	4,7
Kvemo Kartli	2,7	6,9	3,0	8,2	3,2	9,2	3,3	10,1
Shida Kartli	2,1	4,1	2,4	5,5	2,8	6,8	3,0	7,6
Mtskheta-Mtianeti	1,0	3,3	2,2	4,7	1,6	6,0	1,6	6,9
Racha-Lechkhumi	0,9	3,1	0,9	3,5	1,2	4,2	1,2	5,4
Samtskhe-Javakheti	0,9	3,5	0,9	4,0	1,0	4,3	1,0	4,6
Svanety	0,5	5,2	0,5	5,8	1,1	8	1,1	10,3
Georgia	4,4	8,7	4,9	10,1	5,4	11,2	5,8	12,3

Source: Journal of health sciences management and public health. Volume 2, 2001.

Spread of drug addiction has dangerous tendencies particularly in Tbilisi, where over last year's a number of drug addicts and users increased by 1.5%. Drug addiction is widely spread in young people and minors. In mountainous zone of West Georgia (Svanety, mountainous regions of Samegrelo, etc.) there is a health of drug addiction, which is provided by the local raw material.

Georgia has formulated anti-drug intervention policies and plans. Since 1997 according to the State Program the finance of preventive measures against drug addiction has begun, which increased the management significantly. The proposed plan about the fight against drug addiction provides for complex whole of the measures, which means the future development of network, intensification of its work, imbed of principal elements of health promotion with intensive public information campaigns, and education trough programs in school. Although the essence of program implementation is to create a system relevant to the modern international requirements in drug addiction preventive measures in Georgia, owing to the financial problems adaptation of methods got and approbated in the world and their implantation and the wide-scale implementation of this activity cannot be managed.

#### **5. HEALTH STATUS**

Health status of the population reflects the level of the socioeconomic development of the country. Georgia, like many other post-socialist states, experiences the double pressure in the burden of diseases characteristic for both the developed and developing countries.

The provision of universal coverage and equitable access to health care in Soviet period belied the fact that health status was poor in comparison with other industrialized nations. The last thirty years of Soviet power saw the population of the former socialist economy fall further behind their western counterparts in a number of key indicators.

After dissolution of the Soviet Union, economy crumbled and quality of life declined. For some people of fixed incomes, hyperinflation took food prices beyond their reach, causing malnutrition. More importantly the loss of jobs and hope, meant despair. During the 1990s, the significant socio-economic crisis, the civil war, the flow of refugees, increasing unemployment and the deterioration of living conditions for most people living in Georgia have had a strong negative impact on their health behavior and health status. All this has led to the current depopulation process. High maternal and infant mortality rates, reproductive health, cardiovascular diseases, cancers, traumas, mental illness and communicable diseases are considered to be major problems in Georgia. The above multifactorial effect has led to a new demographic situation – the beginning of a decrease in population. Considering the relationship between health status and national wealth, the regression analysis of health status with respect to the GDP per capita and to the share of GDP allocated to health shows that Georgia has a worse situation than developed countries. As the health status is very sensitive to the economic, cultural and social factors, it shows the population's low standard of life.

#### 5.1. Life Expectancy at Birth (Average Life Span)

Between 1970 and 1995, the average life span in Georgia increased 0.8 years from 70.7 to 71.5. The average life span of the female population (75.5 years) was higher than the male one by 7 years (68.1 years). The challenging demography of the population is producing a considerable challenge to health services. When persons achieve retirement age, their need for health care begins to enhance.

The enlarged require for health care has significant resource consequences. Diminishing birth rates compounds this, so that the number of working community able to contribute to health care funds will decline just as need is rising, and when other demands for social safety, such

as pensions, are also growing. As the same time as the long – term trends are still complicated to expect, the remarkable turn down in birth rates in Georgia is also probable to verify a problem, while an insignificant amount of aged inhabitants.

In the following years, the average life span in Georgia continued to decline. This is a cumulative effect of a complex of negative factors, i.e.: the economic underdevelopment; the lack of comprehensible social objectives subordinating the economic improvement; the stress, the moral pressure and personal dissatisfaction; the traditions of a life style cruel to health.

	Georgia	European Region (with former soviet countries)	EU	CEE	NIS
1980	70,7	66,5	70,7	66,7	62,2
1995	71,5	67,2	73,8	67,3	60,6

Table 52: Life Expectancy at Birth (1980-1995)

Source: OECD Health data, 2001

The worldwide aim adopted in 1981 by the World Health Assembly (resolution WHA 34.36), was life expectancy of over 60 years in every nation of the world. The life expectancy has increased universal and is now approaching 66 years. On average, woman lives seven years longer than men in developed countries and three years longer than men in developing countries. Only 26 developing countries (10% of the world's population) still have expectancy at birth of less than 60 years. Of the 53 countries where life expectancy is equal to or greater than 70 years, three-quarters are in Europe (23) or the Americas (17). In the European Region life expectancy ranges from 66.7 years in Latvia and 66.9 in Turkmenistan to 78,8 in Iceland and 78,2 in Switzerland. Between 1980 and 1994, male life expectancy at birth in EU increased 3,1 years from 70,7 to 73,8; for female, it increased by 3,2 years from 77,4 to 80,6. By contrast, in CEE countries, the figures for males increased by only 0.6 of a year from an already low value of 66.7 to 67,3 years; the increase for females was 1,8 years, from 73,5 to 75,3 years. The situation in the newly independent states (NIS) of the former USSR in the most disturbing with life expectancy at birth actually falling: for men by 1.6 years from 62.2 to 60.6 years, and women by 0,6 of years from 72,5 to 71,9 years. (WHO. Monitoring OF progress in implementation of strategies for health for all by the 2000)





#### 5.2. Birth Rate

The most striking development in population dynamics is the dramatic decline of the birth rate. The evolution of the Birth rate has been characterized by a downward tendency. In the last 10 years, both the rate of general fertility and the rates of specific fertility by age declined, an eloquent illustration of the decrease of the family size, although, at the same time, the number of deliveries has been on the decrease, which could affect mostly to social, economic and cultural factors. The birth rate reduced almost twice in comparison with 1989 (table). In 1999, 46 827 newborns were registered, while the numbers of newborns in 1997 was 52 826.

Fig 18: Birth rate in Georgia per 1000 population (1960-1997)



Source: State Department for Statistics of Georgia, Statistical yearbook of Georgia. Tbilisi, 2000

Table 53: Birth rate in Georgia, thousands 1980-1999 years

1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
89,4	97,7	92,8	89,1	72,6	61,6	57,3	56,3	53,7	52	46,8	40,8

Source: Centre for medical statistics and information of Georgia, 1999.

There are important territorial variations of Birth rate ranging from 9 to 12.7 (in 1997). As it is very likely that the rate of nationality continue to drop in the near future, the logical consequence would be to work out a demographic policy. It should provide a complex of social, cultural, economic and legal measures, and take into account the historical development and the traditions of reproductive behavior at national level.

Table 54: Birth rate by regions per 1000 population (1996-1997)

Regions	1996	1997	1998		19	99
			rate	number	rate	number
Georgia	11,1	10,7	9,1	49 588	8,9	46 827*
Tbilisi	9,7	9,5	7,8	13 852	11,1	13 913
Adchara	13,6	12,7	11,2	4 678	10,1	4 529
Guria	10,7	11,3	10,1	1 329	8	1 230
Racha-						
Lechkhumi	9	9	8,5	480	8,1	406
Kvemo						
Svaneti						
Samegrelo	12,4	11,8	8,5	3 724	8,5	3 624
Imereti	12,3	11,3	9,5	7 704	9,7	7 013
Kakheti	9,1	10	8,6	3 611	7,7	3 278
Mtskheta-	11,3	11,4	11,4	1 135	10,1	873
Mtianeti						
Samtskhe-	13,2	10,9	10,9	2 676	9	2 620
Javakheti						
Kvemo Kartli	10	10	8,7	5 732	7,8	5 291
Shida Kartli	11,7	11,1	10,1	3 304	9,7	2 862
Poti	11,7		10,8	556	11,6	600
Upper Svaneti			7,1	107	7,3	109
Tskhinvali			111			133

\*Railway - 346.

Source: Centre for medical statistics and information of Georgia, 1999.

Fig 19: Birth rate by nationality in Georgia (1992)



Source: State Medical University of Georgia.

Between 1985-1990 and 1990-1995, the world crude birth rate will have dropped by 7% (from 27 to 25 per 1000 population). The experience of regions will differ, however according to their level of development. Fertility rate will decline in all regions, but there will be a proportionately greater decline of 9% in the more developed regions to 12.6 births per 1000 population. Less developed regions will experience a decline of 7% - 8%, to about 28 births per 1000, and least developed regions show a modest 2% decline to 42.7 births per 1000.

Fig 20: Birth rate per 1000 population (1990-1995)



Source: World Health Organization. Provisional agenda item 7, 1994





Source: State Medical University of Georgia. 1998

	1980	1990	1995	1997
Armenia	13,6	13	12,8	
Azerbaijan	21,6	19,2	17,3	
Georgia	10	10	11,6	10,7
Russia	9,6	9,3	8,9	8,6
Turkey	22,8	22,4		

Table 55: Birth rate per 1000 population (1989-1997)

Source: Ministry of Health Georgia, National health Management Center. Research papers, volume 1.

# 5.3. General Mortality

In the last 40 years, the rate of general mortality increased from 6.5 to 8.8. The rate peaked sharply in 1993-year (10), perhaps the worst year of Georgia's transition. It bottomed out in 1997 (7.5) and is climbing again in 1999 (8,8); the gap between births and deaths is narrowing. The long-term effects of increased stress, inadequate health care or an improved registration system may cause these. The serious problem is implementation of appropriate preventive programs among ill people.





Source: Centre for medical statistics and information of Georgia, 1999.

Like most European countries, in comparison with females, mortality among males is higher and is characterized with higher speed of increase. This is partly explained by the caring effect of female hormones, which impediment the onset of disease until after the menopause, but also by the lower level of tobacco consumption by woman. It should be mentioned, that mortality rate in males of 40-55 is much higher. Especially complicated situation is among IDPs from Abkhazia and Samachablo where this data is significantly higher.

An indicator of male and female mortality varies in other age groups. Only in elderly population, over 75, mortality curve in both sexes, is characterized by similar dynamics.



Fig 23: General mortality by sex groups, Georgia (1999)

Source: Centre for medical statistics and information of Georgia, 1999



Fig 24: General mortality in urban and rural areas, Georgia (1999)

Source: Centre for medical statistics and information of Georgia, 1999

Mortality dynamics of the population insignificantly different in urban and rural areas, Mortality dynamics in rural population is characterized by more positive trends. For example in the contingent mortality level of children under one year and especially able-bodied people is much lower. The peak is shifted to elderly population.

The structure of mortality of population reflects the changes taking place in recent years: mortality indicators caused by infectious diseases, especially among children are quickly increasing. Cardiovascular diseases (71%), malignant neoplasm's (11%), accidents and traumas (3.9%) are the leading causes of mortality in Georgia.

		Urban			Rural		Total		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Total	11396	10648	22044	8906	9428	18334	20302	20076	40378
0-4	409	274	683	72	41	113	481	315	796
5-9	26	9	35	15	9	24	41	18	59
10-14	31	17	48	19	9	28	50	25	76
15-19	58	26	84	37	22	59	95	48	143
20-24	128	33	161	53	25	78	181	58	239
25-29	166	52	218	87	32	119	253	84	337
30-34	217	71	288	123	45	168	340	116	456
35-39	365	110	475	219	58	277	584	168	752
40-44	481	180	661	215	76	291	696	256	925
45-49	590	184	774	254	103	357	844	287	1131
50-54	591	229	820	255	108	363	846	337	1183
55-59	771	362	1133	408	251	659	1179	613	1792
60-64	1398	859	2257	942	666	1608	2340	1525	3865
65-69	1578	1125	2703	1444	1021	2465	3022	2146	5168
70-74	1967	1867	3834	1852	1593	3445	3819	3460	7279
75-79	1055	1782	2837	1088	1481	2569	2143	3263	5406
80-84	727	1576	2303	776	1420	2196	1503	2996	4499
85+	786	1867	2653	1042	2462	3504	1828	4329	6157
Unknown	52	25	77	5	6	11	57	31	88
age									

Table 56: General mortality by age and sex groups, Georgia (1999)

Source: Centre for medical statistics and information of Georgia, 1999.

	1996	1997	1998	1999
GEORGIA	7,1	7,5	7,6	8,8
TBILISI	8,4	7,7	7,5	8,4
ACHARA A.R	5,7	6	5,8	6,5
GURIA	8,8	9,7	10,2	12,5
RACHA-LECHKHUMI	9,3	12,1	11,6	13
KVEMO SVANETI				
SAMEGRELO-UPPER	8,6	9,1	7,4	8,3
SVANETI				
MTSKHETA-	6	7	7,3	6,8
MTIANETI				
SAMTSKHE-	6	6	7,2	7,9
JAVAKHETI				
KVEMO KARTLI	3,8	4,5	5,1	6,4
IMERETI	7,5	9	9,4	10,7
KAKHETI	7,6	8,5	8,9	10,3
SHIDA KARTLI	6,2	6,6	8	9,4

Table 57: General Mortality rate by regions (1996-1997)

Source: Centre for medical statistics and information of Georgia, 1999.

There is some evidence that cardiovascular diseases mortality differs between rural and urban areas. Ischemic heart diseases in particular are a less common cause of death among the rural than the urban population. This is related to modernization and implication for everyday life, such as high levels of strain and psychosocial stress, changing nutritional habits and other lifestyle patterns.

In the 1999 years, in Georgia was registered 3885 cancer mortality (mortality rate - 84.4). Some 22.6% of overall cancer mortality is due to cancers of the digestive system, 15.4% - of the bronchus and lung; the latter has been rising constantly since 1970, in comparison to the falling trend in most of the European reference countries. Mortality from cancer is much higher in Guria region (rate - 132), Poti (139.5), Racha-Lechkhumi (104.3).

The general trend for mortality from road traffic accident has been increased during the last years. The risk of dying in road traffic accident is very high. In 1999 in Georgia was registered 1782 road traffic accident, from which 539 (30.2%) died and 2172 injured.

Groups of diseases	1995	1996	1997	1998	1999
Infectious and parasitic diseases	9,9	9,2	10,46	7,41	8,62
Neoplasm's	65,4	71,5	75,58	84,05	96
Disorders of endocrinology system,	11	9,3	9,33	12,4	15,9
nutrition, metabolism and immunity					
Blood and blood forming organs diseases	1	0,97	1,38	0,7	0,65
Mental disorders	0,9	0,98	0,92	0,6	0,6
Nervous system and sense organs diseases	1,6	5,3	6,35	3,22	3,58
Circulatory system and sense organs	528,1	493,7	529,6	541,8	623,8
diseases					
Respiratory system diseases	14,3	19,3	17,4	18	17,98
Digestive system diseases	27,8	28,9	27,6	26,45	31,27
Genitourinary system diseases	7,4	6,6	6,8	5,8	7,4
Pregnancies, deliveries and complications	0,4	0,2	0,35	0,3	0,2
related to past partum period					
Skin and subcutaneous tissues diseases	0	0,08	0,14	0,04	0,07
Muscle skeletal system and connective	0	0,16	0,04	0,25	0,24
tissues diseases					
Congenital anomalies	1,5	1,7	1,73	0,66	0,72
Disorders connected with prenatal period	7,1	10,8	11,16	9,17	10,4
Symptoms and unclear diagnoses	16,7	18,4	23,64	23,2	25
Injuries and poisonings	40,7	31,7	29,17	29,4	34,1

# Table 58: Main causes of death in Georgia per 100 000 population. 1980-1999

Source: Centre for medical statistics and information of Georgia, 1999.

Fig 25: main causes of death in Georgia (1999)



Source: Centre for medical statistics and information of Georgia, 1999.

Between 1985-1990 and 1990-1995, the world crude death rate decreases by 3% (from 9.6 to 9.3 per 1000 population). In the more developed countries the crude death tare decrease from 9.6 to 10.1 per 1000 population. This is because the proportions of these regions are aging as fertility declines (fewer young enter the population) and life expectancy at older ages is extended. Consequently, these populations contain an increasing proportion of people in the age groups with the highest risk of dying. In the less developed regions, however, gains due to mortality rate decline continue, with a decline of 5% from 9,6 to 9,1 death rate is decline by 7% to about 15 death per 1000 population.

16 14 12 10 8 ■ 1985-1990 6 ■ 1990-1995 4 2 0 Georgia World More Less least developed developed developed countries countries countries

Fig 26: general mortality rate in the world (1985-1995)

Source: Centre for medical statistics and information of Georgia, 1999.

Table 59: Genera	l mortality	rate in	selected	countries	(1980 - 1999)
rable 57. Ochere	I mortant y	Tate III	sciected	countries	(1)00 1)))

	1980	1990	1995
Armenia	-	6,6	6,6
Azerbaijan	7,4	6,9	6,4
Georgia	9,2	9,6	7,5
Russia	15,7	15	14,2
Turkey			7

Source: State Medical University of Georgia. 1998

Fig 27: Mortality rate in selected countries (1994-1995)



Source: State Medical University of Georgia. 1998

## 5.4. Infant Morality

During the last ten years infant mortality rate continued to decline and the trend in infant mortality rates looks stable in the past few years, although it remains at high level.





Source: Centre for medical statistics and information of Georgia.

The first year of life is one of the most critical phrases as regards mortality, The deaths of children under 1 year of age mainly occur during delivery or within the first week after birth (Table 60) Mortality under 1 week accounts for 68% of all infant mortality, between 1 week

and 1 month 10.1%, and over 1 month 21.3%. Infant mortality is consistently higher in urban areas (89.9%) than rural areas (11.1%).



Fig 29: Infant mortality in urban and rural areas, Georgia (1999)

Source: Centre for medical statistics and information of Georgia, 1999.

	Te	otal	Urban regions		Rural regions	
Age	deaths	Rate	deaths	Rate	deaths	Rate
0-6 days	485	68,0	474	73,9	11	15,3
7-27 days	72	10,1	64	10,0	8	11,1
1-<12 months	152	21,3	99	15,4	53	73,6
1 month	39	5,5	33	5,1	6	8,3
2 months	19	2,7	16	2,5	3	4,2
3 months	19	2,7	16	2,5	3	4,2
4 months	16	2,2	10	1,6	6	8,3
5 months	13	1,8	4	0,6	9	12,5
6 months	13	1,8	6	0,9	7	9,7
7 months	8	1,1	2	0,3	6	8,3
8 months	7	1,0	5	0,8	2	2,8
9 months	4	0,6	2	0,3	2	2,8
10 months	5	0,7	1	0,2	4	5,6
11 months	9	1,3	4	0,6	5	6,9
In total	713	100	641	100	72	100

Table 60: Infant deaths per 1000 live births in Georgia by age and location, 1999

Source: Centre for medical statistics and information of Georgia, 1999.

Infant mortality is consistently higher among boys (60.3%) than girls (39.7%).

Age	Total	Girl	%	Boy	%
0-6 days	485	191	39,4	294	60,6
7-27 days	72	31	43,1	41	56,9
1-<12 months	152	59	38,8	93	61,2
1 month	39	17	43,6	22	56,4
2 months	19	6	31,6	13	68,4
3 months	19	8	42,1	11	57,9
4 months	16	5	31,3	11	68,8
5 months	13	4	30,8	9	69,2
6 months	13	5	38,5	8	61,5
7 months	8	5	62,5	3	37,5
8 months	7	3	42,9	4	57,1
9 months	4	0	0,0	4	100,0
10 months	5	4	80,0	1	20,0
11 months	9	2	22,2	7	77,8
In total	713	283	39,7	430	60,3

Table 61: Infant deaths in Georgia according to age and sex groups, 1999

Source: Centre for medical statistics and information of Georgia, 1999.





Source: Centre for medical statistics and information of Georgia, 1999.

According to the CMSI data, infant mortality accounts for 76.5% of all mortality under the age of 14. Death rate for children between 1 and 14 is 22 per 100 000 population, according to the SSD statistics, this suggest that, if the babies survive the first one-year, they have good chances of survival afterwards in Georgia.

Table 62: Infant deaths under 1 years and under 14 years of Georgia, 1999

Total	Under 1 year	%	1 - 14	%
931	713	76,5	218	23,5

Source: Centre for medical statistics and information of Georgia, 1999.

It should be taken into consideration that about 5-7% of newborns are prematurely and most have low weight and height. In 1999, 66% of died newborn babies weighed under 1000g.

The proportions of clinical causes for the deaths of children under 1 year changed from 1990 to 1998. For example, prenatal conditions have greatly increased (55.7% in 1999 and only 41% 1990). Apart from congenital malformations and diseases of nervous system, major causes of deaths for children are pneumonia and acute respiratory and intestinal infections and sepsis, which suggests that much could have been done to prevent premature death, Post neonatal deaths, particularly those due to infections and injuries, show a seasonal variation with a peak in the winter and are more evident in rural areas.

Deaths from diseases of the respiratory system declined (from 27% in 1990 to 11% in 1998). Other leading causes of infant mortality in 1998 were infectious and parasitic diseases (14%), diseases of the nervous system and sensory organs (8%) and congenital malformations (5%).

For children, major health needs are again to prevent deaths from infectious diseases such as pneumonia and enteritis. In this sense complete coverage of immunization for children is one of the most important health needs. Another needs to treat infectious diseases at early stage to prevent premature deaths. Of course environmental hygiene and individual nutritional status could also contribute greatly to the infant mortality.

Major causes of prenatal and infant mortality also are the lack of proper equipment and facilities for resuscitation for newborn babies, as well as the adequate training for this.

At the same time it is pointed out that a number of infant mortality occurred in the first few days, which might suggest the inadequate service at the maternity house or inadequate condition in the case of home deliveries.



Fig 31: Child Morality by Causes (0-14 years of age, 1999)

Source: State Departments for Statistics of Georgia, 1999.

Seventy-two per cent of patient under 1 years were brought in with a delay of 36 to 48 hours at Tbilisi Children's Infectious Diseases Hospital and Kutaisi Children's Hospital. According to expert evaluation of dead children, only 60% of cases would have resulted in death if health care had been timely. In this respect, the health system faces serious problems, including lack of transport and modern equipment for intensive neonatal care, insufficient financing, and self-treatment and registration difficulties. The characteristics of infant mortality are illustrative of the underdevelopment and, particularly for the last decade, of the "weariness" of the system and the inefficiency of the strictly sanitary measures of death prevention and control with children 0 to 1 year old.

The situation is complicated by the decrease in the proportion of children breastfed as a routine practice, especially for children older than 6 months.

Fig 32: Number of children in Georgia under 6 months of age breasted according to age, 1997 (total children = 52 984)



Source: Centre for medical statistics and information of Georgia, 1999

Regional variations in the infant mortality rate reflect the availability of medical care, antenatal care or underlying socioeconomic conditions. There are a number of outstanding inequalities, both in health and in the use and distribution of health services. First, there are geographical inequalities in mortality rates and in the allocation of health facilities and resources. Second, there are social class differences in mortality rates. By regions in Georgia, infant mortality rate varied from o to 28.6.

Table 63: 1	Infant Mort	ality rate by	regions	(1996 - 1999)
				(

	1996	1997	1998	1999
GEORGIA	17,4	15,3	15,2	17,5
TBILISI	27,2	26	29,4	28,6
ACHARA A.R	26,6	23,4	24	22,8
GURIA	7,5	6,6	8	11,7
RACHA-LECHKHUMI KVEMO-	18,2	14,1	8,2	0
SVANETI				
SAMEGRELO-UPPER SVANETI	10,1	10,6	10,1	8,1
MTSKHETA-MTIANETI	16	5,7	3,7	11
SAMTSKHE-JAVAKHETI	10,3	12,4	9,2	10,4
KVEMO KARTLI	10,4	10	6,6	6,5
IMERETI	13,2	10,7	9,3	16,1
KAKHETI	10	8,7	12,7	19,5
SHIDA KARTLI	24,1	14,7	11,9	15,8

Source: Centre for medical statistics and information of Georgia, 1999.

The global target adopted in 1981 by the World Health Assembly for infant mortality is less than 50 per 1000 live birth. For the 133 countries supplying relevant information in1994 (accounting for 2/3 of the world's live births), the infant mortality rate is 68 per 1000 live births. The rate is 112 per 1000 live births in the least developed countries and 7 per 1000 in developed countries (accounting for 49% of the world's live births), the infant mortality rate is equal to or excess of 50 per 1000 live births.



Fig 33: Infant mortality by nationality in Georgia (1992)

Source: State medical University.

Fig 34: Comparison of Infant Mortality (per 1000 live births) across Countries (1994)



Source: World Health Organization. Provisional agenda item 7, 1994

Table 64 indicates comparison of Infant Mortality rate (per 1000 live births) for Georgia and selected OECD Countries. Regarding infant mortality, Georgia has an unfavorable situation than OECD countries.

Year	Georgia	OECD Countries
1960	36,8	23,7
1970	25,3	16,5
1980	25,4	9.9
1989	19,6	7,8

Table 64: Comparison on Infant Mortality (per 1000 live births) across Countries (1960-1989)

Source: OECD, 1993; national Institute of Hygiene, 1989; WHO, 1991.



Fig 35: Comparison of Infant Mortality (per 1000 live births) in selected Countries

Source: Centre for medical statistics and information of Georgia, WHO "World Health Statistics Annual"



# Fig 36: Stillbirths rate per 1000 newborns, Georgia (1988-1999)

Source: Centre for medical statistics and information of Georgia, 1999

	1998		1999	
Regions	Number	Rate	Number	Rate
GEORGIA	1127	22,7	922	19,1
TBILISI	412	29,7	369	25,8
ACHARA A.R.	158	33,8	103	22,2
GURIA	25	18,8	24	19,1
RACHA LECHKHUMI	4	8,3	7	16,9
KVEMO-SVANETI				
SAMEGRELO	48	12,9	33	9
IMERETI	154	19,9	143	20
KAKHETI	62	17,2	30	9,1
MTSKHETA-MTIANETI	29	25,6	7	8
SAMTSKHE-JAVAKHETI	54	20,2	54	20,2
KVEMO KARTLI	120	20,9	98	18,2
SHIDA KARTLI	56	16,9	53	18,2
POTI	2	3,6	1	1,7
UPPER SVANETI	1	9,35	0	0
TSKHINVALI	0	0	0	0

Table 65: stillbirths rate per 1000 newborns by regions (1998-1999)

Source: Centre for medical statistics and information of Georgia, 1999.

# 5.5. Maternal Mortality

Maternal mortality rate has been on the increase since independence but the trend looks reversed in the last few years (Fig: 37).



Fig 37: Maternal mortality rate in Georgia per 100 000 live births, 1993-1999

Source: Centre for medical statistics and information of Georgia, 1999

The actual number of maternal deaths has not changed significantly since the beginning of 1990, but because the number of births has rapidly declined, the 1998 maternal mortality rate of 68.6 per 100 000 live births is more than four times the WHO target for 2000 for the European Region (15 per 100 000 live births) and has more than doubled since 1993.

About 60% of maternal deaths were in their 30s and over, which could indicates the lack of appropriate knowledge about the extremely high risk of delivery at the high age group. The main causes of maternal deaths are hemorrhagic diseases (39%), toxemia (23%) and extra genital diseases (13%). Approximately one quarter of maternal deaths occur in the first pregnancy and delivery. This might suggest the inadequate care not only at the maternity houses or maternity departments in the hospitals, but also at the woman's consultation clinics or polyclinics.

Major causes of maternal mortality also are bleeding, embolism and sepsis. Major causes for bleeding are hypotonic uterus, which is caused sometimes by multiple babies in the uterus, residual placenta, and cervix and vaginal tract injuries during labor. Placenta previa sometimes causes premature separation from the uterus, which leads to bleeding. Placenta previa could only be detected during labor pregnancy by ultrasonography. Other conditions happen during labor or post-partum period, which makes it impossible to detected beforehand

or take necessary preventive measures. In the case of gestosis, close attention should be paid during pregnancy, as it could lead to bleeding and pre-eclampsia and eclampsia, which could be one of the major reasons for maternal death. The only way to prevent maternal death is the cessation of pregnancy, in other words to have Caesarean section. In this cases, if the babies under 28 weeks in the uterus, chances of survival are very little in this country at the moment in a lot of facilities. Small embolism could be detected almost in all delivery cases, but fatal embolism is sometimes caused by the fact and amniotic fluid. These also happen during labor and post-partum period and no preventable measures can be done. Sepsis could be caused by the premature rupture of membrane, and sometimes could be the result of surgical intervention or unhygienic procedures in the clinical facilities, but it is believed that in many cases it could be caused by chronic infection existing before inception. Close attention again is the most important care for this condition.

	Bleeding	Gestosis	Emboli	Extragenital	Sepsis	Other
						reasons
1996	35,8%	22,6%	22,6%	6,5%	6,45%	6,5%
1997	45,95%	2,7%	21,6%	16,22%	10,8%	2,7%
1998	38,24%	8,82%	17,7%	11,8%	17,7%	5,9%
1999	37,5%	20,83%	16,7%	8,33%	8,3%	8,3%

Fig 66: Main causes of maternal deaths in Georgia

Source: Centre for medical statistics and information of Georgia, 1999.

Fig 38: main causes maternal deaths in Georgia, 1999



Source: Centre for medical statistics and information of Georgia, 1999.
Table 67; maternal Mortality and Live Birth by Me	other's Age 1999
······································	0

Age	Maternal Mortality	Live Birth
Under 19	1	18%
20-24	4	36%
25-29	5	24%
30-34	7	14%
35-39	4	7%
40-44	3	2%
45+		0%
Total	24	40 778

Source: Centre for medical statistics and information of Georgia, 1999.

The main reasons for the rapid growth of this indicator, reflecting both the health status of pregnant women, morbidity of female population and the qualification level of obstetricians, could be the following.

- Abortion remains the most widespread form of contraception (45.3 abortions per 100 live births). Twenty-two per cent of abortions are followed by complications.
- The number of cases with complications of pregnancy because of insufficient prenatal care has increased.
- The number of home deliveries has increased for economic reasons, leading to various complications during delivery and the postnatal period.
- Obstetricians are insufficiently qualified and maternity wards lack equipment.

It is widely recognized that major factors that affect the high mortality rates of pregnant mothers are high risk pregnancy over 30 years of age, and increasing number of home deliveries, reflecting the low accessibility to clinical facilities on part of patients due to economical reasons. The risks of complication during pregnancy, particularly in the prenatal period are assessed correctly and timely at the first level contact or the primary care level. And proper referral systems are needed for the delivery care with high risks. The clinical facilities are inadequately equipped with medical attention such as incubator therapy and safe blood transfusion. (Report on the maternal and child health in Georgia, 2001).

	19	96	19	97	1998		
Regions	Number	Rate	Number	Rate	Number	Rate	
TBILISI	8	56,6	7	49,8	15	108,3	
ACHARA A.R	2	43,6	6	143,8	3	64,1	
GURIA	0	0	3	208,8	0	0	
RACHA-LECHKHUMI	0	0	0	0	0	0	
KVEMO SVANETI							
SAMEGRELO	5	114	3	76,2	2	53,7	
IMERETI	6	61,9	3	34,9	6	77,9	
KAKHETI	4	105,1	3	0	2	55,4	
MTSKHETA-	0	0	2	143,8	3	264,3	
MTIANETI							
SAMTSKHE	0	0	3	107,6	0	0	
JAVAKHETI							
KVEMO KARTLI	5	106	3	54,9	1	17,4	
SHIDA KARTLI	1	25,4	7	188,5	1	30,3	
POTI	0	0	0	0	0	0	
UPPER SVANETI	0	0	0	0	1	934,6	
TSKHINVALI	0	0	0	0	0	0	
GEORGIA	31	59,9	37	71,13	34	68,6	

Table 68: Maternal mortality; rate per 100 000 live births by regions (1996-1999)

Source: Centre for medical statistics and information of Georgia

Table 69: Comparison of maternal Mortality rate (per 1000 live births)

Country	Japan	Canada	USA	France	Germany	Italy	Holland
Rate	6,5	4,5	8,3	11,7	5,4	4,4	7,3
Year	1997	1995	1994	1994	1995	1993	1995

Source: Centre for medical statistics and information of Georgia WHO "World health Statistics Annual".

# 6. Specific Epidemiological Background

The Georgian's health profile is a typical one of a developed country. The trends in morbidity are largely determined by a number of important diseases and disorders, the majority of which are different from those which determine mortality. Infant and child mortality and morbidity are caused mostly by Congenital Malformations and Disease of Nervous System, while cardiovascular diseases are responsible for most adult mortality and morbidity.



Fig 39: Total incidence rate per 100000 population, Georgia, 1988-1998

Source: Centre for medical statistics and information of Georgia, 1999.

Groups of diseases		1997	1	998	1	1999		
	prevalence	incidence	prevalence	incidence	prevalence	incidence		
Infections and parasitic	1311,3	738,2	1165,9	729,1	1172,4	715,9		
diseases								
Neoplasm's	540,7	82,3	478,2	109,1	646,02	135,2		
Disorders of	1826,6	493,5	2225,4	826,2	2870	735,3		
endocrinology system,								
nutrition, metabolism and								
immunity								
Blood and blood forming	188,7	93,6	240,6	116,6	322,5	146,4		
organs diseases								
Mental disorders	1688,9	82,1	1850,9	134,4	2192,96	141,1		
Nervous system and	1277,6	459,9	1481,9	644,9	2088,96	781,6		
sense organs diseases								
Circulatory system	32221,3	523,7	3527,1	1000,6	4524,7	1029,2		
diseases								
Respiratory system	3607,2	2380,1	1927,6	2526,5	4662,7	3291,8		
diseases								
Digestive system	2082,5	1021,1	828,8	863,1	2322,1	899,4		
diseases		2015			1000			
Genitourinary system	822,3	304,7	808,8	351,2	1200	529,5		
diseases		<b>2</b> 00 <b>-</b>		207.1		200 5		
Pregnancies, deliveries	419,5	288,7	443,9	305,4	545,1	390,7		
and complications related								
to past partum period**	414 6	270.2	512.0	262.0	520.2	207.0		
Skin and subcutaneous	414,6	279,2	512,8	363,9	529,2	327,2		
Muscle skaletel system	220.7	07.8	265.9	142.9	501.4	170.9		
and connective tissues	329,7	97,8	303,8	142,8	501,4	170,8		
diseases								
Congenital anomalies***	237 5	62.8	300.3	128.4	123.3	31.6		
Disorders connected with	237,5	140.7	363.7	261.7	620	31,0		
prenatal period	207,4	140,7	505,7	201,7	027	520		
Symptoms and unclear	17.9	8 71	41.6	33.7	67.4	27.8		
diagnoses	17,7	0,71	71,0	55,1	07,7	27,0		
Injuries and poisonings	618.2	423.1	602.03	402.5	644 7	415.8		
injuries and poisonings	018,2	423,1	002,05	402,3	044,/	413,8		

## Table 70: Incidence and prevalence rates, Georgia, 1997-1999\*

\*Data concern only patients registered in medical facilities

\*\* The number of females of reproductive age is the denominator for the indicator

\*\*\* The number of children under 14 is the denominator for the indicator Source: Centre for medical statistics and information of Georgia. 1999.

## 6.1. Communicable Diseases

Communicable diseases that is hazardous to public health is a disease which is particularly infectious, may occur frequently, may have a high mortality rate or may result in serious or permanent injuries a specific regulation identifies such diseases.

Infectious diseases have been increasing, mainly as a result of deterioration of sanitary conditions, widespread property and inefficient implementation of preventive measures. In 1999, 32 969 cases (children - 47, 5%) of infectious diseases were registered, an morbidity rate of 715 per 100 000 population, mortality rate 2, 04 (in 1998 - 2,23). At the same time, the unfavorable epidemiological situation in some neighboring countries has increased the probability of danger for Georgian's health an well.

There is higher of some communicable diseases in urban areas as compared to rural areas because of crowding and more close contacts. Urban citizens suffer more often from infections whose mode of transmission is by droplet spread and by direct contact.

	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Total	58290	66488	69497	52407	34436	33509	23096	18770	34275	38050	37618	32965
number of												
new cases												
Incidence	1079.8	1228.2	1281.8	966.9	667.5	649.5	447.7	363.8	671.4	738.2	729.1	715.9
rate per												
100 000												
population												
Total	22656	32396	28196	15751	10663	14395	9634	8386	18799	19180	17236	15658
number of												
new cases												
in												
children												
Incidence	1645.8	2356	2080.3	1210.8	861.2	1162.5	778	677.3	1534.2	1860.5	1726.8	1502.5
rate per												
100 000												
children												

Table 71: Infectious and Parasitic diseases, Georgia, 1988-1999

Source: Centre for medical statistics and information of Georgia, 1999.



Fig: 40 Infectious and Parasitic diseases, Incidence rate per 100 000 population Georgia, 1988-1999

Source: Centre for medical statistics and information of Georgia, 1999





Source: centre for medical statistics and information of Georgia, 1999

The defeat of infectious disease was the main cause of improved health. He attributed this in turn largely to improvements in nutrition, water supply, sanitation and food hygiene;

Breakdown of public health measures in last years has contributed to the re-emergence of diphtheria, poliomyelitis, and malaria.

About 6000 people has acute diarrhea diseases every year, in particular the children (84%), which is illustrative of the faulty hygiene and sanitary conditions (unprotected water supply, non sanitary toilet facilities), high density of the population due to e big amount of internally displaced people (IDPs), insufficient medical services, lack of population awareness of management of ARI/Diarrhea, timely referral to medical facilities, etc.

The ensuing complications are partly responsible for the rise of infant mortality rate. The incidence of acute diarrhea can be controlled by hygiene and sanitary measures, i.e. the supply of drinking water, the treatment of residual water; the evacuation of solid residue; the adequate processing, distribution and storage of food.

#### 6.1.1. Tuberculosis

Tuberculosis is still a major global health problem in Georgia. There are around 6583 registered TB patients (142.97 per 100 000 population) and 4515 new cases (98.0 per 100 000 population) are reported in 1999 year. The incidence of tuberculosis declined until 1992, but thereafter sharply re-emerged as e serious national problem. About 75% of all tuberculosis cases in Georgia are pulmonary. Tuberculosis is a major problem in prisons; 5-10% of inmates are infected. Case detection is problematic, owing to the poor quality of smear microscopy and laboratory services and facilities.

Tuberculosis reporting rates have significantly increased in the last years as indicated in Table 42. This increase, through partly attributable to improvements in reporting and deteriorated socio-economical conditions in same period. The incidence of tuberculosis increased about 4 times between 1991 and 1996 (from 31 to 137,9 new cases per 100 000 inhabitants). This phenomenon can be accounted for by the decline of the population's natural resistance and social conditions, the failure to observe the prescribed therapy and the occasional absence of medicines.

After 1996 year number of new cases decreased and in 1998 was 89, 4 per 100 000 inhabitant. Intervention measures focus on improving the life standard, early detection of TB and treatment supervision. A remarkable decrease can be observed with the limited potential of Ministry of Health to organize and implement mass screening measures for early detection of TB cases in the post Soviet period, the civil war and the economic crisis.





Source: Centre for medical statistics and information of Georgia, 1999.

Tuberculosis in Georgia mainly affects the economically active age group (25- 44 years) as is graphically represented in Figure,

The old scourge has been returned and now TB is spreading rapidly due to mass stress, malnutrition, poor living conditions, crowding and severe shortages of clothes, medicines and laboratory supplies.

Tab 74: Reported new	cases of tuberculosis,	Georgia, World,	Developed	Countries.	1995.
1		0,	1		

	New cases of tuberculosis	Per 100 000 population
Georgia	4470	89,4
World	800000	142
Developed countries	400000	

Source: World Health Organization. 1995.





Source: State Medical University, 1998

Table 75: The number of tuberculosis b	by regions (1998 year)	
--	------------------------	--

	1998				1999	1999				
	Number of Number of new			Numb	er of	Numb	er of new			
	patien	ts	cases		patier	its	cases	cases		
	total	Per	total	Per	total	Per	Total	Per		
Regions		100000		100000		100000		100000		
		population		population		population		population		
Tbilisi	2752	207,26	1518	114,32	1884	158,9	1307	110,2		
Achara A.R.	843	206,11	506	123,72	736	201,2	582	159,1		
Guria	434	268,9	247	153	253	175,8	170	118,1		
Racha-	11	19,26	6	10,5	2	3,9	0	0		
Lechkhumi										
Kvemo- Svaneti										
Samegrelo-	1393	292,34	465	97,6	671	152,5	460	104,55		
Upper Svanety										
Imereti	849	101,79	528	63,3	741	99,6	560	75,3		
Kakheti	461	102,44	284	63,1	523	130,4	365	91		
Mtskheta-	46	32,55	41	29	76	60,3	58	45,03		
Mtianeti										
Samtskhe-	215	89,47	116	48,3	137	63,9	81	37,4		
Javakheti										
Kvemo Kartli	678	110,64	396	64,6	502	91,8	305	55,75		
Shida Kartli	423	112,8	263	70,13	427	127,7	314	93,87		
Poti	283	491,32	100	173,6	238	461,2	98	189,92		
Other					393	-	219	-		
Georgia	8388	162	4470	86,6	6583	142,97	4515	98,01		

Source: centre for medical statistics and information of Georgia, 1999.

Considerable progress has been made in tuberculosis control efforts in Georgia during 1996-1999 years. The rate of pulmonary tuberculosis is decreased (from 105.4 to 63). Tuberculosis control in the country has undergone major progress during the last year notably in the following areas:

- Increased case finding;
- Improved bacteriological coverage;
- Expansion in DOTS coverage;
- Further introduction of combination anti-TB drugs;
- Supervision, monitoring and coordination of all key activities;
- Strengthening of partnerships and collaboration both nationally and internationally;

Ministry of health concerning the improvement of sanitary-epidemiological development in Georgia. Working group has been appointed for preparing the national anti-tuberculosis program in most affected areas of the country. The National Anti-tuberculosis Program is responsible for Co-ordination the fight against the tuberculosis epidemic in the country. Objectives of the national anti-tuberculosis program have been as follows:

- Stressing the impact of TB spread on the socio economic development of the republic as well as the physical and mental quality of manpower;
- To prevent the development of drug resistance to tuberculosis;
- Preparing a program manual (structure of the program; job descriptions; case definitions; instructions for case funding, diagnosis and laboratory techniques; treatment guidelines and reporting);
- Initiating a training program for primary health care staff and managers involved in the anti TB program;
- To ensure accurate measurement and evaluation of program performance;
- To reduce mortality and morbidity attributable to tuberculosis.

The national anti-tuberculosis program aims to reduce the TB burden in the country through the provision of supervised anti-TB treatment to all patients. This objective at

regional and district level is being achieved through the establishment of training programs to assist health workers with the implementation of the DOTS strategy. Every district in the country now has clinics offering tuberculosis treatment to patients based on the principles of the DOTS strategy.

A sputum smear conversion rate in Georgia is 26, 1%. At this pace of DOTS expansion, the goal of the National anti-tuberculosis program to have the whole country covered with DOTS and achieving sputum smear conversion rates of greater then above-mentioned rate.

There was a further drive towards the introduction and increased availability of combination drugs for the treatment of tuberculosis. Combination drugs through more expensive than single drug preparations greatly simplify treatment regimens and reduce the daily number of tablets a patient has to take at clinic level. They also ease ordering and stock control at district level.

Reducing the number of tablets a TB patient has to swallow may have a positive impact on compliance and hence improve cure rates and reduce the need for retreatment. More importantly, combination drugs also reduce the likelihood of development of multi-drug resistant strains of tuberculosis.

In the long term therefore, these drugs will prove more cost-effective than single drug preparations and should be advocated for all TB patients by the national antituberculosis program.

Supervision of anti-tuberculosis therapy is one of the cornerstones of the revised TB control strategy of the national anti-tuberculosis program. A further increase in the provision of directly observed treatment (DOT) for TB patients and the development of accurate methods to monitor this should be undertaken. DOT ought to be fully functional at primary health care and community level.

There is need for sustained commitment by health care providers and other role players, notably NGOs and civic leaders, to educate the public as well as to facilitate and advocate for the expansion of community-based supervision of tuberculosis treatment. Bacteriological positivity of new cases of pulmonary TB patients has increased over the last years. This indicates that a higher number of sputum smear positive patients are being identified. This achievement is consistent with the principles of the Directly Observed Treatment – Short course (DOTS) strategy, which aims at proper identification and treatment of sputum smear positive patients who provide the infectious pool from which tuberculosis spreads. Correct identification and cure of these cases using DOTS will eventually lead to a reduction in the tuberculosis burden of Georgia.

Tab 76: Bacteriological positivity rate of new cases of pulmonary TB patients (1998-1999)

1998	}		1999
Number	%	Number	%
534	18,7	758	26,1

Source: Centre for medical statistics and information of Georgia, 1999.

The availability of TB sputum testing improved somewhat since 1995. Nowadays TB sputum testing is fully available in all regions. It is notable, that Bacteriological Positivity is extremely high in most of the provinces (Imereti – 31.8%, Shida Kartli-32.2%), being higher than the 30-35% expected from a well functioning tuberculosis control program. In progress that exceed this expected figure it means that either: many of the TB patients are presenting late to the health services for diagnosis (and hence infecting many their contacts before they start treatment), or that the tuberculosis screening algorithm for a positive smear result before treatment, as outlined in the National Anti-tuberculosis program practical guidelines is being applied too stringently at clinic level and many of the sputum smear negative patients are being missed.

Accurate measurement and evaluation of program performance is one of the key objectives of the Georgian the national anti-tuberculosis program. In seeking to achieve this objective, it is important that a uniform, computerized data collection system be established for the whole country, to augment the paper-based already in place and that the current situation of incompatible system be overcome.

		199	8					1999	)			
Regions	Total	Rate	BK+	%	BK-	Unknown	Total	rate	BK+	%	BK_	Unknown
Tbilisi	9255	71,9	154	16,2	642	159	831	70,1	158	19,0	579	94
Achara	312	76,3	52	16,7	197	63	293	80,1	50	17,1	201	42
A.R.												
Guria	158	97,9	9	5,7	130	19	105	72,9	8	7,6	65	34
Racha-	5	8,8	0	0,0	4	1	0	0	0	0	0	0
Lechkhumi												
Qvemo												
Svaneti												
Samegrelo-	249	52,3	38	15,3	173	38	293	67,9	77	26,3	172	50
Upper												
Svanety												
Imereti	331	39,7	114	34,4	196	21	336	45,2	109	32,4	226	1
Mtskheta-	29	20,5	10	34,5	8	11	33	26,2	13	39,4	15	24
Mtianeti												
kakheti	181	40,2	29	16,0	140	12	219	54,6	40	18,3	15	5
Samtskhe-	83	34,5	4	4,8	8	11	62	28,9	4	6,5	48	10
javakheti												
Kvemo	284	46,3	47	16,5	61	18	219	40	40	18,3	155	24
kartli												
Shida	209	55,7	60	28,7	218	19	226	67,6	69	30,5	145	12
Kartli												
Poti	60	104,2	17	28,3	137	12	64	124	21	32,8	38	5
Other				0	38	5	211	-	186	88,2	23	-
sector												
Georgia	2856	55, 4	534	18,7	1944	378	2900	62,9	758	26,1	1821	321

Table 77: New cases of pulmonary TB patients. Rate per 100000 population. Bacteriological positivity (BK+) and BK – by regions (1998-1999 year)

Source: centre for medical statistics and information of Georgia, 1999.

#### 6.2 Malaria

Population movements deteriorated loving conditions and paralyzed health services have in many areas led to a worsening of the malaria situation. The growing number of malaria cases in1999 might be also explained by the increased cross-border travel and constant import of the infection especially from Azerbaijan and Armenia and the recreation of local numerous mosquito-breeding sites in endemic border areas. During the period 1996-1999 number of malaria cases in Georgia increased from 4 to 51 (including 5 pediatric cases). The rate per 100000 population in 1999 year was 1,11. The highest number of malaria cases registered in Kakheti region (23 cases) and Kartli (17 cases), which means that there has been a geographical spread of malaria within the country. This has serious implications for public health development.

Ministry of Health, with the recommendations made by the World Health Organization (WHO) in their Global Malaria Control Strategy, targets activities to ensure the efficient and nation-wide control of malaria through establishment and maintaining an effective control programme. The objectives of the current plan are to:

- Decrease the incidence of indigenous malaria cases
- Improve the malaria control programme
- Encourage community involvement in control potential epidemics
- Develop a regional approach to control

Current policy aims to achieve possible interruption of malaria transmission in Georgia innovative approaches targeting the interventions will be required: there must be increased resource allocation; the successful implementation of control measures in adjacent countries; and cross border involvement and collaboration must be sustained over several years. This is further reliant on maintaining a pool of well-trained and experienced malaria managers. The breakdown of malaria control activities, the shortage of anti-malaria drugs and qualified personnel (entomologists, mobile anti-malaria teams), the influx of returnees from border (Azerbaijan and Armenia), were malaria is present and the continuous intensification and spread of parasite resistance to anti-malaria drugs are expected to lead to a further rise in malaria incidence.

Table 78: number of malaria cases in Georgia, 1997-1999 years

	1996	1997	1998	1999
Total number	4	5	16	51
Per 100 000	0.09	0.1	0.31	1.11
Children		5	2	5
Per 100 000		0.1	0.2	0.53

Source: centre for medical statistics and information of Georgia, 1999.



Source; Centre for medical statistics and information of Georgia, 1999

Malaria control based on mosquito control by spraying with a residual insecticide and parasite control by definitive diagnosis and treatment towards parasitological cure. Additional control measures include the use of focal larviciding and more recently insecticide impregnated bed nets as subsidiary control measures in specific areas.

Malaria cases in Georgia are defined by the presence of parasites in the blood, through definitive diagnosis by microscope. Case detection has been by passive reporting to health facilities by patients and, in the high-risk areas, by active case detection undertaken by the specialties. Quinine was used for treatment and prophylaxes in the early decades of this country, and was replaced by chloroquine when the latter became available.

#### 6.1.3. Diarrheal Diseases, Salmonellas, Dysentery, enteritis, Colitis, Gastroenteritis

Most widespread diarrheal diseases are among children under 0-14 years. These are most likely to be infected through poor sanitation and hygiene practices. Shigella is considered to be a major contributor. The relationship between diarrhea prevalence and such interactive factors as contaminated water sources, infant feeding practices, mother's education level etc. are analyzed. In 1999, 5784 (morbidity rate - 125,6) new cases of Diarrheal diseases were registered (mortality rate 1,3), from which children accounts about 76.9% (4452cases), from 1 to 4 year accounts about 31.8 % (1840 cases), from 1 to 4 year account about 33.7% (1949 cases) Mortality rate among children was 1.7.

	1997				1998				1999			
	Total	Rate	Total*	Rate*	Total	Rate	Total*	Rate*	Total	Rate	Total*	Rate*
Diarrheas	6615	128.3	5572	491.4	5803	112.5	4677	468.6	5784	125.6	4452	473.2
Salmonellas	201	3.9	151	13.32	337	6.53	239	23.9	152	303	117	12.44
Dysentery	682	13.23	449	39.6	950	18.4	557	55.8	854	48.6	493	52.4
Enteritis,	900	17.5	621	54.8	281	5.45	267	26.7	172	3.7	148	15.7
Colitis ,												I
Gastroenteritis												

Table 79: Diarrheal diseases, rate per 100000 population, 1996-1999.

\*children

Source: centre for medical statistics and information of Georgia, 1999

Fig 45; Diarrheal diseases,	Georgia,	1999
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Source: centre for medical statistics and information of Georgia, 1999

# 6.1.4 Nutritional Intoxication, Botulism's

In 1999, were registered 395 new cases of Nutritional Intoxication, morbidity rate-8.6 In children were registered 83 new cases of typhoid, morbidity rate-8.82.

In1999, were registered 83 new cases of Botulism's, morbidity rate -1.8. In children were registered 11 new cases of typhoid, morbidity rate-1.2.

Table 80: Nutritional Intoxication, botulism's, number of new cases, Georgia, 1996-1999

	1997				1998				1999			
	Total	Rate	Total*	Rate*	Total	Rate	Total*	Rate*	Total	Rate	Total*	Rate*
Nutritional	340	6.6	145	12.79	301	5.8	110	11	395	8.6	83	8.82
Intoxication												
Botulism's	18	0.35	5	0.44	53	1	3	0.3	83	1.8	11	1.2

\*children

Source: centre for medical statistics and information of Georgia, 1999.

# 6.1.5. Anthrax

In 1999, were registered 51 new cases of Anthrax, morbidity rate - 1.1. In children were registered 83 new cases of Anthrax, morbidity rate - 8.82. The incident of Anthrax was highest in Kakheti (24 cases) and Kvemo Kartli region (20 cases).

Table81: Diseases, rate per 100 000 population, Georgia, 1996-1999

	1997				1998				1999			
	Total	Rate	Total*	Rate*	Total	Rate	Total*	Rate*	Total	Rate	Total*	Rate*
Anthrax	6	0.12	2	0.18	11	0.2	0	0	51	1.1	0	0

\*children

Source: centre for medical statistics and information of Georgia, 1999.

## 6.1.6. Hepatitis

In 1999, were registered 3076 new cases of hepatitis, morbidity rate-66.8. Among children are registered 1357 new cases (44,1%). In children hepatitis most widespread among 5-14 years old (1125 cases)

	1997				1998				1999			
	Total	Rate	Total*	Rate*	Total	Rate	Total*	Rate*	Total	Rate	Total*	Rate*
Hepatitis A	2391	46.2	1406	123.9	1663	32.2	856	85.8	2087	45.3	1200	127.6
Hepatitis B	456	8.85	107	9.4	457	8.9	101	10.6	530	11.5	64	6.8
Hepatitis C	80	1.55	7	0.62	201	3.9	0	0	212	4.6	7	0.7
Unspecified	0	0	0	0	84	1.6	30	3	241	5.2	85	9
hepatitis												

\*children

Source: centre for medical statistics and information of Georgia, 1999



Fig 46: hepatitis, Georgia, 1998-1999

Source: centre for medical statistics and information of Georgia, 1999

Hepatitis is associated with important social costs and high chronically rates, particularly with hepatitis B (530 cases). In Georgia, this disease is a health problem due to the increasing number of transmitters- particularly in the young groups – and its consequences. The case of hepatitis stays high because of the deficient provision of instruments and consumables, as well as their faulty sterilization and handling.

The essential intervention measures with respect to hepatitis should aim at improving hygiene conditions in general and the hygiene in health units and children units in particular, providing the necessary instruments, the correct sterilization, ensuring the training of personnel and carrying out the required vaccinations.





Source: centre for medical statistics and information of Georgia,

Hepatitis A transmitted through contaminated water and poor hygiene practices, is the most common form prevalent in Georgia. The inefficient disposal of excreta also contributes to the high prevalence of disease through flies, food and other modes. There were 2087 (67,8%) new cases of hepatitis a in 1999 year, including 1200 (57,5%) pediatric cases. It is most widespread among children 5-14 years old (%) and youth (%).

Hepatitis non A non B (E) is also common. Suppositions are made that the high hepatitis A rate in the country are due to the spread of hepatitis E.

## 6.1.7. Typhoid, Brucellosis, Rabies

In 1999, were registered 64 new cases of Brucellosis, morbidity rate -1.4. In children were registered 6new cases of Brucellosis morbidity rate- 0.6. Brucellosis most widespread in Kakheti region (64%).

In Georgian there were 13 rabies cases (rate-0.6). The data on dogs bites are not reliable (approximately 10 000 per year).

In 1999, were registered 82nnew cases of typhoid, morbidity rate-1.4. IN 1999 year, the widest distribution of typhoid cases was in Zugdidi region (77 cases- 93.9%). The outbreak of

typhoid cases was in Zugdidi region (77 cases-93,9%). The outbreak of typhoid abdominal was in city areas; this could be due to the contaminated water sources in these areas. The outbreak in Zugdidi was definitely linked with refugee movements from Abkhazia; patients were treated in conformity with WHO guidelines and preventive measures were carried out for contacts in particular.

	1997				1998				1999			
	Total	Rate	Total*	Rate*	Total	Rate	Total*	Rate*	Total	Rate	Total*	Rate*
Tuphoid, Para Typhoid A, B, C.	17	0.33	2	0.18	8	0.16	2	0.2	82	1.8	13	1.4
Rabies	12	0.21	3	0.24	4	0.1	2	0.2	13	0.3	3	0.3
Brucellosis	35	1.7	4	0.35	62	1.2	3	0.3	64	1.4	6	0.6

Table 83: Diseases, rate per 100 000 population, Georgia, 1996-1999

\*children

Sources: centre for medical statistics and information of Georgia 1999.

## 6.1.8. Diphtheria

In Georgia the outbreak of diphtheria was start since 1993 year. In the last three years epidemic process accelerated, because of the accumulation of persons susceptible to diphtheria during previous years of low incidence, low immunization coverage and high internal and external migration rates. The highest number of diphtheria sporadic cases was recorded in 1995. During this period, the number of diphtheria cases has increased 18 times from 23 (1993) to 425 (1995) cases. Higher morbidity rates of diphtheria were observed mainly in the Adjara and Samegrelo region. Diphtheria epidemic was predominantly spread in rural areas.

After 1993, the situation has been improved because planned immunization campaigns were renewed. In order to control diphtheria epidemic the Ministry of Health implemented WHO primary prevention strategy extensive mass immunization of the whole population. The utmost objective was to eliminate the present epidemic and to stabilize the situation for the future. Ministry of Health, UNICEF and WHO have carefully prepared the immunization campaign in conformity with the following basic principles for primary, secondary and tertiary prevention

- Supply by UNICEF of high quality vaccines, antibiotics and diphtheria sera;
- Early diagnosis and proper case management procedures (immediate treatment and hospitalization) to prevent complications and deaths;
- Rapid investigation of close contacts and their standardized treatment;
- Efficient social mobilization and mass health education propaganda;
- Supply of laboratory kits for diphtheria diagnosis and training of local staff by WHO.
- According to the sociological survey most of the people responded had been immunized.

Table84: Diseases, rate per 100 000 population, Georgia, 1996-1999

	1997				1998				1999			
	Total	rate	Total *	Rate*	Total	Rate	Total*	Rate*	Total	Rate	Total *	Rate *
Diphtheria	286	5.55	118	10.4	114	2.2	42	4.21	60	1.3	33	3.5

\*children

Source: centre for medical statistics and information of Georgia, 1999

Fig 48: number of cases of diphtheria in Georgia (1988-1999)



Source: centre for medical statistics and information of Georgia, 1999

# 6.1.8. Acute flaccid Paralysis

In 1999, were registered 10 new cases of acute flaccid paralysis in children, morbidity rate - 1,6. The use of OPV and the successfully immunization campaign in Georgian has resulted in a considerable decrease in incidence of paralytic disease.

$1able 0.5$ , acute flacciu pararysis, fale per 100 000 population, deorgia $1777^{-1}777$
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	1997				1998				1999			
	Total	rate	Total*	Rate*	total	rate	Total*	Rate*	total	rate	Total*	Rate*
Acute	6	0.1	6	0.5	17	0.3	17	1.7	10	0.2	10	1.1
flaccid												
paralysis												

\*children

Source: centre for medical statistics and information Georgia, 1999.

Country	Coverage1st; Round NID%	Coverage 2st Round NID%
Armenia	85	-
Azerbaijan	97	98
Bulgaria	89	84
Georgia	95	98
Kazakhstan	99	99
Turkey	94	92
Uzbekistan	95	97

Table: Immunization coverage of OPV

Source: CD news. Quarterly issue No 9 July 1995 p.2-4

## **6.1.9. Sexually transmitted Diseases**

Sexual health is emerging as e specific lifestyle concern, particularly as it relates to sexually transmitted diseases, teenage pregnancy and the use of family planning methods. Education and health care services have not kept pace with growing liberalization of sexual attitudes and behavior, and rates sexually transmitted diseases are increasing. Schools, the workplace and the family are relevant settings for promoting healthy sexuality, especially among young people, through culturally acceptable approaches and relevant sustainable policies.

During the last decades sexually transmitted diseases are one of common group of infectious diseases in Georgia. It is estimated that approximately two thousand episodes of sexually transmitted disease occur each year in Georgia. Sexually transmitted disease incidence rates per 100 000 population were as follows: syphilis – 27.45, gonorrhea -18,24.

Sexually transmitted diseases (STDs) are more difficult to diagnose in women (many STDs occur without recognizable symptoms in women. And they suffer more severe sequel than men do. Beside the occurrence of traditional STDs (gonorrhea, Syphilis), new bacterial and viral syndromes associated with Chlamydia trachoma's, the human herpes virus, the human papiloma virus and HIV become prominent. These agents are often more difficult to identify, treat and control and can cause serious complications often resulting in chronic ill health, disability or death.

According to the study, most of infertile women with damaged fallopian tubes had a history of Chlamydia trachoma's infection, confirming that this disease may be a major cause of tubule damage with resulting infertility in women.

Prostitution is out of law but confidentiality of anonymous consultations is preserved. Reporting of sexually transmitted diseases does not reflect the real situation, as most patients prefer to use anonymous health services. In general, the cases of syphilis and gonorrhea are greatly under detected and underreported. It is notable that all districts offer STD services. STD testing is available in all regions in Georgia.

The most common causes of STD growth in the country are incomplete health information for the population about the spread of these diseases, delayed visits of infected persons to medical specialists, inefficient treatment and prophylaxis.

In 1999 it was noted that the sexually transmitted diseases prevalence with young people 20-29 years old was higher (42,8%), than in other age groups. There are many reasons why young people are particularly vulnerable, they are very susceptible to peer pressure, have a tendency to engage in risk-taking behavior, are less able to negotiate safe sex practices, and have difficulties accessing health information and services.

The socio-medical and economic impact of STD is increasing. They cause a lot of complications and sequel (infertility, ectopic pregnancies, stillbirth, neonatal infections etc.) genital and anal cancers are associated with viral sexuality transmitted diseases.

Table 86: number of sexually transmitted diseases in Georgia by age groups (1998)

	Total	0-14	15-19	20-29	30-39	40+
Syphilis	2172	12	152	1028	693	287
Gonorrhea	1245	6	136	696	309	98
Chlamydia	138	16	14	48	41	19
Trykhomonias	1547	12	93	827	459	156

Source: centre of medical statistics and information of Georgia, 1999.

Table 87: morbidity of patients with venereal diseases, Georgia 1995-1999

	1995	1996	1997	1998	1999
Syphilis	877	953	2172	2249	1264
Gonorrhea	1201	947	1245	1559	840

Source: state department for statistics of Georgia. Tbilisi, 2000

Table 89: sexually transmitted diseases, new cases by age groups, 1999

				0-14	15-19	20-29	30-39	40 and
								over
Syphilis	1264	694	570	10	59	541	437	217
Gonococcus	840	684	156	7	80	484	198	71
infections								
Chlamydeous	257	-	-	-	19	121	90	27
infections								
Trikhomoniase	1944	-	-	12	218	976	551	187

Source: centre for medical statistics and information of Georgia, 1999.

Table 88: sexually transmitted diseases, new cases, Georgia 1998-1999

Regions		1998				1999		
	Syphilis		Gonococ	cus	Syphilis		Gonococo	cus
			infection	IS			infection	5
	Total	Rate	Total	Rate	Total	Rate	Total	Rate
		per		per		per		per
		100000		100000		100000		100000
Tbilisi	780	58.7	803	60.5	388	32.73	280	23.6
Achara A.R.	272	66.5	52	12.71	197	53.84	22	6
Guria	80	49.6	48	29.7	32	22.2	1.	6.95
Racha – Lechkhumi	1	1.8	3	5.25	-	-	-	-
Kvemo Svaneti								
Samegrelo-Upper Svanety	73	15.32	64	13.43	35	8.23	50	11.76
Imereti	515	61.7	167	2.	346	46.52	165	22.19
Kakheti	153	34	64	14.2	63	15.71	43	10.72
Mtskheta – Mtinati	22	15.6	38	26.9	7	5.55	37	29.36
Samtskhe – Javakheti	30	12.5	52	21.6	8	3.73	49	22.85
Kvemo kartli	245	39.9	175	28.6	80	14.62	82	14.99
Shida kartli	123	32.8	16	4.3	54	16.14	10	2.99
Poti	48	83.3	109	189.2	25	48.45	58	112.4
Georgia	2397	46.5	1604	31.1	1264	27.45	840	18.24

Source: centre for medical statistics and information of Georgia, 1999.

#### 6.1.10. HIC/AIDS

The acquired immunodeficiency syndrome (AIDS) is essentially a sexually transmitted disease, which can also be transmitted through blood (via the transfusion of infected blood products or use of non-sterile injection equipment.) there is a delay of about ten years or more between initial infection with the human immunodeficiency virus (HIV) and development of the clinical illness of AIDS. In the past years, the spread of HIV infection in Georgia has been increased from 18 cases (1996) to 84 cases (1999). The sex specific prevalence shows that men continue to form the majority of the infected with HIV (85.7%). An important specific to Georgia is the no number of AIDS cases with children under 15. The mortality rate was 1,1 to 10 sick persons (died 14 person). With patients the transmission was mainly parenteral (51% of cases by transfusions); sexual transmission accounts for 11%. However, the very long incubation period means that these figures do not necessarily reflect the current extent of the epidemic or prevailing modes of transmission. As no data about the incidence of infections are available, the prevalence of HIV-positive cases can only be estimated. According to some experts' estimates, about 1000 HIV-infected people are living in Georgia.

There are marked differences between regions and Tbilisi (17 new cases in 1999) had the highest prevalence, succeeded by Zugdidi (3 new cases) and Adjara (3 cases), which means that there has been a geographical spread of HIV infection within the country.

A serious rise of HIV transmission rates is expected since inject able drugs are used frequently, disposable syringes and medical instruments are acutely lacking, knowledge and awareness of HIV are poor, condom use is low, migration is increasing and the rates of other sexually transmitted diseases are rising dramatically.

People were reasonably knowledgeable about the transmission of HIV. Most of the people surveyed said that they got their information from the television, radio, friends, and health workers. Newspapers are also an important source of information. The majority of people know how HIV can be acquired, and that condoms, abstinence, and mutually faithful monogamy are protective. However, most young people are sexually active, condom use is low, and a small but significant proportion of the youth engage in sexual intercourse with multiple partners, sometimes having many relationships at the same time.

There is a consequence of health promotion policies, but in others it is continuing to accelerate. Furthermore, the pattern of underlying risk factors is also changing.

The spread of HIV infection and AIDS has stimulated the development of health promotion activities and services directed at sexually transmitted diseases. Developed an AIDS control program was devised, with the assistance of foreign experts. The major objectives of this program were: to stop HIV transmission by blood transmission infected instruments or incorrect handling; to inform and educate both the health personnel and the public, including the targeted education of high risk groups; to study the epidemiological characteristics of the HIV Infection in Georgia.

Table 90: number of AIDS and HIV cases, Georgia (1996-1999)

	1996	1997	1998	1999
New case	8	21	25	34
Died	4	0	4	6
Total number by	18	35	56	84
the end of the				
year				

Source: centre for medical statistics and information of Georgia, 1999.

Table	91 · numh	per of annua	l new c	ases in t	he Furo	nean regi	on (198 <sup>-</sup>	1_1995)
Table	71. IIuIIIU	lei oi aiiiiua	I new c		life Euro	pean regr	011 (190)	1-1777)

	1981	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
Europe	429	703	1848	3778	7014	10852	14416	17407	19058	20848	22797	26167	25638
Region													

Source: European centre for the epidemiological monitoring of AIDS.

## 6.2. Non-communicable Diseases

In 1998 the total number of registered cases with diseases of the circulatory system was 181 987 including 51628 new cases (incidence rate 1000.6 per 100 000 population). From 1992 to 1997, the number of patients with ischemic heart disease or hypertension has increased greatly. These trends are associated with the emergence of comparatively new health risk factors (unemployment, poverty and continuous stress), which enhance the harmful health impact of smoking, alcohol and drug abuse, unhealthy eating and lack of physical activity.

#### 6.2.1. Cardiovascular Diseases

Cardiovascular diseases are major health problem in Georgia. Cardiovascular diseases cause 70.5 % 529 per 100 000 population) of all deaths, and are therefore responsible for a significant share of total health care expenditures. In every year by cardiovascular diseases died about 25 -27000 patients.

In 1998 year number of cardiovascular diseases was 181 987 (rate per 100 000 population-3527.1). In 1999 number of cardiovascular diseases increased to 208 341 (rate per 100 000 population - 4524.7). The number of cardiovascular diseases decreased between 1993 and 1996, however in 1997 year increased. Many cardiovascular events are not fatal but may be sufficiently debilitating to seriously affect functional ability.

	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Total number of new cases	52617	43438	38020	27394	25705	28049	23251	16523	26996	51628	47388
Rate per 100000 population	971,9	801,2	701,5	506,1	476,4	521,6	433,1	323,6	523,7	1000,6	1029,2
Number of new cases in children	2131	2075	1791	1202	1428	2386	894	1228	1579	1332	1340
Rate per 100000 children	154,9	153	137,7	97,1	115,3	192,7	72,2	100,2	153,2	96,9	99,2

Table 92: Circulatory system diseases, Georgia, 1988-1999

Source: Center for medical statistics and information of Georgia, 1999.

	1993	1994	1995	1996	1997	1998	1999
Cardio rheumatism (total)	406,9	371,8	374,2	155,9	349,1	321,5	335,6
Cardio rheumatism (new cases)	35,2	34,4	32,3	13,3	57,2	62,6	
Hypertension (total)	1755,5	1566,4	1438,6	200,5	1189,1	1422,1	1872,4
Hypertension(new cases)	111,7	94,8	109,4	110,1	180,7	389,7	
Ischemic disease (total)	1716,5	1612,1	1550,5	1214,4	1089,5	1219,7	1536,6
Ischemic disease (new cases)	102,1	137,2	127,5	93,1	167,8	385,9	
Hurt infarction (total)	37,2	29,6	34,5	57,5	75,9	54,6	89,3
Hurt infarction (new cases)	10,8	8,8	8,2	10,9	18,1	15,7	
Stenocardia (total)	304,1	291,5	237,9	57,5	209,1	369,4	473,4
Stenocardia (new cases)	24	20	20,1	25,2	48,8	157	
Cerebrovascular diseases (total)	227,4	209,4	186,9	176,6	138	124	215,9
Cerebrovascular diseases (new cases)	28,2	25,9	18,4	11,4	16,7	36,2	
All cases	5157,9	4711,3	4207,6	3124,1	3221,3	3527,1	4524,7
All new cases	476,4	521,6	433,1	323,6	523,7	1000,6	

Table 93: Rate of cardiovascular diseases per 100 000 population (1993-1999)

Source: Centre for medical statistics and information of Georgia, 1999.

The number of new cases cardiovascular diseases increased between 1993 and 1999 (from 9,2 % to 22,7 % new cases per 100 000 inhabitants).

Fig 49:	Percentage of n	ew cases of	f cardiovascular	diseases	(1993-	1999)
0 -					· · · ·	



Source: Ministry of Health Report 1999. Tbilisi

Table 94: Number of cardiovascular disease (1996-1997)

1996			1997				
Hospitalization		Regi	stered	Hospitalization			
Registere	d		_				
Total	Children		Total	Children			
159 500	4 921	16 601	166046 4513		19996		
%	3,1 &	10,4 %		2,7%	12,6%		

Source: Centre for medical statistics and information of Georgia

In this group of diseases the most frequent is High blood pressure diseases (40%). The second rank belongs to Ischemic heart diseases (37%), followed by rheumatic heart disease, stroke and other cardiovascular diseases. The hospital lethality from myocardial infarction is 14 % (1999 year).

Fig 50: Rate of Ischemic heart disease and myocardial infarction per 100 000 population (1992-1999)



Source: Centre for medical statistics and information of Georgia, 1999.

Hypertension is the most important risk factor for stroke and is also a major risk factor for heart disease. The number of new cases of High blood pressure diseases increased between 1993 and 1998 (from 111, 7% to 380,7% new cases per 100 000 inhabitants). The prevalence of high blood pressure increases with age, and the growth rate is higher after 50 years of age, i.e.: with the age group 50 to 59 years old, about <sup>1</sup>/<sub>4</sub> suffer from blood pressure; with the 60 to 69 years old, the rate is 45 % and, with the age group over 70 years old, 50 % had the same

diagnosis at examination. The mortality by cardiovascular diseases imputable to high blood pressure points out the deficiencies of health services, the formal character of the preventive actions, the low compliance of the sick, and the faulty supply of medicines, which greatly hindered constant long term treatments and rescues in cases of major High blood pressure emergencies.



Fig 51: New cases of High blood pressure diseases per 100 000 population (1993-1999)

Source: Ministry of Health Report 1999. Tbilisi

Table 95: Rate of cardiovascular diseases per 100 000 population by region 1999

Region	Rate per 100000 population	New cases rate per 100000 population
Tbilisi	4619,7	1237,8
Achara A.R	2591,4	614,9
Poti	3106,6	703,5
Guria	4277,3	716,5
Racha-Lechkhumi	8859,3	5041,3
Kvemo-Svaneti		
Samegrelo	3168,5	811,1
Upper Svaneti	4140	453,3
Imereti	3391,4	472,9
Kakheti	4673,3	1009,5
Mtskheta-Mtianeti	2623,8	611,9
Samtskhe-Javakheti	2688,9	657,6
Kvemo Kartli	1840,8	306,9
Shida Kartli	1692,7	258,9
Georgia	4524,7	1029,2

Source: centre for medical statistics and information of Georgia, 1999.

Many from of cardiovascular Diseases can be prevented, as their production depends on life style factors, modifiable through the adoption of a healthy life style. Preventive measures should aim to reduce the consumption of animal fats, encourage physical exercises and reduce the prevalence of smoking – in particular with teenagers and young grown-ups. Primary health care service has an important role in identifying and treatment schemes. The promptness of the first qualified aid in myocardial infarcts is probably the second reason why technological and logistical improvements of emergency medical assistance are a major priority.

#### 6.2.2. Cancer

According to world cancer statistics, incidence rates for cancer are among the highest in third world countries. Economic crisis has affected post soviet countries, which lead to the rise of cancer incidence and prevalence rate. Cancer is the second greatest cause of death in Georgia, accounting for 10, 1% of all deaths (3677 deaths in 1997; 75.6 per 100 000 population). High cancer incidence is mediated mainly by failure of preventive activities and economic problems (this latter includes such factors as malnutrition, ecological problems, control of carcinogenic substances in food, alcohol abuse and etc.). Later referral of patients to clinics, mainly in advanced stages was a result of poor cancer education. Public behavior and education is the key to improving early detection and referrals. Patients generally have average knowledge about cancer. They often take preventive diagnostics (X-ray, sonography etc.). Unfortunately, in most cases, patient does not make regular calls to doctors and does not take preventive activities until they reach the final point, when discomfort from cancer make him/her refer to a physician. In this case over 70% of incoming patients are diagnosed with stages III and IV, consequently decreasing treatment efficiency and increasing prevalence and mortality rates.

Checking organic dyes in food appearing in persons is an important tool for those who think that there nutrition are normal and vice versa-. Patient's confidant about their malnutrition has never checked synthetic products in food. As we think, this latter is typical behavior for low economic status families. City population cancer rates are higher in comparison to countryside population.

The many different types of cancer, and the corresponding differences in risk factors, mean that trends in each type differ widely. Many types of cancer are related to aspects of lifestyle and thus preventable to varying degrees, although certain genetic susceptibilities render some individuals at greater risk than others. The role of lifestyle is most clearly demonstrated by tobacco consumption, which is an important cause of a wide range of cancers, not only of the lung but also of several other organs. The bronchi-pulmonary cancers are: smoking and poisonous working circumstances.

Diet contributes to cancer of the gastrointestinal tract and breast, and sexual activity, through viral infection, contributes to cancer of the cervix. Nevertheless the leading avoidable cause of cancer in Georgia is tobacco smoking. Lung cancer rates offer a indicator for the consequences of youthful smoking, and violent marketing by tobacco companies will have most important health consequences in the prospect. There are large differences between men and women. Death rates are much lesser woman than in men, reflecting their somewhat later implementation of smoking on a large range.

Judging by the number of deaths, the main localizations of cancer for men are: lungs (22,3 per 100 000 population), stomach (7,7 per 100 000 population), and for women: breast (30,4 per 100 000 population), ovaries (9,4 per 100 000 population).

During the last years the number of malignant neoplasm's cases has been increased. According to the national registry for cancer, the number of sick people in 1998 was 24 896 (501, 9 per 100 000 population).

In 1999 annually notified cases was 29 746 (646, 02 per 100 000 population). The malignant disease has a considerable impact on medical assistance, especially the hospital care, as demonstrated by the relatively frequent hospitalization in cases of tumors. With breast cancer, the main risk factors seem to be: the first birth at over 30, mammary carcinoma antecedents, irradiation.

	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Total	9737	11967	9281	9549	5510	4140	3206	3121	3734	4244	5627	6225
number of												
new cases												
Rate per	180,4	221	171,2	176,2	106,8	80,2	62,1	60,5	73,1	82,3	109,1	135,2
100000												
population												
Number of	73	170	107	103	205	68	38	50	29	57	175	
new cases												
in children												
Rate per	5,3	12,4	7,9	7,9	15,6	5,5	3,07	4	2,4	5,5	12,7	
100000												
children												

Table 96: Neoplasm's, Georgia, 1988-1998

Source: Centre for medical statistics and information of Georgia, 1999.

Cases of malignant tumors also increased. Many now seek health care for such problems far too late, either through ignorance or more usually through fear of the cost. Cases of people deciding for financial reasons not to undergo chemotherapy, radiotherapy or essential surgery are now quite common.

There are large differences between Regions. The highest standardized mortality rate by cancer in Georgia is in Poti (139.5), Mtskheta-Mtianeti (99,44), Racha-Lechkhumi, Kvemo-Svaneti (104).

Number		1993	1994	1995	1996	1997	1998
	Total	479,9	505	457,7	482,4	477,77	501,9
First	Total	65,9	68,3	60,1	66,5	83,8	88,7
determined	Men	64,1	61,8	54,9	65,3	80,6	88,1
diagnoses	Women	70,4	68,9	60,4	67,5	86,8	89,4
Esophagus	Men	0,7	0,6	0,3	0,7	0,82	0,9
	Woman	0,1	0,3	0,1	0,1	0,15	0,4
Stomach	Men	5,1	5,1	4,1	6,9	7,13	7,7
	Women	4,7	3,3	2,7	3,8	4,85	4,8
Rectum	Men	2,2	1,8	2,3	2,3	3,26	2,9
	Women	1,9	2,5	2,7	1,5	2,33	3,2
Larynx	Men	3,8	4,5	3,9	6,2	6,1	6,4
	Women	0,2	0,2	0,2	0,1	0,5	0,2
Trachea,	Men	15,4	13,7	11,5	17	19,9	22,3
bronchial	Women	3,2	1,9	2,4	2,8	2,8	2,9
tubes, lungs							
Breast	Women	24,9	28,3	25,7	24,6	29,5	30,4
Cervix	Women	8	8,8	7,5	8,8	8,26	9,4
Prostate	Men	1,7	2,6	2	3,5	3,5	4,4
Lymphatic and	Women	5,4	3,8	4,3	4,5	6,9	5,4
haematogenous	Men	3,9	3,7	3,0	2,2	5,7	3,9
organs							

Table 97: Structure of cancer by the main localization's and sex in Georgia per 100 000 population (1993-1998)

Source: Centre for medical statistics and information of Georgia, 1999.

Region	New cases	Mortality	Prevalence	New cases	Mortality	Prevalence	New cases	Mortality	Prevale
	rate per	rate		rate per	rate		rate per	rate	nce
	100000			100000			100000		
	population			population			population		
Tbilisi	80,4	94,4	465,8	76,7	87,6	452,2	91	97,7	480,7
Achara A.R.	124,9	67	508,3	124,7	50,4	557,2	136,1	59	703,7
Poti	93,9	48,7	182,5	69,4	50,3	201,4	110,5	139,5	193,8
Guria	128,8	167,2	518,9	126,4	110,9	535,3	111,2	132	578,9
Racha-	54,2	33,2	446,2	101,4	82,3	577,9	102,4	104,3	559,1
Lechkhumi									
Kvemo-									
Svaneti									
Samegrelo	92	76,5	377,5	94,2	73,7	380,1	88,9	82,8	417,4
Upper							0	40	393,3
Svanety									
Imereti	90,8	82,2	532,1	97	84,6	549,4	114,4	100,3	602,9
Kakheti	91,5	88,0	693,2	105,3	94,4	710,7	96,5	88	809,7
Mtskheta-	68,9	99,4	429,0	72,9	53,8	477,7	69	67,5	550
Mtianeti									
Samtskhe-	66,9	46	402,6	82,8	66,6	409,9	74,2	63,4	468,7
Javakheti									
Kvemo	43,9	48,6	216,5	47,5	41,8	209,8	54,8	41,1	242,5
Kartli									
Shida Kartli	84,5	60,4	625,8	87,2	60,5	656,3	92,1	79,8	738,7
Georgia	83,8	79,9	475,9	88,7	75	501,9	95,7	84,4	538,9

#### Table 98: Malignant Neoplasm's, per 100 000 population by region 1997-1999 year

Source: Centre for medical statistics and information of Georgia, 1999.

#### 6.2.3. Accidents, Traumas and Poisoning

Accidents, traumas and poisoning are a frequent problem, which is amenable to expensive measures for its treatment or prevention and greatest cause of death in Georgia, accounting for 3,9% of all deaths (number-19 144; 415,8 per 100 000 population in 1999).

They have raised dramatically in Georgia, partly due to the increasing violence, the relaxation of previous occupational safety measures, and the growing psychological stress. The socio-economic cost must also be taken into account when determining the high priority of accidents for public health. According to the cause of injury they could be classified as follows: traumas (51,2%), wounds (10%), burns (4,3%). In the country in 1999 there were 1782 traffic accidents with 539 accident deaths. The following types of accidental injury were registered: high speed, accidents linked with use of alcohol in excess of the legal limit, driving without license. The drivers did not observe the traffic regulations. The poor quality road was conductive to motor vehicles accidents. Accidents take an excessive toll of children and young people in the form of deaths, disability and suffering, a toll that is unacceptable in age groups that normally have the fewest health problems and the lowest death rates. The most

affected is the school age group (7-14 years), in which most of children's accidents occur. The motor vehicles accidents are more frequent among school boys.

	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
Number of new cases	17868	162789	159240	88254	94998	63615	44663	22159	21807	20765
Rate per 1000000	3302,3	3002,6	2937,9	1710,6	1841,3	1233	865,6	434	423,1	402,5
Number of new cases in children	48990	43363	40508	27552	26982	19339	13884	7163	6226	4526
Rate per 100000 children	3562,8	3199,3	3113,9	2225,1	2179,1	1561,8	1121,3	584,6	603,9	329,2

Tab 99: Injuries and poisonings, Georgia, 1989-1998

Source: Centre for medical statistics and information of Georgia, 1999.

#### 6.2.4. Diabetes Mellitus

The analyses of morbidity rates dynamics of diabetes mellitus in Georgia shows a trend of increase: in 1998 the number of diabetes mellitus was 45 584 (883,5 per 100 000 population) while in 1999 – 50 841 (1104.1 per 100 000 population).

From 50 841 people with diabetes in the country, the insulin – dependent persons amount to 16 664 (32,8%). The insulin-dependent diabetes mellitus is more prevalent among children and adolescents. From 343 children with diabetes in the country, the insulin-dependent persons amount to 277 (80, 75 %).

The main causes of insulin-dependent diabetes mellitus mortality are cardio-vascular diseases, and chronic renal failure as well as diabetic coma, gangrene. Mainly cardio-vascular diseases (infarction, stroke) also cause dependent diabetes mellitus deaths Non insulin.

In 1999 high rate of Diabetes Mellitus was registered in Kakheti and Imereti (1334), Guria (1321), Racha-Lechkhumi, Kvemo-Svaneti (rate – 1208, 7).

		Tot	tal		In children				
Region	Total	Rate per	New	Rate per	Total	Rate per	New	Rate per	
		100 000	case	100 000		100000	cases	100000	
Tbilisi	11019	929,4	1619	136,5	80	33	7	2,9	
Achara	4490	1227,1	736	201,2	22	29,4	1	1,3	
Poti	529	1025,2	30	58,1	3	28,5	-	-	
Guria	1902	1321,7	92	63,9	15	51	7	23,8	
Racha-	614	1208,7	137	269,7	11	106	3	28,9	
Lechkhumi									
Kvemo-									
Svaneti									
Samegrelo	2443	574,8	706	166,1	10	11,5	-	-	
Upper	90	600	13	86,7	5	163,4	-	-	
Svanety									
Imereti	9926	1334,7	650	87,4	70	46,1	6	3,9	
Kakheti	5352	1334,7	711	177,3	31	37,8	5	6,1	
Mtskheta-	713	565,9	47	37,3	4	15,5	1	3,9	
Mtianeti									
Samtskhe-	1413	659,1	254	118,5	7	16	-	-	
Javakheti									
Kvemo	2785	509	479	87,5	12	10,7	4	3,6	
Kartli									
Shida	3174	948,9	129	38,6	46	67,3	4	5,8	
Kartli									
Tskhinvali	77		18		5	-	3	-	
Other	6314		1249		22	-	9	-	
sectors									
Georgia	50841	1104,1	6870	149,2	343	36,6	50	5,3	

Table 100: Diabetes Mellitus, Georgia, 1999

Source: Centre for medical statistics and information of Georgia.

#### **6.2.5 Iodine Deficiency Disorders**

The presence of endemic goiter in Georgia, because of its geographical location and unavailability of iodized salt for the last years. According to ministry of Health data, in 1999 Thyroid physical examination provided in 61 525 children and enlargements found in 31 017 cases (50, 5%).

Iodine deficiency Disorders damages health in several ways most importantly by growth and mental retardation in children and reproduction disorders, early atherosclerosis, increased mortality among adults.

As the result of the Chernobyl disaster, when the radiation level at the Black Sea coast of Georgia increased a hundred thousand times, the disruption of iodized salt imports in the
years 1992-1995 have contributed to increased prevalence and dissemination of Iodine Deficiency Disorders in Georgia.

According to these porpoise, Public Health Department actively cooperated with UNICEF and special program has been created. Main goals of this program are:

- a) To reduce the incidence of Iodine Deficiency Disorders in the select regions of Georgia through provision, distribution and administration of the Iodized Oil Capsules among the children among of 0-16 years,
- b) Ensure the proper administration of the Iodized Oil Capsules to the target groups through capacity building of the Health workers in screening, differentiation of the different levels of Goiter and conducting of the urinary tests
- c) To conduct the two consecutive campaigns with the internal of 6-9 months. Prior to each campaign testing of the urinary iodine will be carried out in each region to assess the initial iodine level in the organism and evaluate the post administration effect.

		Total In Children				
	Examination	Enlargements	%	Examination	Enlargements	%
	provided	found		Provided	found	
Tbilisi	8778	5043	57,5	4561	1375	30,15
Achara A.	6301	6301	100	3477	3477	100
R.						
Guria	7575	3554	46,9	5575	2735	49,1
Racha-	6757	4309	63,8	3267	2360	72,24
Lechkhumi						
Kvemo-						
Svaneti						
Samegrelo	16704	8051	48,2	9557	5130	53,7
Imereti	26151	9619	36,8	1718,5	6676	38,85
Kakheti	18508	6684	36,1	12662	4323	34,14
Mtskheta-	8077	3352	41,5	5048	2415	47,8
Mtianeti						
Samtskhe-	12310	3865	31,4	9236	3332	36,1
Javakheti						
Kvemo	8555	4132	48,3	4869	3053	62,7
Kartli						
Shida	4632	2728	58,9	4075	2078	50,9
Kartli						
Poti	1150	279	24,3	915	100	10,9
Upper	2640	1697	64,3	1182	901	76,23
Svanety						
Georgia	132714	62776	47,3	83425	39449	47,3

Table 101: Thyroid physical examination, new cases, Georgia, 1998

Source: Centre for medical statistics and information of Georgia, 1999.

### 6.2.6 Psychosocial and mental health

Radical political and socio-economic changes have caused mass social stress and thus a considerable increase in psychosocial and behavioral problems. Many people have migrated in search of security and shelter from armed conflict. These vulnerable groups of refugees and internally displaced people encounter serious problems affecting their physical and mental health.

The morbidity rates (per 100 000 population) of mental health disorders during 199–1999 increase. The morbidity rates of reactive and senile psychosis in particular, psychosomatic disorders and depression have rapidly increased. During the last decade, the number of suicides has tripled (377 in 1997). Suicidal behavior is most common among men (20-45 years). It is considered that these deaths are results of acts accomplished by the victim under the strong influence of unstable social conditions and uncertainty. The high suicidal risk among men and adolescents is associated with the increased needs for social adaptation (lower prestige of education, difficult choice of a profession, unemployment etc.).

Mental well being is an important indicator of healthy lifestyles and adequate quality of life. Mental health problems, including depression and anxiety, are rising, in particular as a result of the increasing prevalence of risk factors such as unemployment, migration and refugee displacement, war-related trauma, rapid social change and deep economic disadvantages. Indicators of violence and abuse are also more common.

Fear, loss of old values and economic deterioration were accompanied by daily occurrences of violence, rape and sexual abuse. Many of these have post-traumatic stress disorders and need mental health counseling.

Suicide can be used as an indirect measure of mental disorder or lack of psychosocial wellbeing. While women are more likely to attempt suicide, the rate of men actually committing suicide in Georgia is more than three times higher than that of women (147 cases against 42 cases in 1999 year). Whereas the female suicide rate has been falling over the last decade, the rate for men rose slightly.

Most of the visible post-traumatic symptoms have their origin in psychological problems and conflicts: forsaking and mental distress of object's loss; Lasting feeling of freight; new relationship with time (past and present are mixed without any place for the future); a pattern of repetition (life is stalled at the traumatic events); sleeping troubles. Table 102: Mental disorders, Georgia, 1991-1999

	1991	1992	1993	1994	1995	1996	1997	1998	1999
Number	92822	66962	73199	755575	71338	79386	87061	95502	100975
of									
registered									
cases									
Rate per	1712,5	1297,9	1418,8	1464,8	1382,6	1554,9	1689	1850,9	2193,2
100000									
Number	5299	2286	2369	2474	2932	3043	4231	6932	6495
of new									
cases									
Rate per	97,8	44,3	45,9	47,9	56,8	59,6	82,1	134,3	141,1
100000									
Number	905	393	210	357	204	221	259	627	630
of new									
cases in									
children									
Rate per	69,6	31,7	17	28,8	16,5	18	25,1	45,6	66,9
100000									
children									

Source: Centre for medical statistics and information of Georgia, 1999.

Risk factors associated with mental disorders are: organic syndromes of brain, consequences of syphilis or vitamin deficiency; crisis or reaction situations (ranging from cognitive to emotional disorders); hereditary collateral antecedents for major psychoses and schizophrenia-where, in spite of the etiological data, it is established occurrence is higher in cases of family antecedents. Actions measures address the three levels of prevention: avoid or reduce the strength of risk factors; detect mental disorders and illness by screening and medico social methods meant to reduce the disability and facilitate social integration; promote psychic and mental rehabilitation for socially useful roles.

### 6.2.7. Digestive System Diseases

Digestive diseases rank as the one of the most cause of death, having caused 1440 deaths in 1999 (mortality rate 31, 3 per 100 000 population, 3, 6 % of all deaths). In Georgia, 105 998 people, that is about 2 % of the entire population, suffer from digestive diseases, more frequent with inhabitants of urban areas.

The risk factors common to digestive diseases are: infection with helicobacter pilori, hyperacid gastritis, genetic factors, stress, smoking and a number of medicines. Alcohol and hepatitis are definite risk factors of cirrhosis. Prevention actions aimed at lowering the prevalence of and the death rate by digestive diseases focus on fighting smoking, encouraging

safe cooking and disfavoring the ingestion of medicines responsible for the gastric secretion of hydrochloric acid. Infinitely more important however are the anti-epidemic measures addressing hepatitis A and B ad the complex actions aimed at fighting the abuse of alcohol.

-										
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
Number	321383	362420	240942	132254	220999	201300	125867	79424	52631	44533
of new										
cases										
Rate per	5936,7	6684,7	4445,3	2563,4	4283,5	3901,7	2439,4	1555,7	1021,1	863,1
100000										
Number	103466	127683	90688	60212	86798	100980	55708	42620	7335	10298
of new										
cases in										
children										
Rate per	7524,6	9420,3	6971,5	4862,7	7009,8	8155,2	4499	3478,3	711,5	748,9
100000										
children										

Table 103: Digestive system diseases, Georgia, 1988-1998

Source: Centre for medical statistics and information of Georgia, 1999.

Fig 52: Death rate per 100 000 population, Georgia, 1995-1999



Source: Centre for medical statistics and information of Georgia, 1999.

Number of registered cases	Children	Number of hospitalized cases	Children
105 998	10 786	21 766	3 157
100 %	10,2 %	100 %	14,5 %

Table104: Digestive system diseases, Georgia, 1999.

Source: Centre for medical statistics and information of Georgia, 1999.

### 6.2.8. Respiratory System Diseases

During lasts year mortality by respiratory system increased from 14,3 to 18 per 100 000 population, that is 2% of the total number of deaths. In 1999 year was registered 214 694 causes of respiratory diseases (rate per 100 000 population - 4662, 7). Respiratory diseases mainly affect extreme age groups (children and elderly people). In 1999, about 44% (94692 cases) of the total number of respiratory diseases have been registered in children under 15 years old. The regions ranking above the national average of deaths by diseases of the respiratory system are Poti - 7428,3; Tbilisi - 6302,8; Racha-Lechkhumi - 6072,8; Guria - 5657,4; About 31 816 sick people are hospitalized annually for respiratory system diseases, that is 14,8 % of the total number of registered cases.

Pneumonia ad bronchial - pneumonia is responsible for about half of the number of deaths by the respiratory system diseases. With the age groups 0-1 and 1-4 years old, they are first cause of death. Pneumonia and bronchial-pneumonia risk factors include: the age (children and the elderly), the weather and microclimate, and sex (men affected more than women). The main risk factors with respect to pulmonary diseases are smoking, air pollution, passive smoking, multiple acute respiratory diseases and genetic factors.

Action measures with respect to mortality by this group of diseases refer to better house microclimate, detection and providing early treatment of respiratory infections, anti-haemofilus and anti-pneumococus vaccinations.

Intervention should focus on fighting smoking – the passive one included – and airs pollution. Primary health care services can have an important influence on the occurrence of this group of diseases and their consequences through early detection and treatment of acute conditions, and smoking fight in cases of chronic and acute conditions.



Fig 53: Death rate per 100 000 population, Georgia, 1996-1999

Source: Centre for medical statistics and information of Georgia, 1999.

	19	96	19	998	1999		
	Total Rate per		Total	Rate per	Total	Rate per	
		100000		100000		100000	
Pneumonia	14408	282,8	13403	259,8	16444	357,1	
Bronchitis	16630	325,7	12394	240,2	13920	302,3	
Bronchial Asthma	11310	221,5	12496	240,8	13201	286,7	
Other Chronic	1528	29,9	1935	37,5	2568	55,77	
diseases							
Total	214753	4206,31	183801	3562,24	214694	4662,7	

Tab 105: Respiratory system diseases, Number of cases, Georgia, 1996-1999

Source: Centre for medical statistics and information of Georgia, 1999.

Tab 106: Respiratory system diseases, Number of cases in children, Georgia, 1996-1999

	1996		19	998	1999		
	Total	Rate per 100000	Total	Rate per 100000	Total	Rate per 100000	
Pneumonia	8591	764,9	5876	588,7	6053	643,4	
Bronchitis	5363	477,5	2959	296,4	2985	317,3	
Bronchial Asthma	2283	203,3	2106	211	2050	217,9	
Other Chronic	363	32,3	324	32,5	281	29,9	
diseases							
Total	119845	10669,9	94043	9421,5	94692	10065,4	

Source: Centre for medical statistics and information of Georgia, 1999.

Tab 107: Respiratory system diseases, Number of new cases, Georgia, 1988-1999

	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Number of	471672	428342	389203	245895	252148	186397	168928	156414	122687	130357	151570
new cases											
Rate per	8712,9	7900,7	7180,6	4766,1	4887,3	3612,8	3273,9	3063,6	2380,14	2526,5	3291,8
100000											
Number of	249384	228161	214786	148906	155163	112034	98891	95268	79798	72520	73926
new cases in											
children											
Rate per	18136,4	16833,5	16511,2	12025,7	12531	9047,9	7986,5	7774,9	7740,5	5274,1	7858,1
100000											

Source: Centre for medical statistics and information of Georgia, 1999.

### 6.2.9. Nervous System and Sense Organs diseases

Tab 108: Nervous system and sense organs diseases, Georgia, 1988-1998

	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
Number of new	42372	3994	38415	28841	28339	17633	18923	18571	23704	33274
cases										
Rate per	782,7	733,9	708,7	559	549,3	341,8	366,74	363,7	459,9	644,9
100000										
Number of new	15039	13566	12487	10007	11520	7836	6388	9030	11574	13875
cases in										
Children										
Rate per	1093,7	1000,9	959,9	808,2	930,4	632,8	515,9	736,9	1122,7	1009,1
100000										
children										

Source: Centre for medical statistics and information of Georgia, 1999.

# 6.2.10. Genitourinary System Diseases

	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
Number	34487	31528	29442	18575	17852	15280	14804	15153	15707	18119
of new										
cases										
Rate	637,1	581,5	543,2	360	346	296,2	286,9	296,8	304,7	351,2
per										
100000										
Number	2533	2890	3615	2996	3554	2129	1958	2397	2708	2813
of new										
cases in										
children										
Rate	184,2	213,2	277,9	241,9	287	171,9	158,1	195,6	262,7	204,6
per										
100000										
children										

Tab 109: Genitourinary system diseases, Georgia, 1988-1998

Source: Centre for medical statistics and information of Georgia, 1999.

## 6.2.11. Blood and Blood Forming Organs Diseases

Table 110: Blood and blood forming organs diseases, Georgia, 1988-1999

	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
Number	3903	3311	2771	3305	2276	3073	3499	4978	4826	6017
of new										
cases										
Rate	72,1	61,1	51,1	64,1	44,1	59,6	67,8	97,5	93,6	116,6
per										
100000										
Number	3497	2932	2085	2540	2276	2144	2563	3218	3145	3050
of new										
cases in										
children										
Rate	254,3	216,3	160,3	205,1	183,8	173,2	206,9	262,6	305,1	221,8
per										
100000										
children										

Source: Centre for medical statistics and information of Georgia, 1999.

### 7. History of Georgian Medicine

### 7.1. The Pre-Christian Period of Georgian Medicine

Georgian medicine is one of the oldest in the world. In the 18th century K. J. Sprengel's classic of the history of medicine begins with Cura Mediana (Treatment by Medea) and thus recognizes the antiquity of Kolk-Iberain medicine. There exists a well founded version linking medicine with the name of the Kolkhetian ruler's daughter Medea, famed for her knowledge of various remedies.

Georgian medicine is created on the basis of the basis of two great traditions of East and West. There are more than 500 medical manuscripts in Georgian and foreign libraries.

In the first century Greece-Roman medicine was closely bound to the ancient Pelazgian, pre-Iberian world. The Georgians and the Caucasians were always close to the Hellenic world. It resulted from genetic, anthropological, intellectual and cultural links between them.

### 2. The Christian Period

The level of Georgian medicine is given in the literary monument of the V century "Martyrdom of Shushanic", in which the author gives not only the methods of treatment and care of the patient, but also describes the direct and indirect causes of disease. In the work of Sabatsmindeli "Sinanulisatvis Simdablisa" together with many interesting advises, there is given necessary for monks and nuns medical knowledge. Here is noted as well, emergency situation to call doctor. It denotes that the specialty of doctor was existing independently in VI century in Georgia. It is natural, that the special place monastery medicine was especially underlined in religious literary sources. It is evident, that monastery medicine is significant part of the whole medicine. All Saints are healers, and there are no exceptions. Petre Iberi, Shshaniki (5<sup>Th</sup> century AD), Thirteen Assirian Fathers (6<sup>th</sup> century AD), Grigol Khandzteli (8<sup>Th</sup> -9<sup>Th</sup> centuries AD) and many were the famous healers of their times, Illarion Kartveli must be especially mentioned. He was worldwide known doctor treating patients without fee.

The first medical book, "Ustsoro Karabadini", which reached to our time, is dated by the X century. A doctor with encyclopedic knowledge, who calls himself Kananeli, writs it.

Many scientific works are devoted to the Georgian golden period (XI-XII centuries AD). These favorable conditions were conducive to the early origin of remarkable Renaissance. Only after a few centuries Western European countries could enter the Renaissance. Medicine in particular achieved high developments. This time was an extraordinary period in Georgian's history. Georgian medicine is known as Joanne Petrici's and Arsen Ikaltoeli's period.

Arsen Ikaltoeli was recognized as the greatest anatomist of this period. He lived and worked in the same socio-cultural environment where flourished the genius of Shota Rustaveli. In the  $10^{th} - 13^{th}$  centuries many Georgian institutions were created in Georgia an abroad. One of the leading roles was devoted to the building of hospitals. The ruins of these hospitals are still to be seen in Georgian cloisters in the western and eastern Georgia, southwestern part Tao-Klarjeti and at Georgian cultural centers abroad: Jerusalem, Khalkedon, Petrisioni, Sinai and Black Mountains. Some hospitals had rich libraries. In the 13<sup>th</sup> century Kojakopoli wrote medical book "Tsigni Saakimoi" which also corresponds with the "golden period" of Georgian history.

The greatest Georgian doctor and philosopher, Zaza Panaskerteli-Tsitsishvili (15<sup>th</sup> century AD) is the first lay person, holding an especial place in the history of Georgian medicine. His most famous medical work was "Samkurnalo Tsigni (The Book of Treatment)". It became extremely popular in the country.

In the 16<sup>th</sup> century David Batonishvili (Bagrationi) wrote medical book "Iadgar Daudi".

The 17<sup>th</sup>-18<sup>th</sup> centuries are significant because of this expansion of European culture and knowledge in Georgian medicine. The king of Georgia, Vakhtang VI (18<sup>th</sup> century) took some young people to Russia, where they received university medical education. Among them, especially must be mentioned Ilia Gruzinov (Namchevadze) as a talented person, who was sent to Europe, where he became well known in the scientific circles of Germany, France and England. He is considered as a pioneer neurophysiologist.

The document of this period of the king Erekle II show that "Ekimbashi" – chief of doctors, trained his pupils for 20-25 years and only after attending his course had they a right to conduct independent practice and to have their own trainees.

## 3. The Russian Conquest Period

In 1801 Russia conquered Georgia. On October 12, 1801, was established the "Department of Medicine". According to the instruction the Department supervised the pharmacy, turnover of pharmaceuticals. It should regulate the issues of care of ill prisoners and patients with mental disorders. It also makes medico-topographic description of province. Under the Russian rule dozens of brilliant Georgian Physicians received their education in Russian and European medical schools. In Tbilisi, the Caucasian Medical Society was founded, which had a worldwide response and whose honorary members included Vikhrov, Pirogov, Pasteur, Hirstli and Mechnikov.

In 1840 after creating a single Province of Georgia, department of medicine of Georgia was reorganized into Kartli-Imereti department of medicine. In 1846 department was restructured into Tbilisi and Kutaisi department of medicine. The aim of reorganization was unification of prior separated medical net and it's centralization. In 1896 a project was developed according to which the management of medicine was attributed to vicegerent of Caucasus and it was subordinated to his head office. In 1867 reorganization medial administration began. Its responsibility was supervision of existing in Caucasus medical facilities, assignment, distribution and discharge of doctors, midwifes and doctors assistance, working plan of medical personnel, their presentation to degrees and awards, establishment and abolishment of pharmacies.

For 1919 there were 250 doctors and 38 hospitals, 21 city hospitals and 10 rural hospitals, in total for 1985 beds in the country. There were 36 medical stations, 48 ambulatory, 2 malaria stations and 95 pharmacies.

In 1888 the Ministry of Internal Affairs reorganized department of medicine once again and the same administration, as in other provinces of Russian Empire was established. Since then medical activities were governed by Department of Medicine and Province Administrations.

Against spread of outbreaks on the main roads of Georgia quarantines were introduced. In the first half of XIX century 12 quarantines were established in the east of Georgia. Since 1812 total vaccination was introduced.

In 1829 first civil hospital on 12 beds was established. In 1865 new ambulatory was established. In 1873 the first obstetric medical institution was founded. In 1875 it was reorganized into midwifery institute. In XIX century a lot of medical institutions were established in Georgia.

## 4. The Medicine of the Period of Georgian independence (1918-1921)

In the short standing period of Independence of Georgia in 1918-1921, foundation of the University was the greatest event. It was the first National University in Georgia and whole Caucasus. On February 27, 1918, a Medical Faculty was founded at the Georgian University. It became the centre, where many renowned Georgian medical scientists were educated.

In November 1918 was established Medico-Sanitation Department at the Ministry of Internal Affairs and Simon Japaridze was assigned as a head of department.

Territorial division of the country was the same, as it was in Russian Empire. Georgia was divided into districts, regions and cities. Correspondingly were assigned district, regional and city doctors. Medico-Sanitation Department supervised also veterinary service. The curative network of Democratic Republic of Georgia as divided into 3 sectors:

- a) Network of state Medical Institutions;
- b) Municipal medical network;
- c) Private medical network;

In February of 1920 the Minister of Internal Affairs Chichinadze represents for approval a draft of decree o establishment the Department of Health on the basis of the Medicosanitarian Department. Minister reviewed the state of health care of the country of the country in his speech, he noted, that serious situation existed concerning: malaria, tuberculosis, STDs, and that despite to active measures conducted against the outbreak typhus didn't give any positive results. The Minister considered that, it was caused by non-coordinated actions of different medical institutions, and requires subordination of all medical organization to the department of health. The draft was approved in July 13. Spiridon Virsaladze was assigned as a Head of Department.

The Department of Health had a responsibility for:

- a) Supervision over the activities of all medico-sanitary institutions of Republic;
- b) Issues of quarantine;
- c) TB, malaria, cholera, plague, STDs, typhus and other diseases;
- d) Expertise issues;
- e) Conducting o medico-sanitarian statistics;

- f) Sanitary management of recreation zones of state importance;
- g) Issues of pharmacy and pharmaceuticals;

h) Monitoring of the correct accomplishment of medical-sanitary law, elaboration of medical-scientific questions.

Department of Health includes 5 Departments till unification of railway, public and community parts. Department was managed by the Board, composed of Head of the Sub department and was chaired by the Head of the Department.

According to the data of 1919 there were 45 hospitals for 1200 beds in Georgia, 17 medical stations in Tbilisi and 13 in Kutaisi. New medical institutions were established in Poti, Akhalkalaki, and Svanety region. Medical-supervisory stations are considered as units of health care system and were a kind of mixture of sanitary-epidemiological stations and ambulatory services.

The decree of 1920 and the report of the Minister of Internal Affairs developed on the basis of the Law adopted on May 30, 1919. They concern the financial assistance of families of victims of struggling against epidemics and disabled medical personnel. The Chairman of the Health Committee of the Constituent Assembly, an outstanding doctor Ivane Machabeli, signs previous draft.

Medical care in independent Georgia wasn't free of charge, but taking into consideration social-economic condition of the population were half of the real cost. Kutaisi was a pioneer in introducing free medical care for population. The pioneer of this practice was the doctor from Kutaisi Topuria. His hospital was free for the population.

In 1918 Georgian Red Cross Constituent Assembly was attended by Noe Zhordania ( the Head of Government ) and Grigol Giorgadze ( the War Minister ). The International Red Cross Committee representative, physician Mikhail Zandukeli, opened the Assembly. Red Cross Society established a wonderful hospital in Mtvari's street, where the service was free of charge.

The first medicl periodical edition (journal)" The Doctor" was published I 1919. In accordance with editorial staff statement, it was "The scientific-public medical journal", the edition of Georgia Doctors and National Sciences Society. In January 1918, a new monthly journal "Doctor's assistant" was issued. It belonged "Georgian Doctors assistance organization". In 1919 was published monthly journal "working pharmacist". As it was stated in editorial reference, it represented "the Georgian Working Pharmacists Trade Union Central Council Body". In 1920 every two weekly journal (Moambe) "Tuberculosis and preventive medicine".

Georgian health service system rapidly developed and achieved efficiency in a short period.

# 5. The Soviet Period Georgian Medicine

In 1921 Georgia became the part of Soviet Union. Most part o the 20<sup>th</sup> century Georgia spent as one of 15 Republics within the Union of Soviet Socialist Republics (USSR). The Communist state established in Georgia was highly centralized, and ideologically oriented.

The state used policy to buttress the doctrine of Leninist socialist ideology which emphasized the collective over the individual, and where the state was an authoritarian and dominant force.

The People's Commissioner for public health, founded in 1921 under the 21 April decree, had to start its activates for building of a completely new health care network in Georgia. Since 1925 significantly have expanded the medical-preventive institutions net. A lot of ambulatories, polyclinics, women's and children's consultations, TB facilities, pediatric and delivery hospital departments, were opened in the country. The number of hospitals, also physicians and nurses has increased; the medical assistance has improved. Great attention was paid to sanitary inspection. The first sanepid stations, (including stations for malaria control), sanitary aviation (of an extreme need for the mountainous relief of the country), the occupational health network, bacteriology and other laboratories were established. The abovementioned health care developments, the construction of modern houses, water pipes, sewerage systems and the improved health education of the population contributed to the eradication of some infectious diseases (such as smallpox, cholera and plague) and considerable decrease of malaria and typhoid spread. Mortality in general and especially child mortality had significantly decreased.

In 1930 Medical Department of the Tbilisi State University was transferred into Tbilisi Medical University. In 1935 was founded Advanced Training Institute for Doctors, which directed the qualification improvement and professional education of medical personnel. Famous scientists, such as Virsaladze, Tikanadze, Moseshvili, Muxadze, Natishvili, Machavariani, Kakhiani, Tsulukidze, Amiredjibi, Asatiani, Aladashvili, Kandelaki, Makhviladze, Tsinamdzgvrishvili, Kipshidze, Cavtaradze, Natadze, Antelava and others successfully trained future doctors.

Georgian Medical Society suffered great damages in the thirties, and early fifties because of repression conducted by Government. The country became isolated of outer world. This isolation negatively affected on the Georgian medical science ad practice. Wide ideologization of medical sphere and isolation led to complete degradation. It was accomplished step by step. Greatest damage brought to the development of genetics, psychology, social medicine, psychiatry, medical sociology and demography.

During the World War II the health care activities were reorganized in accordance with the home front requirements. Thousands of Georgian physicians took active part in battles. Thousands of medical personnel died. Hundreds of wondered soldiers were brought to Georgia from the field of battle to, where were all conditions not only for their recovery, but there were all conditions for more than 1,5 million temporary displaced persons' social and medical services. Georgia suffered great losses during the great patriotic war. The echoes of demographic damage are still being reflected in the age structures of Georgia population.

In the post war decades the Government started construction of new standardized health establishments providing primary and specialized care for urban and rural population. Health care system in Georgia was 100% publicly owned and financed. Health care was centrally managed by the Ministry of Health through district Institutes of National Health. There was

an integral part of the global soviet system and was based on the so-called "Semashko Model", which can be compared with the NHS system of the United Kingdom.

"Semashko Model" developed after Russian Revolution and with expansion of Soviet influence spread in different countries. After World War II "Semashko Model" was introduced in the countries of socialist camp (Czechoslovakia, Hungary, Poland, GDR), although non-of them had an exact copy of the original Soviet model.

The strategy and tactics of health care, its volume, means of implementation and expenses used to be determined centrally, completely ignoring economic motivation of development .The central authorities (government of the USSR) organize and control the whole available resources. Therefore, representatives of the local government were left with insignificant and second-rate responsibilities and rights. Health within the 15 Soviet Socialist Republics. Departments within the All-Soviet Ministry included:

- Curative Health Care Services
- Maternal and Child Health Care
- Medical and Nursing Education
- Sanitary Epidemiological Services
- Sanatoria and Resorts

The Ministry also directly supervised special, health services and institutions (largely highly specialized and research oriented) and oversaw the Plague Research Institutes and the Academy of Medical Sciences. Ministry of Health directly controlled medical educational institutes and research centers (some with beds and clinics); specialist republican hospitals and polyclinics (out-patient centers); nursing schools, sanatoria, sanitary and epidemiological centers responsible for monitoring infectious disease and environmental hazards and known as Sanepid stations.

The regular health service delivery was mediated through a series of local government organization structures, all incorporated within the formal local government organization, which provided accountability through the elected nature of local assemblies. City health authorities managed city hospitals and polyclinics for adults, woman and children. Regional (Oblast), Autonomous Republic governments provided both tertiary and secondary hospitals, and outpatient services at a "state" level. They also monitored "district bodies", the next tier of administration down. Districts oversaw smaller territories or districts and provided a central hospital and outpatient service (polyclinic). There were further rural councils providing uchastok hospitals and in remote areas either doctor-led ambulatory clinics or feldshermidwife stations.

Under Soviet order, health care system in Georgia could be defined as a form of national health services, financed exclusively through the general government budget. Health care services were free. The main source was direct fiscal transfers from state enterprises; in the future these will be replaced by other sources of taxation such as value-added tax (VAT), profit and income tax. Revenue is collected into a common "pot". The share of health expenditure in GDR was relatively low. The system operated on small administrative structures and costs. Budgets were centrally determined, distributed through an established

administrative hierarchy, often influenced by political considerations, and generally did not correspond with the level of services provided.

Funding from general taxation had a number of advantages:

1. Because it makes use of range of revenue sources a reduction in any one source does not usually have a devastating impact on overall revenue.

2. Since one agency collects money on behalf of all government departments, collection tend to be more efficient than if each department collected money independently.

3. Overall control of government expenditure is made easier because the overall budget for government is fixed and obtained from one source.

4. In addition, funding is usually equitable since all forms of income are taxed and taxes are usually proportional or progressive. This means that they take the same or an increasing proportion of income in tax the higher a person's income.

General taxation also had several disadvantages:

- 1. Systems based on taxation may not be equitable if they depend heavily on goods taxation. Since these taxes are usually imposed as a proportion of the product price, it follows that a person with lower income will have to pay a larger share of income in tax than a person with higher income. This type of tax is known as regressive tax.
- 2. Since taxes go into a general fund, citizens are unaware exactly what their contribution will be spent on. This can reduce a person's willingness to pay taxation. This can be a problem in a developed market economy, but is even more problematic in a transition economy where systems for assessing and collecting taxes are as yet undeveloped. It is currently quite easy for a person to avoid taxation and the likelihood that this happens increases if it is unclear what the money will be spent on.
- 3. Annual allocations from the general budget are subject to changing political priorities over what is considered more or less important public expenditure. In communist period Georgia have tended to regard the health sector as unproductive and therefore meriting a small allocation.

The Soviet system, despite its many and profound flaws, represented a very real achievement. It provided a basis for community health activities including mandatory immunization and periodic health checks and fostered a generation committed to solidarity in health care provision. Many principles of Soviet Health Care System were concordant with the WHO recommendations, such as full availability of medical care, free access, the scientific character of the health policy and participation of the population in the promotion of own health.

The system was built on equity principles, and ensured access to comprehensive health services for whole population. Access to services did not depend on the patient's ability to pay. The system organization and financing allowed an efficient control of costs.

From organizational point of view the following important measures were taken in the health sector: unification of polyclinics and hospitals, regulation of sanepid stations, introducing of district-territorial and occupational principles in primary health care, establishment of new health management patterns for urban and rural areas...

The service infrastructure was extensively developed; it was made up of an integrated network of dispensaries, policlinics and hospitals. Hospitalization, in terms of bed coverage was good and even outsized the real needs. There has been a sufficient body of trained health personnel and a medical education of good quality.

On 1968 in the Republic of Georgia there were 22 training scientific institute and 600 hospitals, with 41400 beds. 17 000 thousands doctors and 40 000 thousand medium medical personnel were employed in health care system.

The Semashko system dominated the national conception of public health and ld to extensive epidemiological monitoring networks, a focus on "sanitary" medicine and the institution of systematic checks on the health of children and workers. Networks of rehabilitation and recuperation centers were regarded as an essential corollary to standard provision.

The focus on infectious diseases led not only to extensive preventive measures but also to the creation of an enormous bed capacity which allowed for the isolation of infectious cases. The epidemiological shift of the 1960s saw the government unprepared to respond both psychologically and in terms of capacity. There was a reluctance to accept the growing impact of non-communicable diseases and an institutional inability to re-gear the health system. Rather than review their approach, governments chose to suppress data and to create yet more beds. The Brezhnev era saw annual health checks extended to the entire population. This annual health checks was largely unfounded. It overstitched the primary care system and promoted the creation of still more bed spaces.

The Soviet era held doctors and nurses to be part of the non-productive sector of society and consequently deprioritezed their pay and conditions. The fact that the bulk of doctors were woman, tended to exacerbate this situation. This has left a long-standing tradition of underpayment of medical staff relative to industrial workers.

As a result of some favorable material and organizational developments, up to the end 1970s, the population's health condition registered obvious improvements. Between 1960-1999 number of population increased from 4 129 200 to 5 420 900. The medium duration of lifetime was 72, and in 1926 it was only 48. Morbidity and mortality rate has been decreased. Malaria was practically eradicated. The number of diphtheria cases was considerably reduced. Ministry of Health strengthened the TB and skin-venereal dispensaries. Hence, the number of active forms o TB, syphilis form decreased. Significant achievement was the initiation of national programs to fight cardiovascular diseases, cancer, and tuberculosis, to promote mental health care, effective management of immunizations.

In spite of these advantages, the system o health services also had weak points, increasingly manifest after the 1980s in the deterioration of both the population's health status and medical assistance. Some of the health care system characteristics have grown to disagree with the demands of society. A rigid planning, together with a centralized authoritarian system stifled initiative and responsibility in managing health services and particularly in adapting them to changing health needs. By administrative means, the centralized model compelled rigid, often arbitrary norms and standards and hindered the adjustments of health services to local needs, different for each area. These norms led to an inefficient mingling of plenty and waste in some areas and want in others. The inadequate level of health care provision in Georgia can be found in the insufficient material basis, the low quality care, the incomplete follow up of chronic cases, the inefficient prenatal and delivery care, the lack of health promotion and

family planning, the unsatisfactory level of medical training, shortage of rural doctors, the insufficient financing of the health sector.

The normative planning was both ineffective and inefficient. The system did not succeed to reduce territorial inequity, either in point of health condition, staffing or bad coverage. Financing to historical criteria and not to the population's needs increased disparities between regions

The underfinancing of services resulted in considerable delays in the adoption of new technology for diagnosis or cure of present pathology, and, by the late 1980s, serious default and shortages of current medicines and medical material. All this made health services lose interest in delivering and assessing quality of health care-a fundamental element of a system's performance.

Despite the declared preventive orientation of Soviet health care, most of its efforts were directed towards in-patient care. The number of bed/days spent in the hospital was regarded as one of the indicators of successful functioning of system; this, in turn, lead to trend towards increase of the number of beds and medical staff. It is not surprising that under these circumstances, Soviet Union was far ahead of developed Western countries in number of hospitals and beds. This fact used by official propaganda as a proof of great achievements in health care.

Buildings and equipment were deficient and, as regards the latter, badly distributed. The Committee for Social and Economic Information, jointly with Ministry of Health, carried out a survey in1990 of public health institutions together with a survey of public opinion on health care. The majorities (58 per cent) of medical institutions were found to be located in buildings constructed originally for other purposes, 12 per cent were in buildings that dated to before 1918, one in ten of buildings required emergency repair, another 50 per cent major reconstruction or major repair. Many rural hospitals and polyclinics lacked hot or any running water and sewerage: 35 per cent had no running hot water, 17 per cent had no running water of any kind, and 27 per cent had no sewerage system.

The opinion poll suggested that patients were dissatisfied particularly because of the luck of hygiene in wards, bathrooms, toilets and dining areas, and discomfort generally. Maternities were the object of particularly harsh criticism (lack of linen, clothes, toilets, and showers). Wards planned for six persons were sometimes occupied by up to 20 patients.

Maternity hospitals are good example of what lies behind the apparently favorable hospital statistics. While their dispersal throughout the regions made for relatively easy access, many of the regional hospitals were underequipped. Resuscitation, ultra-sound diagnostic apparatus, sufficient incubators, parturient beds, gynecological chair, laparascopes were often insufficient or altogether absent. Lack of surgical utensils was a routine problem. Overcrowding and lack of hygiene rendered mothers and infants liable to infection. Only a few of the maternity hospitals were equipped with intensive care units.

Buildings and equipment apart, medical staff generally, as well as specialists, were found by a commission of enquiry to be often underqualified of lacking experience. Whereas the national average was 3,1 per 10 000 population in 1990, the ratio was as low as 0,3 in

Dusheti, 1,3 in Tianeti and Tsalendjikha, 1,0 in Sagaredjo, although birth rates in these areas were not significantly below the national average. Half the medical institutions had no neuropathologists, surgeon, ophthalmologist or otolaryngologists; two thirds of the hospitals had no oncologist or endocrinologist. Nurses presented another kind of problem. Badly paid, with little prestige attached to their profession, recruitment was problematic, and they were said to be rude or, at best, unfriendly and often ignorant.

The system was curative rather than preventive, expert possible for a widespread, if cumbersome, system of immunization. Not that the government did not try to convey simple massages o hygiene or dietetics, but most programs originated in Moscow, and little ritual devotion to food in some circles. The vast majority of Georgians consumed their salty, starchy and fat diet unless failing hearts or gastric juices dictated otherwise. There was also the fact that preventive medicine was based on statements disseminated by the public media which the population as a whole had come to disregard as propaganda, I not downright lie. They paid no more attention to medical advice, however sound, than to other forms of public utterance. Prevention through better environmental control was ignored in Georgia.

In spite of the deficiencies described here, the system worked reasonably well in the sense of giving the population a sense of security trough a health care system that was universally available and almost free, through sometimes of indifferent quality. The relatively low infant mortality rate in Georgia and high life expectancy speak for themselves. The infant mortality rate declined steadily (with a short interruption in the 1970s) in the post – 1945 era to 1992.

In 1990 it was well below the Soviet average (though this was affected by the high rates in central Asia): 13,1 in Georgia as compared with 22,0 in the USSR as whole and 17,6 in Russian. Georgia's life expectancy, similarly was significantly higher than in any other of the former republics in 1990: 68,7 years for man, 76,1 for women in 1990 (compared with 64,6 and 74 for the USSR as a whole).

The economic crisis had led to rapid deterioration of services. The government lacks the means to provide more than a small fraction of even minimal costs. The structure is unchanged in the sense that buildings and some equipment continue to exit and numbers of beds and doctors are virtually unchanged since 1990.

Like other public servants, medical staffs receive only token payment. A few have resigned, but most do not bother to attend while they look for other sources of income.

Lack of fuel has inhibited the heating of hospitals. Free medicines are no longer supplied, except trough international humanitarian assistance. Their use has become problematic. Staff, trained in Russian medicine, do not know many of the imported western drugs and often cannot read the instruction in English, French or other western language. The public emergency system no longer functions for lack of ambulances or other means of transport, there is a commercial ambulance service of sorts in Georgia, with charges beyond the capacity of most.

In fact, expect in emergencies, patients no longer attend hospitals, especially as in-patients. Wards in the winter month are cold and bereft of electricity; food must be supplied by relatives and medicines, if not provided by humanitarian assistance, purchased in commercial outlets. Luck of fuel especially in rural areas prevents people from reaching hospitals in emergencies. People prefer to by medicine, including antibiotics, in the open market where it is available without prescription, and to treat themselves. Average utilization of beds in 1993 was 128 out of 365 days for the country as a whole and no greater than 25 days out of 365 in six districts. Desolation is the mood in a typical rural hospital anywhere in Georgia at the present time, with more staff than patients, even though many of the staff does not bother to attend, but try to make an honest living, like everyone else in the country, trough various more remunerative activities.

The system in fact has survived so far only thanks to surreptitious payments. Doctors and nurses demand money for each service, and the amounts can by extortionate relative to current incomes, though doctors may moderate their demands in the light of the patient's means. A caesarian operation in the 1994 cost between 300\$ and 400\$. A sum which very few can afford. Nurses must be paid to carry a newborn infant to the mother or to inform the father of a successful birth. The system is largely corrupt even if many doctors are reasonable in their demands.

Immunization of children dropped sharply in 1991, as vaccines became unavailable, and even more so in 1992. The number of measles cases in Adjara alone in 1994 was greater than it had been in the whole of Georgia for 1992. Similarly 288 cases of diphtheria were reported in Georgia in 1994 whereas the total had not exceeded`11 in any year since 1969. However, many of the cases were among adults, so past as well as recent deficiencies in immunization were at fault.

	1985	1990	1991	1992	1993
Population(1000)	5264	5456	5464	5463	5247
Number of doctors 1000	28,2	31,4	31,7	29,9	29,9
Population per doctor	187	174	172	183	175
Number of beds 1000	55,4	58,7	57,3	57,1	57,1
Population per bed	96	93	95	96	92

Tab 1: Immunization coverage, Georgia (1985-1993)

Source: Ministry of health

The organization of medical assistance to territorial and in particular to workplace criteria blocked the idea of the population's free choice of physicians. Patients entered the system trough assigned primary physicians who controlled referrals to specialists when needed. The patients had practically no rights in the health services. They were obliged to tolerate its gross shortcomings. The limited possibility to choose one's physicians and health facility freely, some privileges for certain social and political groups and the discrimination against others, suppressing and distorting information, impersonal way of treating patients and shadow economics in the health services were among the severest inequities.

Georgia employs 120 000 people in health care sector. The ratio of doctors remains one of the highest in the world, with one physician per migration. Residents of Georgia often used, in order to get the highest possible quality health care, to go better equipped medical centers in or outside Georgia, taking the responsibility to cover the related expenses. Physicians were state employees of the state owned health facilities and received a relatively low fixed wage.

Charge for heath care was free, but in real it was within the limits of average norm and in case of out-patient care patients still had to pay for medicine.

During the socialist era revenues for health care-like other social benefits-were generated mainly from the revenues of state owned enterprises, and private sources were negligible expect as informal payments to providers. Health expenditure levels were determined through the political bargaining processes, were the health sector competed with other claims on the government budget.

After 1991, lack of funding and political, social and economic upheaval resulted in the total collapse of the stat-owned health care system n Georgia. According to the 1990 data, a health care evaluation criterion in Georgia was remarkably lower in comparison with other countries. The extensive and financially unsound growth of the health care system, as well as the irrational methods utilized in the system, brought the whole health care sphere on the edge of collapse. The volume of funds allocated by state for health care has been drastically reduced during the last period, which made it practically impossible to provide population even with minimum level of health care. By 1994, average public sector per capita spending in the country had fallen to less than US\$1 or 0, 3 % of GDR. The scare financial resources of the country did not allow ensuring the declared "free medical care for everybody".

Despite the relatively low level of spending, country offered population a comprehensive range of services, ranging from ambulatory care to inpatient hospital care. Resource allocation decisions within the health sector were based on historical budgets and were typically influenced by bargaining through informal personal networks. Motivated by a belief in economy of scale, highly specialized inpatient hospital care became favored over outpatient and primary care. Huge hospitals became a common and inefficient feature of most socialist health care systems. The economic collapse during the transition made these huge facilities unsustainable.

With independence, Georgia simply did not have resources to maintain the delivery of free health care. The country had far too many hospital beds and the health system was overstaffed by physicians and other health care workers, whose government salaries were increasingly inadequate and who imposed substantial formal and informal requirements on users. In the devastated economy, sick people became less and less able to afford out-of-pocket payment and were increasingly simply turned away from the health care system. As a result, health facilities are experiencing a low volume of activity as well as patient dissatisfied with the limited services and supplies, including pharmaceuticals.

These circumstances resulted in the following:

- Reduction of funds in the central state budget on the health care.
- Weak and inadequate administration of the system at the all levels.
- Distorted and irrational practice existing in the health care system.

All these factors determined dramatic decrease in demand for health care in under-supplied, unequipped and unheated and unheated medical facilities. Annual admission to hospitals and total inpatient days decreased. Average bed occupancy rates throughout the country dropped to as low as 10-15 %.

	Georgia	Regional indicators	World indicators
	General Indicate	ors	
GDR per capita	440	2240	4800
Average GDR growth rate	-26,9 %	-6,5 %	2 %
Urbanization	58 %	65 %	45 %
Population growth rate	-0,3 %	-3 %	1,4 %
Percentage of population	23	25	31
under 15 years old			
Life expectancy at birth	75	68	67
	Health Indicator	·	·
Infant mortality rate	18	26	55
Under-five mortality rate	21	35	81
Adolescent fertility rate	40	38	60
Maternal mortality rate	55	60	295
Tuberculosis(per 100	32	33	58
000)			
In-patient beds per 1000	8,2	9,2	3,3
population			
Physicians per 1000	3,1	4,1	1,6
population			
Immunization coverage	63	63	77
measles%			
Public health expenditure	3	120	467
per capita in US\$(1990-			
1995)			
Public health	4,5%	0,8 %	5,5 %
expenditure/percent of			
GDR(1990-1995)			

Tab 2: General and heath indicators in Georgia and in the world (1995)

Sources: Human Development Report: Georgia 1997, United Nations Development Program, Tbilisi 1997

Health care Reform in Georgia-Discussion paper series N 5, UNDP, 1999

Deterioration of health care, declining quantity and quality of provided primary and secondary care contributed to worsening of the population's general health status. Infant mortality rate for 1990 in Georgia (17,8per 1000 live births) was twice as high as in Western European countries; by 1993-1994 it has as increased by 13% and reached 21,4 per 1000 live births. Maternal mortality rate has also increased; one of the contributing factors for this is the increase of the number of home deliveries. Maternal mortality rate is 4-20 times higher than in highly developed countries (app.39 per 100 000 deliveries). Mortality due to cardiovascular diseases has increased by 35 % during the last 5 years. Mortality in all age groups has increased by 18%. The significant increase of socially dangerous diseases (tuberculosis, psychiatric diseases, sexually transmitted dangerous) causes considerable concern. Number of patients per 100 000 inhabitants with tuberculosis diseases increased from 148,1 (1988) to 279,4 (1994). Number of newly diagnosed tuberculosis diseases per 100 000 inhabitants increased from 28,7 (1988) to 55,3 (1994). Immunization coverage rates decrease less than 25 percent, emergence of the number of refugees and internally displaced persons caused

violation of vaccination schedules, which, in turn, lead to outbreak of diphtheria; numbers of cases of diarrhea diseases, botulism, typhoid fever and tetanus have also increased.

Therefore, it could be argued with certainty that the Georgia have inherited from the former USSR the almost ruined health care system. In Georgia, situation further detoriated as a result of unprecedented social-political cataclysms (civil wars, budget crises), which took place after the independence of the country.

To allow the situation to continue this way would mean to leave population actually unprotected with casually predictable dramatic consequences; on the other hand, it could completely destroy the already agonizing health system.

Therefore, it became essential to fundamentally reorganize the system and make relevant its institutional arrangement.

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## 8. HEALTH CARE REFORM

### 8.1. Determinants and Objectives

The transformation of health care in Georgia is an important part of democratization and decentralization. Change in the health care sector of the economy is essential to improving the health status of population.

In order to overcome the deep crisis of health care system, Government of Georgia initiated painful and multistage reorientation process in health care system in August 10, 1995. After the restoration of independence in Georgia, the political, socio-economic crisis, leaded the health system to the complete collapse. This made it necessity to implement fundamental reorientation in health care system, by creation a new model management and organization, economic relations, protect human rights and make use of democratic mechanisms in state administration and regulation. The Georgian National Health Policy goals are directed towards improving health, providing health care and mobilizing social resources in accordance with priorities for health and human development, creating a legal basis for the new health system, giving priority to primary care, converting principles of health insurance, ensuring social security, reforming pharmaceutical policies, reforming medical education, medical science and health information services.

Worked out in assistance with the World Bank, who provided the USD 20 million long-term credits for structural reorientation, the fundamental purpose of the Reform Package is "to improve health of the entire population through design and implementation of primary carebased system which emphasizes health promotion, diseases prevention, and health protection".

Ministry of Health designed, as a declared goal, new health care system's criteria:

- To start the reform of the health care system and combine the national and international experience, in accordance with the strategic direction of economic development of the country;
- $\circ$  To balance the volume of work with the required material and human resources;
- To achieve a controllable system aimed at utilizing resources rationally.

Improving the health status of the population involves activities on behalf of the whole society requiring a coherent national health policy. Stabilizing the economy is important during strategic political changes. The important task under a new democracy is to create an environment that induces efficient allocation and use of resources to improve productivity and facilitate innovation. Selected priorities for better health include: improving maternal and child health, reducing morbidity and mortality caused by cardiovascular diseases, preventing cancer, injuries, communicable diseases and mental disorders, establishing healthy lifestyles and providing a safe and healthy environment, developing human resources, providing health education and developing a health care workforce.

The following general objectives can be determined:

- Health care is defined as a collective social benefit, which should therefore be accessible to all Georgian citizens, whatever their ability to pay;
- Adequacy and equity in access. Equal access to at least a basic minimum of health services should be provided to all citizens, and there should be equal treatment for equal need where services are financed publicly, whatever their physical, geographical, economical and social-cultural characteristics;
- Income protection: Patients should be protected from payments for health care that represent catastrophic threats to their income or wealth, and the payment for such protection should be related to individual's ability to pay. This will involve at least three types of transfer insurance (the need for care is unpredictable); saving (the elderly use more services than the young) and income redistribution (the sick are often the poor);

Solidarity in financing health services should be seen as the joint responsibility of generations, of people with different income levels, of people in ill-health and in good-health.

- Macroeconomic efficiency: Health expenditure should consume an appropriate fraction of gross domestic product (GDP); the international experience shows that health expenditure macro efficiency is situated at 5% to 7% of the GDP. In this respect, Georgia holds a special position at least on short and medium term, as the reform aims at increasing the national health expenditure and not at reducing it, as is the case with most countries undertaking the reform of health care services.
- Macroeconomic efficiency: Health outcome and consumer satisfaction should be as high as possible for the available share of GDP spent on health services. This implies that cost should also be minimized for the appropriate mix of health care activities. Methods should all rely on the selection of health units delivering the best suited health services;
- Freedom of choice for consumers: Consumers should be free to choose their doctors under both public and private insurance, and, with the advice of their doctors, they should be able to exercise some choice over subsequent treatment and referrals to other providers.
- Appropriate autonomy for providers: Doctors and other providers should be given the maximum freedom compatible with the attainment of the above objectives, especially in matters of medical and organizational innovation.

Achievement of this objective will be possible on the assumption of taking a complex measures such is legislative, economic, structural, technological and others, that formulate basic directions of health care changes within the framework of general development strategy and establishment of the Republic as a sovereign country.

There are basic Directions of health care reforms in Georgia:

- Creation of the legal basis for the new health care system;
- Decentralization of the health care system management;
- Innovation of financial and economic foundations of the health care system, transformation to the program based financing;

- Priority importance of the primary care;
- Reform of the sanitary-epidemiological service;
- Transition to the principles of health insurance;
- Social security of health care employees;
- Reform of the drug policy;
- Support of privatization process;
- Accreditation and licensing of the medical institutions and personnel;
- Reform of the medical education;
- Reform of the medical science;
- Reform of the health information service.

The reform process can be divided into four stages:

- ✓ Stage 1 (August 1995 Spring 1996): reorientation of the health care system;
- ✓ Stage 2 (Spring 1996 Spring 1997): adaptation of the new relations and introduction of health insurance;
- ✓ Stage 3 (Spring 1997 end of 1998): complex implementation of a new model of health system management and organization;
- ✓ Stage 4 (1998 present day): adaptation, improvement and permanent strengthening of a new model.

A decree issued in 1995 by the Head of State determined the principal components of the launched reform. During this period was an introduced new payment method of medical personnel. The management structure underwent radical changes and new legislative base of the health care system has been introduced.

The most important points were:

- Legalization of medical care expenses creation of insurance risk;
- Organization of the new type of medical institutions as legal entities based on self financing principles;
- Limitation of state responsibilities in the sphere of health care services for population creation of State Health Care Programs and Standards;
- Creation of financing mechanism for the mobilization and realization of services federal and municipal health care funds have been created, compulsory medical taxes were fixed (later on referred to as compulsory medical insurance premiums);

The reorientation of health care was aimed to establish the system. This could provide realistic conditions of protections of protection and improvement of health of population. The major public importance of health system reorientation and the complexity of the reform process were emphasized in programmatic the speech of the President of Georgia E. Shevardnadze during the pre-election campaign, through; the difficulties of reform process were also indicated: "Health care reform is hard ordeal for the whole country and every citizen. It is not a problem of just one agency".

Reorientation of health care system is inseparable constituent of strategic direction of development of social and economic infrastructure of the country and based on the principles of building democratic society. Therefore, organizational principles of the whole system, concept of functioning and relationships of different services require fundamental changes. It is necessary to clearly define the public function of the system, social and economic mechanisms ensuring effective functioning of the system, elaborate an appropriate organizational structure of health care system, establish a new system of state management.

The main objective of health care financing reforms is implementation of the medical insurance system as an additional financial source assumes transition of health care to compound financing. Active preparation to recurring implementation of medical insurance system in Georgia should solve other problem – introduction of real responsibility of employers, state authorities and citizens for its improvement.

Starting in the early 1995 the Ministry of Health began a reorganization which included the creation of the State and Regional Health Funds, the Department of Public Health (with regional branches), the National Health Management Centre, the Department of Pharmaceuticals and Pharmacy Industry, and the State Agency for Quality Assurance and reform of the existing Sanitary Epidemiological, Medical Care and Maternal and Child Care Departments.

## 8.2. Legislation

The creation of national legislation is an essential condition for establishing, functioning and development new health care system. The history of new health care system was formed on December 23, 1994. It was started by the President Order and entitled: No 400 "on the Measures of the First Stage of Georgian Health Care System Reorganization". In this document, inevitability of reform was stated, and political, legal and economic components of the Governments policies were defined. The foundation of an adequate legislative basis was declared to be the basis condition of the health care reorganization. According this legislation in Georgia was announced conceptions for the right to choose medical personnel and medical institution and equal access to adequate health care low of Georgia was set up at the National Health Management Center of the Ministry of Health and Social Welfare of Georgia. In 1997 this group developed into the Health Legislation Department.

An important set of new health sector legislation was composed of the following pieces:

- 1. The decree 400, issued by the head of the state on December 23, 1994 and later ratified by the parliament, contains the first statement of the health reform.
- 2. Seven Cabinet of ministers decrees on the implementation of the health reform were issued on June 30, 1995:
  - 1. Decree No 390 on the composition and implementation of state medical programs, including five supplements

- a) Public health programs financed by the state: immunization, healthy children and safe motherhood, prevention of communicable diseases, impatient treatment and health promotion;
- b) Budget plan of the state health fund for 1995;
- c) Basic municipal package of care;
- d) Organization of regional municipal health administration
- e) Organization and functions of the regional (municipal) Health Funds.
- 2. Decree No 399 on the role of the Ministry of Health in the reorganization of the health care system.
- 3. Decree No 389 on the reorganization of the Sanitary Epidemiological Department in the Ministry of Health. Later the Department of Public Health was created taking public health functions out of the former Sanitary Epidemiological Department.
- 4. Decree No 392 on the privatization of health care facilities. Institutions were to become private through purchasing them by stuff and not privatized were to be auctioned. The institutions were grouped into three categories a) institutions that would remain with the same curative profile during next 10 years and would have to carry out state orders; b) institutions that will maintain their health service profile for not less than a ten year period; c) institutions to be privatized without any limitation.
- 5. Decree No 388 on the future development of the pharmaceutical sector. The decree created a compulsory licensing system for improving, distributing and selling pharmaceutical products, and quality assurance mechanism for all pharmaceutical related activities.
- 6. Decree No 391 on the financing of the state health fund, including a supplement describing the rules for the collection of the pay-roll tax of 3 % from employers and 1% from employees which is one of the most important sources for the basic package of care.

III. Decree No 269 issued by the Head of State "on additional measures of strengthening health care system of Georgia under the conditions of market economy", on July 5, 1995, established additional activities to improve the health care system under a market economy. This decree had following major innovations:

1. By August 1995 all health care institutions were to become administratively and autonomous from the state budget. A debt of former public institutions identified on August 10, 1995, was to be covered by the Ministry of Finance. All existing institutions needed to be registered at the Ministry of Health. This registration was valid till January 1997, after which they had to follow common legislation. Those who had not registered were not allowed to provide care.

2. The basic package of care. Supported by the state trough the municipal budget and the State Health Fund included: care of pregnant women and children under one year of age, all kinds of delivery, emergency care for children 1-15years, care for war veterans and population under the poverty line, prevention of communicable diseases, including AID Sand STD, critical and urgent care for tuberculosis and mental health problems, insulin-dependent free care for the victims of disasters and epidemics.

3. The Ministry of Labour and Social Protection was to established criteria for the definition of poverty line and was to identify those citizens under that line, by place of residence. The Ministry of Health was to identify those health care institutions, which provide free health care to the vulnerable people after providing appropriate certificates.

4. The Ministry of Health is to guaranty the quality of medical care through the licensing and accreditation procedures of stuff and facilities, quality control, registration and licensing of drugs. Medical supplies: medicines, food, fuel and other commodities provided through humanitarian aid should be monetized, in agreement with donors and included in the state medical program. Persons or institutions without a corresponding license are not allowed to sell drugs or medical supplies.

5. The Ministry of Health was to prepare a 2-3 year program to rescue and support further development of the Georgian Medical Science.

6. The ministry of Health was to prepare Legislation and Regulations for the transition of the present system into a Health insurance model and introduce legislation on the restructuring of its own departments in accordance with the health reform needs.

IV. Decree N 351 issued by the Head of the state, on September 13, 1995, with two decisions: a) creation of State Medical insurance Company; b) creation of a municipal obligation to pay 90% of the cost of care services utilities in their areas.

During this period the Georgian parliament adopted the number of legislative and regulatory documents for the new health system:

- Law on health care (December 10 1997)
- Law on Medical Insurance (April 18,1997)
- Law on Drug and Pharmaceutical Activities
- Law on Health Taxes (March 21 1995)
- law on State Compulsory Insurance Premiums (may 28,1997)
- Law on Taxes for Production and Marketing harmful for health products.
- Law on Donorship of Blood and its Products
- Law on Prevention of AIDS
- Law on Psychiatric care.

• Law on Protection and Promotion of Breast feeding, Controlled Consumption of Artificial Nutrition

Adoption of "The Basic Law on Health Care" on December 10, 1997, was significant step toward the establishment of a new health care system. The law contains major principles and statements that regulate development of health sector in the country, regulates relationships between the state and non-governmental establishments, and clarities their roles and responsibilities within this partnership.

The law fully complies with the Georgian constitution, with internationally accepted principles and norms, international conventions and agreements whereas Georgia is part of it.

The law is synchronized with UN WHO, The World Health Assembly, European Council declarations, pacts, charters and conventions as well as with Georgian cultural characteristics. The Georgian health Care Law has been considered to be the framework for the other documents determining the priorities of the legislative regulations for the health Care system of Georgia.

In 1998 The Georgian Parliament adopted the "law of Georgia on Medical insurance". According to this law the object of medical insurance risk, which is related to the anticipated costs to be paid whenever to insurance risk occurs. It aims at providing health care to the population under the conditions of market economy and defines legal, economic and organizational bases for the medical insurance of the population. The law also defines the mandate for the activities of state and private insurance companies. It provides for two Kinds of insurance - mandatory and voluntary.

Licensed private insurance companies are authorized to voluntary insurance. They provide the insured with payments for medical services in the context of program registered according to the established rules.

During the last year 46 Health sector related Decrees and orders were signed and issued by the president. Following draft-laws have been developed and submitted to the parliament of Georgia for their approval:

1. Removal, Storage and Transplantation of Human Organs, Organs Parts and Tissues.

2. Legal Turnover of Specially Controlled Narcotic Drugs, Psychotropic Substances and Precursors

3. Rights of Citizens in Health Care.

4. Changes and Amendments to Criminal and Administrative Codes (regarding pharmacy)

5. Amendments to Georgia Law on Advertisement

Starting point for the legislation is the situation as seen from the patient's point of view. The patient's rights are directly outlined. The "Low of Georgia on Health Care", setting out patient's rights and introducing national standard setting as a device for improving the quality of care. The low gives patients the right to good health and medical care and related treatment, access to care, information on their state of health, informed consent to or refusal of specific components of healthcare, confidentiality and dignity, the legal position of minors and adults who a e not capable of managing their own affairs, medical liability, the use of medical data and records.

The "Low of Georgia on Health Care" stresses inadmissibility of discrimination on the grounds of disease, sexual orientation or negative personal attitude. The law prohibits the discrimination of a patient imprisoned during medical care. Persons imprisoned are enjoying all the rights declared in the law. The physician is obliged to establish an order of priority in

providing medical care to patients in accordance with medical indications without the consideration of any other privileges.

According to the Law on Psychiatric Care, persons suffering from mental disorders in addition to all other citizens of Georgia enjoy all the rights and freedoms ensured by the Constitution. The restriction solely on the basis of psychiatric diagnosis is inadmissible. The basis for any restriction must be the patient's actual psychiatric condition of the disease.

The law on HIV\AIDS Prevention states that HIV\AIDS infected persons has the right to be employed except in occupations when there is danger of the transmission of the disease by the blood exposure to non-intact skin and mucus membranes. The list of these occupations should he determined and approved by the AIDS National Governmental Commission (NGC) in collaboration with the appropriate services. It is forbidden to discharge HIV/AIDS infected persons from their jobs or to refuse them employment because of the mentioned disease HIV/AIDS infected persons have the right to participate in sports when there is danger of transmitting the disease by blood exposure lo non-intact skin and mucus membranes. The list of sports, training, and competition is determined and approved by the NGC through participation of appropriate services. The law forbids refusing reception of HIV/AIDS infected persons in medical, educational and pre-school-age establishments because of the mentioned disease.

According to the Law of Georgia in Health Care, one of the principles of state policy is to provide the population with universal and equal access to medical care within State Medical Programs. By the Law main form of state financing for health care is funded through state programs. Georgian citizens have the right to enjoy medical care envisioned by the state programs on health care. The medical care is accomplished by the appropriate legal entity without taking ownership (whether private or public) and organizational-legal form into consideration. The State is responsible for the extent and quality of medical service.

The law obliges physicians to provide a patient with medical care and to ensure his/her continuity if there is grave danger, for life which includes suicide attempts, or if a patient needs urgent medical care at physician's working place. When a physician initiates medical care, he/she automatically becomes responsible to ensure reasonable care as well as continuity of care.

The principles of medical insurance are formulated in the Law on Medical insurance. In Georgia, medical insurance is being implemented in two forms: compulsory and voluntary. The state compulsory medical insurance applies to all citizens of Georgia as well as stateless persons residing in Georgia on a permanent basis, and is implemented via the state Compulsory Medical Insurance Programs. These programs shall ensure that all insurance is indemnified against medical expenses within the limits of the State Medical Insurance Programs. The State Medical insurance Program also covers foreign citizens residing and working in Georgia unless otherwise by an intergovernmental treaty. Patients have the right to compulsory and voluntary insurance. The voluntary medical insurance shall ensure that the insured are indemnified against the costs of any medical service provided to them within duly registered and examined insurance programs.

According to the law the population should he provided with extensive and accurate information on all existing forms of medical care. Population has the right to receive in understandable form, comprehensive and accurate information on their health condition. Physicians are obliged to provide a patient with full and accurate information about health condition, except for cases when the physician is sure this information will significantly harm the patient. The Law on Psychiatric Care gives the patient the right to receive information concerning the disease and methods of treatment. Physicians have duty to give patients a copy of their records if the patients ask for these.

Informed consent is considered to be a necessary requisite for any medical intervention. According to the law, "the verbal or written in-formed consent is a necessary precondition for the participation of the patient in treatment, diagnostic, rehabilitation or preventive medical procedures" The only exception may be the cases when there is a need to examine citizens in order to confirm the existence of a principally dangerous contagious disease. In these cases, citizens are obliged by legislation to undergo all necessary examinations. A patient has the right to refuse any kind of medical intervention, except in the cases just mentioned above. "All capable persons have the right to express in advance their will in a written form regarding stage of an incurable disease" Law also regulate issues concerning the treatment of incompetent patients or patients not having decision making capacity, the participation of patients in biomedical research, and regarding the provision of emergency care to them.

The laws on '' Drug and Pharmacological Activity'' Psychiatric care'' and "Human Organ Transplantation" include articles that stress the doctrine of informed consent for various procedures such as: receiving an informed consent from the subject of research or patients legal representative: and informed consent of patient suffering from mental disease or legal representative.

According to the law, "patient has the right to choose the medical I personnel and/or institution in accordance with conditions of the insurance agreement. The agreement should ensure an opportunity to make the choice". The law on Medical Insurance determines the realized limits of realization of the right residing in Georgia shall have the right to I choose a physician or medical institution within the limits of an insurance contract and, accordingly, to receive all medical services provided I by the insurance program, irrespective of the amount actually paid by I patient.

The legislation treats the relationship between patient and physician I as a "special contract". The contract aims to strengthen the legal position of patients in the care sector. This has become necessary because I the relationship between care providers and patients, the basis of the treatment contract, have gradually changed over recent decades. Patients I used to have virtually complete confidence in the authority of the doctor. This confidence has been eroded by people's improved education and increased awareness. The traditional relationship of trust between care provider and patient is not appropriate in these times, and offers an inadequate safeguard for patient's rights, particularly now that treatment is involving more and more complex medical technology.

Contract sets out a number of rights and obligations for the patient, based on two important fundamental rights: the inviolability of the body I and the right to personal integrity. A number of rights and obligations are discussed below: the obligation to obtain consent, the obligation to provide information, representation of the patient, protection of privacy I and the ultimate liability of hospitals.

According to the Law on Health Care, medical employees and all other employees of a medical institution are obliged to keep medical secrecy. On the other hand, the disclosure of information is allowed if it is demanded by a relative or legal representative of the dead person, judicial or investigator bodies, and/or if this is necessary for ensuring I public safety, protection of rights, and freedoms of other persons.

The law on HIV/AIDS Prevention grants all citizens of Georgia and I all permanent and temporary residents of Georgia, including foreigners, I &e right to undergo anonymous medical examination on HIV/AIDS.

The issue of confidentiality is also regulated by the Law on Human Organ Transplantation. According to the law, only the Information Center of Transplantology should be able to identify donors. After taking an organ, only the identification number should be indicated in any accompanying documentation.

The Law on Health Care prohibits the accomplishment of euthanasia in Georgia. This law regulates issues of terminal care. This law grants the dying patient to his/her right to refuse resuscitation, life-saving or palliative treatment. The patient has right to make decisions related to terminal care in advance. Terminally ill unconscious patients shall receive relevant treatment, if the patient would have decision-making capacity and had refused resuscitation, life-saving or palliative treatment.

Issues of the protection of human subjects' rights and safeguarding their physical and mental integrity in the process of biomedical research gained great importance. According to the Health Care Law, any biological research should correspondent to the norms of scientific research accepted in Georgia. The norms of scientific research are based on the grounds of the through and accurate conduct of laboratory tests and experiments on animals and the comprehensive knowledge of respective literature. The goals, objectives, methods and expected risks and benefits for humans and animals, are to be pointed out in a scientific research plan. Any research is to be performed within the boundaries of this plan.

# 8.3. Decentralization of Health Care System Management

The health care system in Georgia, established in Soviet period, was extremely centralized with totalitarian approach to management, financing material and technical provision and control.

The new organizational structure of health care is based on economic relations and free of ideological restrictions, capable to break through the existing state monopoly thus abruptly changing the goal, objectives and functions of health management.

Decentralization of management is a central tenet of health care reform in Georgia. It is seen as an effective means to stimulate improvements in service delivery, to secure better allocation of resources according to needs, to involve the community in decisions about priorities, and to facilitate the reduction of inequities in health. The main objective of decentralization was breaking the state monopoly on provision, and introducing some market elements through the adoption of patient's right and choice. Decentralized institutions have the privilege of being more flexible and reacting rapidly to changing requirements.

At the initial stage of the reform Decrees N 351 and N 464 of the Head of State (1995) became the first fundamental documents which contributed to the creation of qualitatively and organizationally new state institution.

The health care reform started by structural adjustment of its administrational arrangement. As a result of reorganization of the state management function in the sector it became possible to separate strategic and tactical objectives among central and regional health authorities. The role of government was shifted away from direct provisioning and financing to a regulatory and policy-making organ.

The policy-makers dealing with the issues of health care in Georgia, came to an agreement that the most optimal way to fulfill these duties would be to entitle relevant bodies at regional level carry out medical policy and grant to medical service providers (hospitals, policlinics etc) the status of independent juridical and financial entities.

Despite financial difficulties, the change in structure of the health care system proceeded relatively quickly. Decentralization found its reflection in the establishment of local coordination bodies. The deconcentration of powers is typified by the extent to which the Ministry of Health has allowed the regions and district health committees to 1 assume responsibility for the monitoring and regulation.

According to regionalizing, management of the health service delivery have been decentralized and 12 Regional Health Departments were I introduced to administer the transaction of the health fund, and to carry I out the responsibilities of the regulatory agency at the local level: Tbilisi, Adjara, Guria, Poti, Samegrelo, Upper Svanety, Imereti, Racha-Lechkhumi and Kvemo Svanety, Samtskhe-Javakheti, Shida Kartli, Tskhinvali, Mtskheta-Mtianeti, Kvemo Kartli, Kakheti Regional Departments. The Local Authorities of the Ministry of Health (Regional Health Departments) were created under the Presidential Decree N 687 1 (26.12.1997) on "Approval of Regulation of the Ministry of Health", on the basis of the Georgian Law on "Structure and Activity Rules of Executor Authorities of Health Care System".

As a matter of fact, the local coordination body became the most principal pillar of the new institutional arrangement of health care system and it is expected to study existing problems locally and harmonize the central and local programs in an adequate manner. This body is assigned a task to consider health strategies and local priorities and to make sure that local programs are managed and financed in a proper way.

In addition to the function of carrying out medical policy at localities, Regional Health Departments were entitled to collect necessary funds from municipality budget and distribute the existing resources, as well as carry out control and monitor over financial means.

Considerable authority has been delegated to hospitals, which are now responsible for their own finances in an unprecedented fashion. There has also been outright privatization of pharmacies and dental polyclinics, removing them in effect from government auspices. Decentralization will increase both as the overall framework of the reformed health care system is put in place and as regional administrations increase their capacity to cope.

The reform of health care system was expected to promote the establishment of a management structure that would meet requirements of new political-economic realities found in the country. Unfortunately, a number of subjective and objective factors that came to the surface in the course of implementation of the reforms turned out to be huge Obstacles to the implementation of these reforms. If these challenges are not addressed, they would most likely pose a serious threat to the whole process of reorientation in the health care field.

Local administration bodies are not willing to assume additional responsibilities and currently these functions are not taken up by anybody else. Due to the lack of initiative at the local level ail decisions tend to be taken at the Ministry and afterwards they are mechanically transferred to the local level.

One of the most serious impeding factors of the road to reforms is the existing pattern of relationships between local medical bodies and local administrations. After the initiation of reforms more than 1500 medical facilities were transformed in self-financing legal entities. Also the licensing of these institutions as well as pharmacies has been conducted. The most significant form of decentralization in Georgia is delegation typified by the creation of State Medical Insurance Company as third party payer (see Economic and financial aspects of health system reorientation) and the establishment of the Public Health Department.

In accordance with the low on state budget, local administration should - take some responsibilities on financing some programs, such as mandatory municipal programs and taking into consideration local requirements make sure implementation of certain health care activities.

Briefly, the Government of Georgia aims to increase private-sector participation in the health system and limit the state's role to such areas as health promotion, immunization, establishing a regulatory framework, accreditation and licensing, research and education. Privatization is the final form of the decentralization and it has been a feature of the reforms Kina number of ways.

In 1999 The Ministry of Labour and Social Protection joined to the I Ministry of Health under the President Decree N 687 (26.12. 1999) and the Ministry of Labour, Health and Social Affairs was established. In the scope of father reorganization, the Regional Health Care Departments was replaced by Regional Departments of Labour, Health and S. Social Affairs on the basis of President Decree N 265 (19.06.2000). These B departments subordinate to the Regional Policy and Management Department at the Ministry of Labour, Health and Social Affairs. The establishment of district and Municipal Departments of Labour, Health and Social Affairs are in process.



## Fig 54. Decentralization of Health System Management

Source: Georgian health system reorientation: major directions. Ministry of Health. National Health Management Centre. Tbilisi. 1996.

# 8.4. Privatization

Government has been particularly vocal in this area since the emphasis has been on reversing the economic effects and inefficiencies of the Communist era and its command economy. Privatization is a hallmark of the market economy. For health care, privatization policy efforts include developing contractual agreements between independent health care institutions. The Law of privatization governs some of these arrangements.



Source: system reorientation: major directions. Ministry of Health. National Health Management Centre. Tbilisi. 1996.

# 8.5. Contracting

Health care system in Georgia was historically based on the Semashko model, a rigorously hierarchical, nationally controlled system m which all health personnel, including physicians arc stale employees.

After health care reform in Georgia, contracting is seen as an instrument for implementing health policy objectives. It is a coordinating mechanism that offers an alternative to the traditional

Command models of health care management. An essential element of the new approach is a move from hierarchical and highly integrated forms of service delivery and finance towards models based upon purchaser- provided separation. Through contracting mechanisms, third party payers and provider, are bound by explicit commitments and also acquire economic motivation to follow these commitments.
Georgia introduces contracting between payers and providers in the context of established health insurance system. Contracting between third-party payers and suppliers of health services has long served as a common coordinating mechanism. In Georgia, insurance-based system combines elements of both the Bismarck and the Beveridge models.

By Dutch sociologist De Swaan, contracting is a transition from a command society towards a negotiating society, in which contractual relations replace traditional hierarchical relations. Rapid technological change and the growing need for more efficiency and innovation require a more efficient type of coordination than the rigid command model. The process of democratization and individualization in society points in the same direction. It facilitates a more market-oriented form of institutional resource allocation based on separating purchasers from providers and generates the economic motivation.

Contracting can support equity if they take explicit account of vulnerable people as well as underserved communities. From this perspective, purchasers represent the interest of their populations, allocating resources and purchasing services in accordance with the needs of their communities. Patients also participate in contracting process. This participation generates a democratization process in health services and makes health policy more relevant to the needs and priorities of society.

The contract model seems to have the potential for combining macroeconomic efficiency with microeconomic efficiency. It is also the most suitable for promoting appropriate autonomy among providers and a Measure of self-regulation. With contract the purchaser agrees to pay a budget for a defined service. Contracts contain *agreements* concerning the maximum and minimum volume of the services to be provided and the assessment or monitoring of quality. There are specific provisions on the financial sanctions for violating standards and on procedures for quality control.

Hospital remuneration is determined by contracting between the hospital and the State Medical Insurance Company and is based on medical-economic standards. Volume is controlled through prospective global budgeting. Contracts also include agreements on the quality of services.

Policlinics remuneration also is determined by contracting between the policlinic and State Medical Insurance Company in accordance with the nationally negotiated medical-economic standards and the volume of services provided. Physicians are reimbursed on a fee-for-service, capitation and salary basis. There are several additional issues involved in contracting in Georgia. The main one is being under funding of the system. Public funding needs to be adequate and predictable in order to meet the bills of contracted providers. In Georgia, with transitional economics, this is rarely met.

### 8.6. The impact of changes in health care system

## **<u>8.6.1 Quality of health care</u>**

The state policy targets improving the quality of health care, which means improving health services by setting treatment standards and organizing a system for ensuring compliance, training highly qualified personnel and carrying out scientific research to implement the current achievements in practice. Society requires a form of government intervention and regulation of quality management in the care sector. Ministry of Health and international agencies initiated, sponsored and carried out medical training courses and other educational activities.

## 8.6.2. Solidarity and competition

Historically, the concept of "solidarity" has a variety of roots, among them Protestant as well as Catholic religious thinking on social justice, conservative reasoning about social order, Marxist-socialist ideas, and even the libertarian concept of a social contract.

Solidarity has become synonymous with "risk pooling", referring to all arrangements in which health care costs are not financed individually, and in which people who remain healthy through a given period financially support those who become sick and used health care services.<sup>2</sup>

Solidarity is predominantly reserved for reduce health-related inequalities.<sup>5</sup> Social insurance schemes may transfer wealth not only from the healthy to the sick, but also from the rich to the poor. According to this principle individual financial contributions are, at a minimum, not dependent on the individual's health status - instead they are related to his or her ability to pay. Services should not be delivered according to the ability to pay but according to "need".<sup>6</sup>. Health care system is judged to achieve solidarity if it realizes a more equitable distribution between age groups, between income classes, between single people and families, and between good and bad health risks, than would be the case in the situation of an unregulated private health care market.

After reforms in health care system in Georgia compulsory health insurance has been introduced. One of the principles behind compulsory health insurance is that it should promote social solidarity.

Health inequality increases with widening socio-economic disparity. The level of health insurance coverage still concern in some remaining inequities in access for certain groups of population. Compulsory insurance system in Georgia is not universal. National health policy gives top priority to those who are in vulnerable social groups. In last decade, Georgia extended its compulsory scheme from about 1.9 % of the population (1996) to nearly 14 %. Remain groups of population are covered by Regional Municipal funds, but there is a significant growth of cost sharing within and out of public health care schemes.

Direct payments by patients at the point of service make significant portion of health care financing. In terms of solidarity, such payments represent the most regressive form of payment for health care, since they constitute a greater share of income for the poor (who are also higher consumer of medical care). Therefore, although Georgia from year to year continue to offer a more comprehensive package of benefits through publicly run health care systems, overall solidarity in health care financing is on less level.

# 8.6.3. Efficiency

Efficiency is the capacity of the health system to produce satisfactory health outcomes given the resources invested. In former communist period, Georgia relied wholly on the "Semashko model". These centralized model, with salaries and fix budget; there was reason for some satisfaction with the level of health outcomes achieved. The "Semashko model" seemed to encourage a take-it-or-leave-it attitude by providers toward minor or intractable illness. A plausible reason for this was that salaries and fix budget gave perverse incentives to providers.

After reforms, Georgia's national health policy makes efficiency one of the main goals, including optimizing human and material resources, reducing total expenditure through early diagnosis and preventing diseases and reducing expenses of the population based on proper pricing and profitability. The latter goals combine both allocate and technical efficiency.

Georgia introduced new reimbursement methods in health care tem. Physicians paid by feefor service and capitation reimbursement methods. Georgia moved toward competition between hospitals by & lowing State Medical Insurance company to refuse to renew contracts: with "surplus" hospitals. Also announced arrangements to strengthen competition between physicians, because patients had free choice of doctors.

Hospitals were encouraged to become self-governing "trusts". A key aim of the hospital reforms was to introduce work-related payment systems within global budgets, with a view to encouraging hospitals to become more effective.

# 8.6.4. Cost containment

In the 1970-1980s, judging by their health expenditure shares of GDP, costs grew rapidly. To some extent, this resulted from planned extensions to the breadth and depth of public health care system coverage\*. But to some extent, it was the unwelcome consequence. The financial crisis in the late 1980s followed by the recession of the early 1990s meant that repetition of such growth tares was unacceptable to government. Georgia adopted policies of cost containment.

As the resources are limited against the growing health needs and demands even in the countries affordable to them, it is widely accepted that the effectiveness of interventions from the clinical point of view, or in other words, evidence-based clinical interventions should be taken into consideration as well as the cost-effectiveness of the services provided. After all we must define what are the most effective interventions to obtain the improvement in health status at present and in the near future, taking into consideration of other major health needs

and economical situation. When the health project was drawn under the support of World Bank, it was recognized by the government that the major health needs in Georgia were maternal and child health, cardio-vascular diseases, oncology diseases and trauma, as well as major communicable diseases. Here arises the need for evidence based health care on the one part, and calculating effectiveness in terms of cost on the other. One way of giving priority to the particular health needs to be intervened is cost-effectiveness analysis. As a part of project preparation by the World Bank, a study was done to assess the cost-effectiveness of some programs which was proposed at that time. It was concluded that the prevention program for Ischemic and cerebra-vascular disorder was the most cost-effective, using the method of calculating in number of Disability Adjusted Life years lost due to death and illness, which was recommended in the World Development Report in 1993.

I here is a noticeable, that in initial period of reforms Georgia had a prospective payments for hospitals using diagnosis-related groups without global budgets. Extra cost sharing imposed on patients within public schemes, especially for nonessential pharmaceuticals.

In the beginning of 2001 year, Georgia introduced prospective global budgets for hospital care. The suggestion that global budgets are effective in containing costs is borne out by a recent econometric study of OECD data, which found that global budgets for hospitals were associated with a 13 percent reduction in national health expenditure, other things being equal.

Two factors contributed more substantively: partial or complete capping of direct third-party payments to providers, and determined government policies to use such mechanisms to contain costs.

## 9. ORGANIZATIONAL STRUCTURE AND MANAGEMENT

# 9.1. Introduction

In Georgia, the provision of health in various forms is a task for different kinds of professionals. The organizational forms in which these professionals work may vary. Two fundamental alternatives may be identified: market system versus public resource systems on the one hand, and centralized versus decentralized forms of public systems on the other. The administration of health services in Georgia is organized by dividing responsibility between the national authority, the 14 Regional Health Authorities and the 65 District (municipalities) Health Authorities.

At the national level, the political decision-making body is Parliament. The Parliament, The presidency and the government of Georgia, as the sovereign powers of state, officially determine health policy and the broad parameters of inter-ministerial coordination in the field of health services. The Parliament is responsible for enacting health care legislation and for approving the health care budget. In addition a parliamentary Committee on Health Issues is active within Parliament, lobbying for and monitoring health reforms. The effective management of the health care system also requires the collaboration of Ministries of Finance, Economy, Justice, etc. The Ministry of Finance determines the size of the health care budget for the public sector health care services.

Otherwise most decisions regarding health care are taken at the level of the Ministry of Health. The Regional Health Authorities and the District (municipalities) Health Authorities are responsible for the production of health services in accordance with the national policy.

# 9.2. Ministry of Labor. Social Affairs and Health

Ministry of Labor, Social Affairs and Health is the highest executive and administrative body, headed by a minister appointed by the Prime Minister and approved by Parliament. The responsibility of the Ministry of health is to determine policy, prepare legislation, undertake national budgeting and planning, organize information channels, and to approve institutions and capacity expansion. The Ministry of Health also has responsibility for overseeing the education, training and development of medical staff and for ensuring the maintenance of service standards throughout the health system.

Accordingly, the Ministry of Health, as the state body, was assigned the following functions and responsibilities:

- State policy in health care;
- Definition of the health needs of the population and priority setting for health protection
- Development of principles for resource utilization for health; Licensing of medical personnel, medical enterprises and medical educational institutions;
- Control over the quality of medical services;
- State sanitary supervision and setting of hygienic standards;

- Control over the quality of medicines and regulation of pharmacy and production of medicines;
- Promotion of the introduction of new medicines and medical technologies;
- Major capital investments in the health care system (buildings and equipment);
- Provision of legal framework for relationships between a patient and medical personnel;
- Promotion of the introduction of healthy lifestyle.
- Working out of medical programs and their implementation.
- Elaboration of standards and recommendations for health care delivery, tariffs for health care services and supervision of their observance.
- Promotion of the improvement of medical science, development of scientific research in the health care field and transfer of technique-scientific achievements and advanced experience into practice.
- Medical education, continuing education, development of health personnel. Professional undergraduate and postgraduate training in medicine and nursing

The functions of the Ministry of Health include needs assessment, planning, resource allocation and ensuring that services are equitable, cost-effective. In addition the various departments or units of the Ministry take on specific roles which support the overall work of the health care service. These functions include economic planning and forecasting, workforce planning, the collection and analysis of statistical and epidemiological data, the monitoring and licensing of pharmaceuticals and medical equipment.

A priority setting process took place after health care reforms (1995). The priority areas were identified by using a combination of techniques. The areas, which emerged as top priorities, were: State Medical Programs for Vulnerable population, Maternity and Child health care, Psychiatry and Tuberculosis. The capacity to benefit from an existing intervention was a necessary prerequisite for inclusion. Decentralization of the health care system, in particular the autonomous management of health care institutions, is one of the main thrusts of the reform process.

## Fig 56: Georgia's health care system



The Ministry of Health is also the key motor for reform, formulating and developing strategies for coherent health services development.

Decentralization of the health sector has been a part of a broader trend of decentralization in the public sector. The Ministry of Health has, to a certain degree, adapted to decentralization development and is concentrating more on creating an overall framework and establishing norms and standards and retains nominal rights to oversee the work and decisions devolved to the regions. However, with the growth of the power of the regions, the Ministry of Health no longer expects to command compliance to all central directives.

The Ministry of Health can issue regulations both on the planning, construction, redesigning, installation, and running of the health institutions and on their supervision. These directives can also include decisions on the approving of responsible heads of institutions and on the requirements in respect to qualifications for individual posts, on the approving of accounting and auditing arrangements, and on private care.

In 1999 the Ministry of Labor, Social Protection joined to the Ministry of Health under the Presidential Decree N 687 (26.12.99) and the Ministry of Labour, Health and Social Affairs was established. The Ministry of Labour, Health and Social Affairs also is responsible for social welfare, social security, care for the elderly and occupational health and safety.

## 9.3. Regional Health Authorities

The need for a regional tier of administration has been recognized ever since the reforms of health care in 1995. In the first phase of reforms Regional Health Authorities played an important role into implementation and co-ordination of new health care model. Then their functions were extended and their name changed to Regional Health Departments. The Regional Health Authority works as a corporate body and is accountable to the Ministry of Health. The regional health administrations are responsible for developing regional plans in accordance with the Strategic Health Plan and implementing them. Also there are responsible for evaluate all local activities and also provide feedback to the President's Regional Committee and the departments of the Ministry of Health, including the Health Policy Department.

There are 14 RHAs in Georgia, serving populations ranging from 16 000 (Upper Svanety) to over 1 400 000 (Tbilisi):

- Ministry of health of Adjara A. R.
- Ministry of health of Abkhazia A.R.
- Tbilisi health Authority
- Poti Health Authority
- Kakheti Regional Health Authority
- Kvemo Kartli Regional Health Authority
- Shida Kartli Regional Health Authority
- Mtskheta-Mtianeti Regional Health Authority
- Samtskhe-Javakheti Regional Health Authority
- Imereti Regional Health Authority
- Samegrelo Regional Health Authority
- Upper Svanety Regional Health Authority
- Guria Regional Health Authority
- Racha-Lechkhumi Regional Health Authority

Regional Health Authority performs a number of functions in the health care system. These are mainly concerned with planning, monitoring the performance of District Health Authority. Regional Health Authority has responsibilities guiding the introduction of medical enterprises, leading the development of contracting, regulating the relationship between purchasers and providers and managing the market. This means that if there are disputes between purchasers and providers, Regional Health Authority will provide a conciliation service. They also have a broader duty to ensure that managed competition does not undermine the availability and accessibility of services or distort priorities in service provision.

In carrying out these functions, Regional Health Authority is expected to work within a framework established at a national level by the Management Executive. Ministry of Health has sought to draw on the experience of Regional Health Authority in developing national policies. In this sense there is scope for those responsible for implementation to contribute to policy-making. Regional Health Authority retains an ability to adapt and amend ministerial

intentions and to themselves innovate in service delivery. To this extent, policies are made as they are implemented, and experience of implementation feeds back into policy formulation.

In the scope of farther reorganization, the Regional Health Care Departments were replaced by Regional Departments of Labour, Health and Social Affairs on the basis of Presidential Decree N 1265 (19,06.2000). These Departments subordinate to the Regional Policy and Management Department at the Ministry of Labour, Health and Social Affairs.

# 9.4. District Heath Authorities

Similar considerations apply to District Heath Authorities and their role in the management of health services. There are around 65 District Heath Authorities in Georgia. The District Heath Authority works as a corporate body and is accountable to the Regional Heath Authority. District Heath Authorities perform a number of functions in Health Care System. District Heath Authorities are expected to work closely with Public Health District Authorities, local Authorities and other agencies.

In the same way that Regional Heath Authorities may adapt national policies to suit local requirements. To reduce the scope for local variation, Regional Heath Authorities maintain contacts with District Heath Authorities through a variety of formal and informal channels. Within each region, there are regular meetings between the regional chairman and district chairmen.

The planning and review process is one the most important mechanisms for ensuring that District Heath Authorities comply with national and regional policies. These plans are based on strategic aims agreed with the Regional Heath Authorities. Progress made in implementing plans and objectives is assessed at the end of each year and the cycle begins again. The detailed arrangements for planning and review have developed over the years and continue to evolve. As with Regional Heath Authorities, District Heath Authorities have been subject to increasing control from above in recent years, particularly in ensuring effective implementation of reforms.

Local authorities are responsible for determining the scope of Municipal Programs and volume of health services with accordance with the national policy. Municipal Programs is financed through 12 Regional Funds, were earmarked funds from local governments were accumulated. Local governments were required to allocate at least 2.5 GEL (1 GEL = 0,5 FOR 2001) per capita of local population for transfers to respective regional funds. The municipal government ruled that resources would be transferred from the district budget to Regional Municipal Fund.

The Ministry of Health and Social Affairs has the overall responsibility for monitoring environmental factors which directly or indirectly influence health. Such factors may be of biological, chemical, physical or social nature. The authority to act in this area can be delegated to the District Heath Authorities, who can determine if an investigation is warranted, can direct that activities having a negative impact on health be restricted, or even terminated in whole, until the situation has been rectified. In practice, the main areas of concern for an environmentally conscious health care system have been within areas such as environmental hygiene; food, drinking water and air pollution; refuse treatment; noise problems; radiation.

# 9.5. Department of Public Health

During the reorganization of Georgia's health care system, the functions of the former Sanitary-Epidemiological Department have been divided between two new departments:

- The Department of Sanitary Surveillance and Hygienic Rationing (DSSHR)
- The Department of Public Health (DPH).

The Department of Public Health for the efficient development of public health policy, monitoring and control of diseases actively cooperated with the:

- National Centre for Disease Control,
- The Centre for Health Promotion and Disease Prevention
- The Centre for Health Statistics and Information

The Department of Public Health has branches in 12 regions. The Department of Public Health has recently been entrusted with the following responsibilities:

- analyzing and managing the epidemiological situation in the country;
- organizing, co-coordinating and implementing public health measures to prevent disease;
- reducing disability and premature mortality;
- supervising the health care information system;
- organizing state, regional and municipal programmes for health promotion and disease prevention; and ensuring international co-operation in these areas.

The Department of Public Health has responsibility with the following A fundamental principle of the reforms in health care system is protect the health of the public, childhood nutrition, control of epidemics and health promotion. The principal goals within health promotion and lifestyles aim to:

• reduce deaths due to all accidents, in particular traffic accidents and occupational accidents;

• reduce cancer mortality rates by addressing the risk factors contributing to cancers, such as bringing down tobacco and associated alcohol use and improving nutrition;

- reduce cardiovascular mortality by improving the situation regarding hypercholesterol, hypertension, tobacco use, obesity and sedentary lifestyles;
- reduce the consumption of heroin and cocaine and the problems associated with drug abuse, including HIV and hepatitis infections.

Local or regional public bodies play a key role in the execution of public health care services. They have the responsibility for operating health promotion, disease prevention (vaccination and screening programs), and epidemiological surveys. Many of these important activities - in particular, health education programs on AIDS, sexually-transmitted diseases, alcohol and substance abuse, tobacco, unintentional injuries and general hygiene are being undertaken by special municipal and regional authorities for Public Health.

Especially it has to be mentioned the significance of partnership program with UNICEF. The program goals are: to improve child survival and child health by controlling, eliminating or eradicating all vaccine preventable diseases; and to reduce the mortality and morbidity from vaccine preventable diseases with a special emphasis on measles and diphtheria.

The program objectives are:

- a) to increase immunization coverage to at least 90% in all districts by the end of year 2000;
- b) to maintain polio-free status, and to achieve certification of poliomyelitis eradication by the end of year 2000;
- c) to reduce the incidence of diphtheria to pre 1993 level by the end of year 2000 that complete elimination of indigenous transmission within the next decade will be feasible.
- d) To strengthen disease surveillance and investigation capabilities at all levels.

# 9.6. The Department of Sanitary Surveillance and Hygienic Rationing (DSSHR)

Before reforms, during the soviet era, former Sanitary-Epidemiological Department was responsible for core public health services. It was made up of a series of outposts (sanitary-epidemiological stations) reporting upwards from the rayon to the region, from the region to the republican level, and ultimately to the all Soviet Ministry of Health. Accountability was to the centre rather than to local government bodies, as was appropriate for the key surveillance structure. Its core duties included the control of outbreaks of infectious diseases, nutrition, and the collection of epidemiological data, disaster relief and the monitoring and regulation of conditions of sanitation, hygiene and environmental health, certification of enterprises. The majority of duties for health promotion, health education and prevention also belong to the sanitary-epidemiological stations.

In 1996 the function of the former Sanitary-Epidemiological Department has been divided between two new departments: the Department of Sanitary Surveillance and Hygienic Rationing (DSSHR) and the Department of Public Health (DPH).

Department of Sanitary Surveillance and Hygienic Rationing (DSSHR) have following responsibilities:

- 1. Control of outbreaks of infectious diseases;
- 2. Regulation of conditions of sanitation, nutrition, hygiene and environmental health;
- 3. The collection of epidemiological data, disaster relief;
- 4. Certification of enterprises.

## 9.7. State Medical Insurance Company

A major achievement of the reforms is an introduction of Health Insurance principles. At the initial stage of the reform Decrees N 351 and N 464 of the Head of State (1995) became the first fundamental documents which contributed to the creation of qualitatively and organizationally new state institution, which will guarantee the social insurance with these Acts. The State Medical Insurance Company was created in February 1996. The correspondent legislative basis was created:

- Law of Georgia on Health Care Taxes March 21, 1995 (later on referred to as Law on State Compulsory Insurance Premiums - May 28, 1997);
- Law of Georgia on Medical Insurance April 18, 1997;
- Law of Georgia on Health Care December 10, 1997.
- Law of Georgia on Insurance May 15, 1997.

In 1998 The Georgian Parliament adopted the "Law of Georgia on Medical insurance". According to this law the object of medical insurance is any kind of insurance risk, which is related to the anticipated costs to be paid whenever to insurance risk occurs. It aims at providing health care to the population under the conditions of market economy and defines legal, economic and organizational bases for the medical insurance of the population.

Parties is to medical insurance shall include: a) the insurant - an individual or group of individuals who is to be insured; b) the insured - an employer or the State who pays insurance premiums; c) the insurer - an insurance company who has obtained a medical insurance license. Compulsory health insurance has been introduced on a highly centralized basis, usually without effective choice of insurer. Georgia has one state medical insurance agency. In national level State Medical Insurance Company is a primary insurer that provides health care services.

Country	Introduction	Number of sikness	Contribution	Employer/	Free choice
Country	Introduction	funds	rates	Employee	of physician
		1 State Medical			
Georgia	1996	Insurance Company	4 %	3:1	Yes
		with regional offices			
Estonia	1992	21 regional sicknes funds with central compensation fund	13 %	100:0	Only within a districts
Latvia	1993	1 model sicknes fund	6.1 %	5.1:1	Yes
Poland		1 sicknes fund			
Slovak Republic	1993	1 sicknes fund	13,5 % +	2/3:1/3	Yes
Slovenia	1993	1 sicknes fund	12,8 %	50/50	Family doctor
Czech Republic	1992	19 regional sicknes funds with central compensation fund	13,5 % +	2/3:1/3	Yes
Hungary	1993	1 sicknes fund with regional offices	23,5 %	19,5:4	Family doctor by choice

Table 113: Social Health Insurance in Central and Eastern Europe

Source: BASYS (1994)

## 9.7.1. Internal organization of SMIC

Since April 1998, the SMIC has been a legal entity, with full financial, managerial and contractual independence. The Director of the Company shall be appointed to and dismissed from the office by the president of Georgia by the nomination of the Ministry of Health.

According to the Law the organizational structure of State Medical Insurance Company is to be determined by the Supervisory Council, which is the supreme managerial body of the State Medical Insurance Company and shall be approved by the president of Georgia. The board from time to time monitors the currency of insurance contracts, review and approves the structure and stuff of the Company. The Supervisory Council consists of 22 prominent citizens, among them scientists, artists, and representatives from various ministries, employers, trade unions and non-governmental organizations. The Supervisory Council is chaired by the Minister of Health.

The SMIC has 75 staff in the headquarters in Tbilisi (including those responsible for Tbilisi as a region) and 93 staff in the 11 regional SMIC offices.

State Medical Insurance Company has 11 regional branches. Company has the responsibility for overseeing the regional branches. Regional staff is visiting the Tbilisi headquarters from time to time for training in various aspects of the SMIC activities. Sometimes, staff from headquarters also travels to the regions to instruct the regional staff.

Figure 57: SMIC Organizational Chart



The State Medical Insurance Company consists of 8 departments. A brief overview of the various departments of the SMIC and their tasks is given in Table 4

Table 4.	SMIC	dep	oartments	and	their	tasks
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Department t	Tasks
Registration dept.	registers the various groups of insured (e.g. vulnerable groups) and issues
	them with insurance policies
Financial-economic	general control and evaluation of revenues and expenditures; definition of
dept.	the financial limits of programs
Technical-material provision	technical support, e.g. maintenance of the building, electricity and office
dept.	supplies
Supervision dept.	receives the invoices from providers, checks if they are correct, and enters
	them into the data base; control of correctness and quality of provided
	services
Organizational	creates all documents, such as decrees, regulations, brochures and contracts;
methodological	concludes the contracts with the providers; promotes proper relations
dept.	(communication) between insurer, insured and providers
Personnel dept.	Personnel tasks: salaries of SM 1C staff etc
	performs bookkeeping and accounting activities; prepares regular and ad hoc
Accounting, registration and	management information reports; prepares and sends the payment orders for
calculation dept.	the providers
Computerized provision	computer services and data management
department	

## 9.7.2. Insured Population

The creation of the State health insurance system provides die universal Insurance State Guarantee for the population in the field of public health. At the same time, all citizens permanently residing in the Georgia Republic did not participate in the health insurance system. State Medical Insurance Company of Georgia covers approximately 14 % of the population or about 640 000 people. Some state insurance programs (e.g. Infectious, Ontological, TB care, Psychiatry) are accessible to the whole population, but some of them (such as Vulnerable, Obstetric care and children care) are accessible only for certain groups of population In case of children care, the State is responsible for children under 3 years old.

SMIC provides insurance certificate - insurance policy. Any person who is covered by the medical insurance program receives insurance policy to be passed to each insurance personally. The scope of this policy is determined in the medical insurance contract.

Fig 58: Insured population (1996-2001 year)



Source: State Medical Insurance Company, 2000.

Table 115: Insured population (State Medical Insurance Company, 2000)

				Oncology	Hemodialysis	Provision of
	Insured	Insured	Insured			selected chronic
Total	vulnerable	pregnant	children 0-3			patients with
insured	population	woman	years of age			pharmaceuticals
40432	424137	43715	141327	18533	120	12600

Source: State Medical Insurance Company, 2000.

Table 116: Number of insured population. 2000

	Insured v	rulnerable	population	Insured	Insured children 0-3 years of age	
Region	Total	Internal displaced persons	Indigenous population	Invalids of war	woman	
Adjara	21851	3313	18155	383	4476	14171
Tbilisi	83589	35951	43745	3893	11889	36509
Kakheti	22373	870	20219	1284	4186	13 406
Imereti	60871	16590	41639	2642	6347	23 624
Samegrelo -	135197	И 5854	1Й150	1193	3805	13 507
Poti- Upper						
Svanety						
Shida Kartli	13938	1872	10869	1197	2880	8942
Kvemo Kartli	23059	4625	17477	957	4718	14994
Guria	12688	290	11875	523	1280	4488
Samtskhe - Javakheti	7844	<sup>v</sup> 1495	5638	711	2657	6730
Mtskheta -						
Mtianeti	12329	3231	8687	411	976	3 717
Racha – Lechkhumi, Kvemo Svanety	6742	474	5772	496	501	1239
Kodori	2098	0	2098	0		-
Other						-
organizations	21558	0	21558	6		
Georgia	424137	184565	225882	1 13690	43715	141 327

Source: State Medical Insurance Company, 2000.





Source: State Medical Insurance Company, 2000.

The remaining number of population is covered by 12 Municipal Funds. The Number and the volume of the programs, as well as the responsibilities of the State increase and cover wider parts of the population every year.

# 9.7.3. Benefits Package

The Ministry of Health in Cooperation with State Medical Insurance Company and other interested public organizations determines what services is included under statutory health insurance. According to the State order, The Minister of Health submits the Compulsory State Curative Programs Indication Plan to the parliament of Georgia (after examination of Ministry of Finance) for examination. The above - mentioned plan includes the real cost of each program.

By statute, the insured receive a wide range of therapeutic and preventive services. The treatments and services available under the State Medical Insurance Programs are following:

- Medical and surgical treatment
- Obstetric care
- Admission and stay in a hospital
- Pharmaceutical care (in hospital)
- Maternity cafe
- Treatment of children under 3 years
- Psychiatric care
- Tuberculosis care
- Treatment of oncology patients
- cardiosurgery for children
- Treatment of Ischemic heart disease
- Organs transplantation
- Hemodialysis

Provision of selected chronic patients with pharmaceuticals Mandatory health insurance covers preventive medical examinations for children under 3 years old and for the pregnant woman. In addition, reimbursement is made for specific medicines (insulin). State medical standards include cost for drugs. Pharmaceutical products are classified into three categories; some are reimbursed in full, others only partly, and still others are normally not reimbursed.

The first program, which was a major element of to be financed by the Insurance system, was financing the special state program for vulnerable population (1996 year).

Table 117: State Medical Insurance Programs (1996-2001 year)

	1996	1997	1998	1999	2000	2001
State Medical Insurance Programs	1	6	9	14	15	13

Source: State Medical Insurance Company, 2000

In 2001 the SMIC benefits package included 13 health care programs. The State Medical Insurance Programs are following:

## 1. Child Care

- a. Care of children
- b. Pediatric cardiosurgery
- c. Orphans care
- d. Replacement medical care of orphans
  - Medical Care of Vulnerable Groups
  - Obstetric care
  - Psychiatry care
  - Tuberculosis
  - Treatment of Oncology patients
  - Treatment of Inf. Diseases
  - Hemodialysis
  - Treatment of Ischemic Heart Disease
  - Organs transplantation
  - Provision of selected chronic patients with pharmaceuticals
  - Tskhinvali Population Medical Care
  - Samegrelo-Upper Svanety IDPs Medical Care

## Child Care (0-3 years)

This program offered outpatient and inpatient care. All insured children have one policy, which is actually one half of the mother-and-child policy. Outpatient care consists of a preventive and a curative part. In the preventive part, all children are screened for morbidity by nurses and doctors during their first year of life according to a protocol, including a blood test. Immunization is not included in the policy (immunization included in Public Health Program). During the first year SMIC covers seven visits to pediatrician (including one home-visit of pediatrician just after check out from Maternity house); consultation of four specialists; blood test two times and one urine analysis. During second year and third years: visit to pediatrician every three month; anthropometry of child twice per year. In curative

outpatient care, children can obtain all necessary diagnostic tests and forms of treatment for all diseases, excluding drugs.

Inpatient care means that children can be hospitalized without cost for all forms of treatment, except for a short negative list of services which are excluded such as plastic surgery.

• Orphans - This program covers medical care for orphans in orphanages.

• *Pediatric cardiosurgery* - Approximately 100 children received cardiac surgery in one institution in Tbilisi in 1999. Children between 3 and 14 years pay a 20% co-payment. There is no waiting list.

## Medical Care of Vulnerable groups

In 1999, the Minister of Social Affairs decided which categories of the population could be considered as vulnerable. These were: invalids, poor pensioners, mothers with many children, single mothers, refugees, war veterans, and some special groups. Approximately 424,000 persons had a policy for vulnerable in 1999.

Basically, municipal health programs cover emergency inpatient care for all citizens, whereas the SMIC offers free inpatient care to vulnerable persons for a positive list of approximately 130 "nosologies" for more chronic conditions. The SMIC also pays the copayments for municipal programs for vulnerable persons. A growing burden in 1999 was the increasing pressure by the Ministry of Health on the SMIC program for vulnerable to pay for treatment which either fell outside the 130 nosologies or for persons who did not qualify as vulnerable. Such patients make individual requests to the Minister of Health, e.g. for hip surgery, eye treatment or chemotherapy. In 1999, nearly 50% of expenditures for the program for vulnerable groups were not according to the regular criteria for this program.

# Obstetric Care

The obstetric program guarantees 4 antenatal visits to policyholders (at 12, 20, 30, 34 and 36 weeks of gestation), including laboratory tests and treatment of complications of pregnancy (overall 38 GEL per case). If additional visits are necessary, they must be paid by the patient.

- First visit: doctor's consultation; blood test; urine analysis; ultrasound examination of urogenital organs; HIV test; consultation at hospital; blood group and Rh test; Pap smear analysis; Wasserman test; Bacteriological examination of vaginal smear; test on Cytomegalovirus;
- Second visit: doctor's consultation; urine analysis;
- Third visit: doctor's consultation; blood test; urine analysis; ultrasound examination of urogenital organs.
- Fourth visit: doctor's consultation; blood test; urine analysis; Wasserman test.

There are approximately 53,000 deliveries per year in Georgia. According to the SMIC program, delivery should be free, but the budget is insufficient to cover the whole sum (100 GEL per case in the big cities and 80 GEL in districts), thus, since 2000 year co -payment was introduced. In 2001 year 30 GEL per case in the big cities and 20 GEL in districts (in 2000 year - 15 GEL) is paid by patients out of pocket.

For Neonatology care of physiology Newborns SMIC covers 22 GEL per case (2000 year).

## Psychiatry Care

The SMIC psychiatry program offers free outpatient, inpatient and day-care treatment to patients with major psychiatric syndromes. Less serious diseases such as neurosis of posttraumatic stress syndrome are not covered. In day-care, only emergency cases are covered. Outpatient care offers follow-up treatment to chronic patients, often after hospitalization. Psychiatric patients receive a unique patient's number, which is entered on their files.

## Tuberculusis Care

All tuberculosis patients in Georgia receive a unique patient s number. All diagnostic tests and all outpatient and inpatient care in special dispensaries are covered, including drugs. Approximately 4500 new cases of tuberculosis were notified in 1998.

#### Treatment of Oncology patients

Oncology outpatient and inpatient diagnostics and treatment is covered in 5 oncology centers in Tbilisi, Telavi, Kutaisi, Batumi and Gori. Surgical treatment and radiotherapy are free, but there is a co-payment for chemotherapy (except in cases of pediatric haematooncology practice, patients must often make unofficial payments.

### Treatment of Infections Diseases

Outpatient and inpatient care is offered for a positive list containing most infections including AIDS, in special institutions or in special departments in general hospitals.

## <u>Haemodialysis</u>

120 patients were treated in 6 centers. Peritoneal dialysis is also possible. The growth in this program in 1999 and especially in 2000 is the consequence of a wish of the Georgian Parliament, for which funds had to be taken away from other programs.

#### Treatment of Ishaemic Heart Disease

This program covers angioplasty for a limited number of patients with coronary disease in 2 institutions.

#### Organs transplantation

This small program covers kidney transplants in 2 institutions, including the evaluation of donor kidneys. In 1999, only 5 patients were treated.

## Provision of selected chronic patients with pharmaceuticals

This program covers insulin and other drugs for patients with diabetes mellitus, and drugs for patients with diabetes and after kidney transplantation.

## <u>Tskhinvali Population Medical Care</u>

Program covers expenditures for the obstetric, children and vulnerable programs in South Ossetia, via Gori.

## Sainegrelo-Zemo Svanety

This program offers services to refugees not covered otherwise. It is in fact a program for a vulnerable group, which offers more services than a standard contract for vulnerable persons.

## 9.7.4. Contracts

The insurance contract has been made by and between the parties to medical insurance who are required to perform their duties and obligations as determined by the insurance contract. Any medical insurance contracts include:

- Names of the parties;
- Period of contract and terms and conditions of its termination
- Number of the insurants;
- Amount, dates and terms of the payment of insurance premiums;
- Contents of the insurance program;
- Rights and obligations of the parties as well as liabilities;

Contacts with providers are made after the selection according to requirements of the state programs and documentation of competition. Contracts are concluded with institutions that win the tender in a certain district. Only licensed institutions are allowed to participate in the tender procedure. The SMIC likes so limit the number of contracted providers to what is necessary for an adequate geographic distribution. However, if in a certain town or district two licensed providers near to each other are offering the same quality price, they can both be contracted. If a provider is licensed for most but not all nosologies required in the contract, it can itself subcontract another provider.

Contracts described the quantity of the contracted services with a tariff per service and a ceiling for the total contracts. State Medical Insurance Company can cancel contracts with hospitals, which they consider are inefficient or unnecessary.

In 2000 State Medical Insurance Company had 819 contracts with 752 providers, (winners of the tender) who take part in 15 health insurance programs. The numbers and types of the contracted provider's are given in Table. One provider may have several contracts for different SMIC programs.

10010 1101 51000 11100										
	1996	1997	1998	1999	2000					
Number of contracted providers	all medical enterprises	425	455	690	752					
Number of contracts	10	798	997	1324	819					

Table 118: State Medical Insurance Programs (1996-2001 year)

Source: State Medical Insurance Company, 2000.

	19	97	1998		1999	2000		
	1	1 6		number		number		number
program	contracted providers	number of	contractor	01 contracts	contractor providers	01 contracts	contractor	01 contracts
Children 0-	providers	contracts	providers	contracts	providers	contracts	providers	contracts
3years pediatric cardiosurgery + orphans	220	220	279	286	255	266	220	233
vulnerable groups incl. Samegrelo program	279	301	357	400	339	364	48	60
obstetrics	167	206	173	223	163	215	119	154
psychiatry	25	26	21	24	21	24	21	24
tuberculosis	35	35	36	38	28	28	26	27
oncology	9	10	13	13	12	12	12	12
infectious diseases	-	-	7	7	13	13	13	14
Hemodialysis	-	-	5	5	6	6	6	6
rural health care	-	-	-	-	360	387	176	177
ischemic heart disease + kidney transplants	-	-	1	1	4	4	5	5
specific drugs	-	-	-	-	2	2	103	104
Tskhinvali	-	-	-	•	3	3	3	3
total	425	798	455	' 997	690	1324	752	819

Tabic 1 19. Health care providers contracted by SMIC in 1997-1999

Source: State Medical Insurance Company

## 9.7.5. Public Relations Framework

Health Insurance Public Relations activities are intended to enhance and to maintain good communication with the 'stakeholders' in the health insurance system: the general population, the insured people, the health care providers, the involved Ministries, the parliament/health policy committees, the professional (para-) medical associations, and the patient organizations.

As to the public relations activities of the SMIC, a variety of initiatives have been undertaken:

- informational campaigns with the use of the mass media (TV, newspapers) to inform the population about the health insurance system (new programs, insurance policies, procedures to obtain insurance policies);
- information to the health care providers about the contracts, and the administrative procedures to comply with the contracts;

- brochures and leaflets for the insured people to inform them about programs, rights and duties; close co-operation between SMIC and the Ministries of Health and Social Welfare and other ministries (development of new programs and legislation);
- Co-operation between SMIC and parliamentary health committees.

The SMIC has chosen to establish the Ombudsman function as the major strategy to serve the insured and the contracted health care providers. It is assumed that personal contact between the ombudsmen at the SMIC-offices and the insured people and health care providers will enhance the understanding of the health insurance system and procedures. Furthermore, it will enhance the compliance of the insured and health care providers with these procedures. The role of the Ombudsman is being a personal mediator between the insurants and the health care providers and thus a part of a whole system of the public relations of the SMIC and other stakeholders. The status of the Ombudsman function is derived from the Georgian Law on Medical Insurance end other legislative documents. The main tasks of the Ombudsman are (statement of SMIC):

- to ensure and to protect the rights of the insurants with respect to the medical services;
- to mediate between insurants and health care providers, in cases of misunderstandings/problems with respect to insurance policies or the procedures with respect to contract obligations of the Health care providers; to investigate complaints concerning the scope and the quality of the medical services;
- to investigate patients and providers knowledge and satisfaction concerning the health insurance system and procedures;
- to promote the health insurance system.

The Ombudsmen have an outreaching informative and educational role. Basically, they visit hospitals with three objectives:

- to inform individual patients about the content of the insurance policy, rights and duties, payment and other relevant aspects;
- to inform medical and administrative staff about the programs, contractual obligations, and the insurance policies and to enhance compliance with the insurance procedures;
- to investigate and to solve problems with insurance policies, complaints, and administrative procedures.

At present an investigation is carried out to measure the knowledge about the health insurance system and the insurance policies and the satisfaction of patients concerning the information on insurance policies and the quality of care. Patients are given a questionnaire to fill in and hand it over to the Ombudsman. This questionnaire is the basis for an analysis about the extent to which patients are familiar with then duties and rights and provides insight in the quality of the present» «I information by health care professionals and in the quality of care. First experiences of the Ombudsman at SMIC show that:

- patients do not always know that they are insured (the vulnerable, children 0-3 years through the parents, the pregnant women);
- insurance policies are not always made available to patient, patients are not always assertive enough to apply for the policy;
- providers do not always fulfill their contractual obligation (follow the standards/protocols, send to SMIC a document »m treatment procedure, signed by the patient);

• Providers still require payments from patients, despite what is stated in the insurance policy (also due to the weak financial situation of hospitals).

The Department of Organization and Methodology at SMIC is proposing the following plans:

- to expand the Ombudsman function in the remaining 11 regions (preferably for each hospital one Ombudsman); to expand the Ombudsman function also to the ambulatory health services (because the first contact with the medical services is at the polyclinics);
- to develop a 'telephone-campaign' to inform the insured about the programs, insurance policies, rights and duties, before entering the medical services. This campaign is to be carried out by all employees at SMIC and at the regional branch-offices
- to draw a sample of insured people throughout the country and to visit them with a questionnaire to measure knowledge and satisfaction.

In implementing these plans, it is expected that the understanding of the health insurance system and the compliance to all the related procedures can be reinforced more rapidly.

The major strategy of the SMIC to enhance the knowledge, understanding and compliance to the health insurance procedures is the use of ombudsmen. From a public relations point of view, such a strategy is effective, for personal communication with insurants and providers leads In general to more understanding en compliance.

As to the 'telephone-campaign' with respect to the insurants, two strategies are foreseen: employees of the SMIC-offices are to carry out this campaign, added with support of independent bureaus. Again, this strategy will enhance knowledge and understanding, but is very labour-sensitive and costly. The SMIC perceives it as her responsibility to inform and educate the insurants. Nevertheless, the health care providers have a similar responsibility. In other words, it should be considered to III. I he health care providers more systematically as sources of information for the insurants.

## <u>9.7.6. Future Challeng</u>es

There is a continuing debate about the future organization and financing of State Medical Insurance Company. At the new stage of development of the state health insurance the system (due to the different sources of income) is still fragmentary, (health insurance contributions come from Central Budgets); Varieties of "insurance programs"; the universal identification system of health insurance contributors/payers and insurants doesn't exist yet.

The following events of health insurance system development in Georgia are taken place:

- Creation and implementation of universally personificated health insurance programs for children under 14 and people over 65;
- Unification of registration and personification of medical service expenses, creation of universal identical number and card;
- Merging the responsibilities of State Medical Curative Programs of Municipal and Federal Programs creation of universal basic package of medical services for population;
- Complete shifting of the state responsibilities of health care services to the compulsory health insurance principles;

- Creation of premium collecting facility;
- Increase in the volume of health insurance premiums;
- Creation of insurance premiums payers identification system.

## 9.8. Regional Municipal Fund

Remain population is covered by Regional funds (Municipal Programs), and Public Health Department. Local authorities are responsible for determining the scope of Municipal Programs and volume of health services for inclusion in these programs.

Everyone has the right to receive necessary health care in that Municipality district he or she lives in, or stays in on a temporary basis. The health care services must maintain a minimum standard and municipality cannot for economic reasons justify falling below a certain minimum standard.

Under Municipal Programs, patients usually pay copayment, which is about 50 % of nosological standard cost; copayment is identical across the country. The use of drugs is largely covered by the Municipal Programs, except for those medicines, which are not included in standards.

Municipal Programs is financed through 12 Regional Funds, were earmarked funds from local governments were accumulated. Local governments were required to allocate at least 2.5 GEL (1 GEL = 0.5 FOR 2001) per capita of local population for transfers to respective regional funds.

Since 1998, sixty-five Municipal Funds were merged into 12 Regional Funds. The municipal government ruled that resources would be transferred from the district budget to Regional Municipal Fund.

To obtain medical services, individuals must apply to a physicians with whom, or an institutions with which, Regional Municipal Fund has concluded a contract. In response to the dissatisfaction with the assignment policies of the past, unrestricted choice of physician is guaranteed. Insurers can choose from any participating health provider organization and can change their primary care providers. Specialist visits are permitted without referral from a primary physician.

## **10. HEALTH CARE DELIVERY SYSTEM**

## 10.1. Introduction

Georgia inherited a health care system, which was dominated by the Semashko model and by the particular history of the Soviet Union. Policy makers were heavily influenced by a very real fear of infectious diseases, by a belief in the primacy of the industrial worker, and by a commitment to mother and child health which were to secure the next generation of workers and citizens.

The fear of infectious diseases was a result of the epidemic, which raged through the Soviet Union. Creating enough hospital beds to isolate sufferers from infection had unfortunate consequences. It led to the over provision of beds and created a long-term imbalance in the structure of health sector spending. The attempt6 during the Brezhnev era to provide annual health checks only exacerbated this tendency. On the positive side the fear of epidemics was responsible to a large extent for the development of the San-Epidemic network, which has highly effective in monitoring disease outbreaks but also played a positive role in wider public health issues. It did though encourage the neglect of non-communicable diseases and left the system unprepared for the demographic and epidemiological shift in disease patterns of the 1970s onwards.

The commitment to the worker had many positive consequences including the development of health and safety standards and early attempts to introduce monitoring of environmental conditions. It also saw the creation of a network of work-based clinics providing primary care on site. However, there was a tendency to commit resources to the industrial workforce, perhaps out of proportion to real health needs. Curative and rehabilitative "rest homes" were, and continue like massage and spa treatments. While this is not bad in itself, these areas are excluded from many Western systems because of cost and because they are not seen as a genuine part of health care provision. Georgia would, however, find it difficult to withdraw such services now and therefore has an expensive inheritance to maintain.

## 10.2. Structure of the Soviet Health Care System

The soviet health service infrastructure delivered care through a hierarchy of facilities. The basic unit was the "uchastok" which, in rural areas, covered a population of approximately 3000. Their primary care needs were met by the health post, which was often staffed by nurses or feldshers. Any problems that required more complex help would be referred to a rural health centre, which would normally employ a general physician and a generalist pediatrician in addition to nursing staff. These centers provided a mixture of primary and routine secondary care and often had a small number of inpatient beds. More complex cases would be referred to rayon policlinics or hospitals. These were district level facilities offering specialist secondary services in either an outpatient setting (policlinics) or on an inpatient basis (hospitals). These fed into the rayon polyclinics and hospitals, which in turn could refer to Republican level or All-Soviet centers of excellence.

The urban population was in principle covered in the same way except that the network of primary careers was made up of doctors working out of polyclinics. Like the rural health posts, they were meant to deal with the basic needs of the population and to refer upwards to rayon or region polyclinics or hospitals which in turn could refer on to tertiary facilities. However, the provision of ambulatory secondary care was slightly more complex in the urban setting. In addition to housing uchastok doctors, each polyclinic tended to employ key consultants to offer specialist outpatient services. Furthermore, primary careers often shared

the same building, as rayon polyclinics were a full range of specialist outpatient clinics was held. The physical proximity of primary and secondary providers meant that patients often referred themselves directly to specialist clinics. In larger towns or cities patients could access region level clinics as easily, and there were also polyclinics exclusively for women and specialist pediatric polyclinics. All this further undermined the gatekeeping role of the general practitioner, blurring the boundaries between primary and secondary care.

The links between secondary care in polyclinics and hospitals was also problematic. Ambulatory care was offered through the polyclinic, in isolation from the provision of inpatient care in hospitals. This meant that patients admitted from a polyclinic to a hospital and then discharged back into the care of the outpatient clinic often experienced a lack of continuity of care. The varying criteria used by doctors in the different settings and the failure to communicate also allowed inappropriate referrals to take place, while poor coordination encouraged the duplication of services in both parts of the system. Ultimately ongoing and follow-up which ought to have been within the domain of primary care remained in the secondary and specialist sector.

In addition to the primary and secondary facilities based on residence, health care was also made available through the work place. Large enterprises supported Medsanchasts or work based clinics to provide primary care on-site and sometimes, smaller undertaking combined resources to set up a polyclinic. Although it was rare for there to be inpatient facilities, these were offered in some of the large collective farms and it was not unusual to find specialist outpatient clinics as part of the package of care. Employees were entitled to care both at work and from their home address but, again, coordination between centers of care were poor and there was duplication of services.

Finally, public health surveillance was through the network of Sanitary-Epidemiology stations which reported upwards to the Ministry of Health of infectious disease and regulating sanitary and environmental conditions. They were also part of the distribution and delivery network for immunization programmes and were responsible for ensuring that there was compliance in primary health care centers and in the schools delivery system.

The profusion of care giving institutions and the complexity of the links between them have continued in Georgia. The number of facilities has changed relatively little since soviet times polyclinics continue to offer primary care and specialist outpatient services side by side. The reform of the financing mechanism has yet to promote the rationalization of the system or the redefinition of the boundaries between primary and secondary care.

## **10.3. Organization of Services After Reforms**

To obtain an overview of the principal elements of the system, a distinction is made between three areas of service provision: namely, public health care, primary health care and secondary care. One of the major objectives of health care reforms in Georgia is to encourage a shift from inpatient to outpatient care, and more cost effective medical interventions. Previous bureaucratic controlled to severe distortions in the structure of health care provision. Inpatient costs in Georgia The Georgian health care system is in transition and will change profoundly in the near future towards a more market-orientated approach with less influence from central government. Some changes have already taken place while others are only vaguely formulated and need further specification before implementation can take place. The reform started in 1995.

						<u> </u>	
Medical facilities	1988	1994	1995	1996	1997	1998	1999
Hospitals	402	321	289	264	287	272	273
Outpatient patient facilities in hospitals	301	247	185	111	115	114	88
Dispensaries	99	82	79	82	83	81	78
Independent outpatient facilities	841	805	828	840	829	859	962
Dentist polyclinics	56	53	53	51	51	56	61
Medical posts	613	502	180	33	47	53	29
Midwife posts	1198	748	781	479	386	512	434
Ambulance stations	. 11	7	5	5	24 !	25	20
Blood transfusion stations	8	7	6	5	6	6	7
Infant orphanages	3	3	3	3	3	2	2
Scientific-research institutes	19	19	19	19	19	19	18
Medical centers					22	27	48

Table 120: Medical facilities under the Ministry of Health, Georgia (1988-1998)

Source: Centre of Medical Statistic Information, National Centre for Disease Control (1999)

There is free choice to any physician - generalist or specialist and use such choice widely. People know and expect their rights and are encouraged to receive their entitlements. Some co-payments exist in addition to reimbursed fees.

To obtain treatment from a medical specialist or another consultant and for hospitalization is not require referral by primary health care physicians.

# Figure 60: Structure of Health Care



## 10.4. Primary health care service

The national health policy emphasizes the priority of developing primary health care in Georgia. For most patients, primary care is the first point of contact with the health service. Equity in the availability of health care has been an underlying principle of primary health

care, a keystone of the health-for-all strategy and thus a critical element in monitoring progress of countries in the implementation of the strategy.

The broad principles of primary health care systematically defined in the Declaration of Alma-Ata in 1978, have helped develop a new health culture. Over the last years primary health care has advanced considerable in taking on new roles and functions. The four strategic elements of primary health care, as defined in the Declaration of Alma- Ata, may be summarized as follows:

- The need to reorient health services so that primary health care is at the core of the health care system, while secondary and tertiary care act as supporting, referral levels;
- A concept of health policy that includes lifestyle and the environmental determinants of health, i.e. an intersectional approach to health policy;
- Community and individual involvement, both in terms of participation in the decisionmaking process and of greater individual responsibility for one's own health;
- Appropriate technology and cost-effectiveness, including the efficient allocation of resources and their redistribution away from hospitals and towards primary health care.

In Georgia primary health care has been an important focus of reform. Georgia seeking to replace their Soviet-style policlinics with some type of primary health care physicians. Although these efforts were initially hampered by the lack of trained GPs, or even of appropriate training programs, the process of establishing a new model of primary health care delivery is well under way.

Primary health care in Georgia refers to the first point of contact (first level) of the health system with the individual consumer, the family and population groups and includes general medical care for common conditions and injuries as well as health promotion and disease prevention activities. After reforms in Health Care System in Georgia there also continues to be considerable debate about the most appropriate way to structure the delivery of primary health care services. There are arrangements based on multidisciplinary health centers.

Primary health care facilities include 859 independent outpatient facilities, 114 outpatient hospital departments, 53 medical posts and 512 midwife posts in 1998. The activities are based on the following principles:

- provision of health care for each registered patient;
- accessible and high-quality health care;
- « correlation between treatment and prevention;
- interrelationship between outpatient and inpatient hospital care;
- supporting the employed population by establishing a specific
- ambulatory-admission schedule.

Primary health care units provide the population with:

- health education;
- maternal and child health care
- immunization;
- prevention programmes for endemic diseases;
- treatment for prevailing diseases and injuries;
- Essential drugs.

The material basis of these facilities does not usually correspond to current sanitary requirements concerning buildings, regular water supply, sewerage, electricity supply, telephone and other factors. They have insufficient equipment and inventory. The personnel's salaries are low and there are insufficient incentives for improving care and relations with the population. According to survey data in 1998, close to 60% of 830 respondents are dissatisfied with outpatient care.

The system is established in four levels of: village, district, region and the country. The ambulatory provides the basic unit of primary health care. As in soviet era, this means that in rural areas patients are covered by health posts staffed by feldsher and/or midwives and in urban areas they present to the primary care physician in the local polyclinic. There is also the same hierarchy of clinics and hospitals at the rayon, region or republican level to which complex cases can be referred.

The model of provision primary health care services includes the following levels:

## **10.4.1. Feldsher-Midwife Posts**

Health posts/Feldsher-Midwife Posts cover a population of about 1300 population, including children and offer immunization, basic health checks and routine examinations, as well as care during pregnancy and for the newborn. They are also able to treat minor injuries and make home visits but cannot prescribe. Staffs are normally trained for two years beyond the basic nurse training and are employed by the local government body and supervised via the nearest health centre or policlinic. No post is supported to be more than 3 km from the population served. The staff of a Health posts/Feldsher-Midwife Posts depends on the size of the catchment area. The minimum is one feldsher, although midwives and nurses are sometimes employed part-time or cover two such posts in shift. Health posts/Feldsher-Midwife Posts are entirely paramedical/no doctors are employed at that level. It is often difficult to attract medical personnel to work in such posts, particularly in remote areas. Health posts/Feldsher-Midwife Posts are financed by Regional Municipal Funds, State Medical Insurance Company, Public Health Department.

At the grass root level of the health care system the feldsher is performing preventive, diagnostic and therapeutic tasks. In rural area feldsher traditionally provide all primary health care and manage all staff, in role similar to the nurse practitioner. They may also work in factories where their role is oriented to prevention and public health.

In Feldsher-Midwife Posts, were feldsher are in charge, the midwife is responsible for antenatal and postnatal care, normal deliveries and all health education related to maternal and child health. All abnormal cases are referred to the district hospital or polyclinic. The personnel of Health posts/Feldsher-Midwife Posts registers birth and deaths

The people also receive vaccinations and health education (though home visits and community meetings). Most extension workers' communication and teaching skills and materials are out of date and these personnel are continuously covered by Ministry of Health training and refresh course curricula.

## **10.4.2 Rural ambulatories and health centers**

Health centers and ambulatories are most periphery units to deliver primary health in the rural area. They are staffed by a general physician, a pediatrician and sometimes an obstetrician or gynecologist, dentists as well as nursing staff. Large clinics also have a surgeon. The number

of paramedical personnel varies with the size of the clinic. The staff pattern also depends on the size of the population served. Rural polyclinics supervise the Feldsher-Midwife Posts in their areas and are involved in the continuing training of their staff.

Rural ambulatories and health centers are financed by Regional Municipal Funds, State Medical Insurance Company, Public Health Department and mostly are subordinated to the district polyclinic.

In ambulatories and health centers is provided some of services, including vaccination and immunization, ante-natal and post natal care, health screening, child health surveillance, advice on the prevention of ill health, supervision of chronic conditions, as well as prescribing, sickness certification and twenty four hour cover. Some ambulatories tend to have a number of beds and are able to carry out inpatient deliveries and perform minor surgery.

## **10.4.3. Urban and district polyclinics**

Policlinic is located in the city and gives health services to a whole district population. Policlinic has more number of personnel and specialized wards of; surgery, internal, pediatrics, obstetrics, gynecology, laboratory and emergencies, providing medical treatment, advisory services and preventive care and rehabilitation. They provide primary and specialized care for the population of cities, regional centers and small towns on a territorial basis or according to place of work. In policlinic patients also can make electro-cardiograms, ultra-sonic examination, proctology and other high-technology procedures. Patients have free choice to any personnel, and there is considerable competition among the physicians for patients at the first contact level, not only between generalists but also between them and specialists. Because of this competition and direct access, communications and relations between generalists and specialists are poor and distant.

Each district has one or more local policlinic or health centers, with physicians and specialists. Specialists work in policlinic and not all of these have hospital privileges. There are also hospital outpatient departments. The outpatient system usually includes nurses and/or midwives. When district policlinic care resources are insufficient for the measures required for a diagnosis or treatment, patients are referred to a regional policlinic or a country level.

A district physician serves about 1700 adults, a pediatrician - 800 f children. The core figure in this structure is the district physician (for adult population) and the district pediatrician (for children under 15).

For workers in industrial enterprises primary medical care is provided | by occupational health services including outpatient departments, 1 physician's and feldshers health points. For organized children contingent (pre-school facilities and schools), students of high and secondary institutes, Primary Health Care is provided in consultative rooms of the above institutions, physician's and feldshers health points and in the territorial polyclinics as well.

The urban polyclinics and outpatient departments could be either in- / dependent or attached to the hospitals.

Regional Municipal Funds, State Medical Insurance Company, and Public Health Department finance these health facilities.

## **10.4.4. Regional Outpatient Services**

At regional level the Primary Health Care needs of the population are satisfied by the city and or consultative polyclinics (independent or attached to hospitals) outpatient departments of regional dispensaries, hospital departments of sanitary aviation and first aid stations. Regional policlinic delivers high level of primary health care.

Doctors normally have approximately 1500-1700 patients on their list. Pediatric generalists cover about 800 patients. Regional Municipal Funds, State Medical Insurance Company, and Public Health Department finance these health facilities

## 10.4.5. <u>Republican Facilities</u>

On top of all these at the republican level there are profiled polyclinics and republican diagnostic centre which serve the whole country and act as the final reference point within the country's Primary Health Care facilities network.

## 10.4.6. Special Focus Polyclinics

In large towns and cities there is a network of children's polyclinics where generalist pediatricians and specialists in ambulatory pediatric care mirror the normal polyclinic patterns of provision but treat only children up to age of 15. Likewise there are polyclinics devoted exclusively to woman (and in particular to gynecology and obstetric services) in areas large enough to sustain them

## 10.4.7. <u>Enterprise Polyclinics</u>

Some Medsanchast facilities survive and through their own GPs provide the staff of the enterprises with the standard package of basic primary provision, although with an increased emphasis on occupational care. There also work-based polyclinics with outpatient specialists and a very few examples of inpatient beds attached to industry. These clinics are legacy of soviet focus on the industrial worker.

There are also a number of special dispensaries in urban areas, mainly for psychiatric and Tuberculosis care. Some primary care takes place within the specialist (secondary) care setting (both outpatient and inpatient care) as a result of the failure to coordinate care or to hand over follow-up of cases effectively. Further health promotion and disease prevention activities are listed under public health services.

The Primary Health Care infrastructure though its preventive, diagnostic, curative and auxiliary services allow Ministry of Health to satisfy the population needs of medical care and sanitation. The range of these services is extended at urban an district level with mobile ambulatories as well as with ambulatory and minor surgery centers; at all levels with day hospitals and domiciliary hospitals treatment from rural ambulatories, to regional and national level with family planning centers.

Highest attention is paid to vulnerable population groups: children, woman, disabled, highrisk persons etc. Nursing care has a patronage character and is mostly directed to home care of invalids, elder people, and persons with somatic, emotional and psychological disturbances.

Most of Primary Health Care services (with exception of Feldsher-Midwife Posts) are equipped with diagnostic, X -ray and physiotherapy facilities as well as can provide treatment

and rehabilitation for the outpatients. The volume and range of diagnostic services is increased according to the sublevel of Primary Health Care (district, regional, republican).

In Primary Health Care facilities of towns and district centers physicians provide consultations.

Primary Health Care activities integrate sanitation and epidemiological services (number) in carrying out environmental and communicable disease control. The aim is to ensure prevention and control of environmental health risks and access to healthy environments. For the achievement of this target sanitation the epidemiology stations main activities are as follows:

- water and quality;
- waste quality and safety;
- observance of legislation criteria for healthy houses construction,
- safety plans etc;
- observance of radiation norms and standards;
- prevention of communicable and parasitic diseases as well as immunization of all eligible persons against eradicable diseases;
- training of epidemiology stations personnel.

In epidemiology stations worked sanitary physicians with acknowledged specialty in community hygiene, labour hygiene, nutrition hygiene, general hygiene as well as epidemiologists, parasitologists, biologists, laboratory technicians and other paramedical staff.

Primary Health Care facilities also co-operate with non-health sec-and local NGO's: Social Welfare, Education, Transport, Defense, Red Crescent Society etc.

The Primary Health Care structure is rational but its principles (according to Almaty Declaration, 1978) are not fully implemented in the country. The principles of financing and allocation of other resources I insufficiently oriented to enhance the leading role and adequate quality of Primary Health Care sector. The financial resources allocated Primary Health Care facilities are extremely low and consequently their technical and material capacity is very weak. Some priority programs are supported by international humanitarian assistance: family planning, control of Diarrheal diseases, acute respiratory diseases, tuberculosis leases, malaria, immunization etc.

During the last years the organizational system providing doctors from Primary Health Care facilities for population has been broil. That's why the system is not running smoothly and the volume of emergency and sanitary aviation aid has been sharply decreased.

Due to external and internal migration processes a decreased number of health personnel is working particularly in the Primary Health Care facilities. The insufficient level of professional training is alarming.

The estrangement and the methodology incompatibility between various sectors, the poor computerization of data collection and its interpretation have negative impact on efficient activities of environmental control. The lack of national ecology control program favors the pollution of water, air and soil and consequently the spread of epidemics. The mass health education of population also has severely deteriorated.

The above mentioned weaknesses are closely associated first of all with the political, social and economic crisis consequences.

During years the number of the people seeking Primary Health Care that was the reason for reduction of registered morbidity. Hospitalizations were also decreased, but the number of inpatients with severe conditions was increased. Births and deaths outside health care facilities are frequent. The community involvement in Primary Health Can-is not satisfactory.

The primary care system is strikingly reminiscent of the soviet model despite the reforms. There has not been a real shift in responsibility for managing care or for budget holding to the individual GP. General practitioners could not realistically set up a single - handed practice within the public sector, and the conversion of polyclinics into group practices took place only as a part of experimental pilot projects. The reforms have instead, elected to vest the responsibility for purchasing care in insurance companies rather than in GPs.

Primary care providers receive funding from State Medical Insurance Company and Regional fund. Only small amount of primary care are offered privately, either on a fee-for consultation basis (in independent polyclinics) or through voluntary insurance schemes.

The Ministry of Health developing a strategy for a gradual shift of resources from the secondary and tertiary levels into primary health care. The number of hospital beds has decreased in recent years, and the actual days in hospital have declined. This is related to the development primary health care. It is hoped that the gatekeeper role of the primary sector will be enhanced but also that the specialized services provided by physicians in polyclinics will be replaced by a network of general practitioners or family doctors offering an extended package of care in a more cost- effective, community setting. Hence an increasing number of patients can receive treatment in their own homes, the goal being the desire to offer the patient the best possible care at the lowest possible expense. We have learnt from experience of the Health Service that patients tend to receive more specialist attention; occupy more of the beds in better- equipped and staffed hospitals; receive more elective surgery. Family doctors will go hand in hand with measures to develop adequate services in the community, to involve doctors more effectively in management and to improve the quality of care. The aims of the changes were to raise standards of health and health care, to place greater emphasis on health promotion and disease prevention, and to offer wider health ser/ice to patients. Family doctors were expected to become more closely involved in child health surveillance, the provision of minor surgery...

The introduction of a postgraduate training program for GPs means that future entrants to general practice will be specialists in their own right and significantly better trained than their equivalents in the previous generation. This is expected to raise standards and enhance public confidence in the primary care system. The role of nurses was also underdeveloped and they continue to act as little more than doctor's aides. Plans to enlarge their clinical and patient management input are being developed. There have also been discussions on how to allow patients greater choice.

In addition to GPs, polyclinics tend to employ specialists depending on the polyclinic size and profile. The specialties most commonly represented are obstetrics/gynecology, cardiology, rheumatology and oncology. These doctors provide secondary outpatient care only, although the boundaries between primary and secondary care become confused as present self-refer for specialist consultations.

As compared with other European countries, contacts with physicians in Georgia are above average (see figure). It is hoped that enhanced public confidence in primary care will encourage patients to present in future in primary setting rather than going directly to a provider of secondary care. It is also hoped that better trained GPs will minimize patient dissatisfaction and will be less included to refer patients on without good cause. Finally, the insurance program is seen as a concrete means of the GP gatekeeping role through the creation of financial incentives for polyclinics to treat patients on-site.





Source: Centre of Medical Statistic Information. 1999

# 10.5. Patient lists and Referral restrictions

In Georgia most group of patients are not registered with their own physicians and. They have no obligation to be on a specific patient lists (although, in practice, most are on the list of their choice). The publicly insured children under the age of 3 are registered with a primary health care pediatrician. This leads to a lack of continuity of care and is not conducive to the development of a sound doctor-patient relationship which is one of the fundamental aspects of primary care. This leads to dissatisfaction for both patients and doctors. Physicians are paid by capitation, fee-for-service and salary. In most cases there is "no defined population" system, whereby patients have direct access to all physicians or specialist. There is no defined geographical area, patients can consult as many doctors as they wish (either physicians or specialists), and though in practice most patients stay with one physician, because this system increases the likelihood of a personal relationship developing between doctor and patient, and ensures continuity of care. Physicians are no gatekeepers to secondary care. There are hired employed of multidisciplinary health centers. In Georgia patients have direct access to specialists and can also choose between private and public institutions and between outpatient and hospital settings. Patient decides when and whom to be referred even before visiting the doctor. The tasks of primary and secondary care are not well defined, and this results in overlapping activities and strong competition between physicians. Specialists care being provided by both hospitals and polyclinics on an outpatient basis. In rural areas primary health care physicians can be gatekeepers because specialists and hospitals are scarcer and people consult their local doctor first.

One of the consequences of the absence of a patient registration system in primary care is that hospital specialists find it more difficult to discharge patients from their outpatient clinics. Patients thus tend to be followed up at hospital outpatient clinics instead of in the primary care setting. In large towns or cities patients could access regional level clinics as easily, and there were also polyclinics exclusively for woman and specialist pediatric polyclinics. All this further undermined the gatekeeping role of the general practitioner, blurring the boundaries between primary and secondary care.

The fact that doctors continue to be allocated without choice undermines confidence in the primary health care system and explains why there are so many self-referrals to secondary care. The situation is exacerbated by the fact that under the soviet system there was no special training for polyclinic physicians and generalist care was regarded as the least prestigious end of medicine.

Most doctors in practice now tend to have qualified in the soviet era and so to be associated with the negative image of primary care. The links between secondary care in polyclinics and hospitals are also problematic. Ambulatory care is offered through the policlinic, in isolation from the provision of inpatient care in hospitals. This meant that patients admitted from a polyclinic to a hospital and then discharged back into the care of the outpatient clinic often experienced a lack of continuity of care. The varying criteria used by doctors in the different settings and the failure to communicate also allowed inappropriate referrals to take place, while poor coordination encouraged the duplication of services in both parts of the system. Ultimately ongoing and follow-up care which ought to have been within the domain of primary care remained n the secondary and specialist sector.

#### **10.6.** Hospital services

Hospital services account for the major portion of public health sector expenditure. Inpatient care typically consumes more than 60 % of the Resources dedicated to health provision. Substantial restructuring of hospital services has been a goal of Ministry of Health since 1995. In the past, hospital services were disproportionately expensive. Substantial inefficiencies existed which could partially be addressed through rationalization.

Activities which have been taken into consideration after the reforms In health care system are: optimal exploitation of existing potentials and manpower, sufficiency in medical equipment and appliances in Georgia it is perceived that there is scope for further reductions in the provision of hospital services and that there are more cost-effective alternatives. As a result hospitals have come under particular scrutiny as part of cost-containment policy.

Changes in hospital network have also occurred for a number of other reasons such as the belief that people prefer to revive care in or near their home. General policy to changing the hospital system appeal to be aimed at achieving the following objectives:
- increasing provider efficiency
- improving appropriateness of admission, utilization and discharge
- changing the shape of the network of hospital services to achieve a more efficient configuration.

There are 272 hospitals in Georgia, with total of 23 296 beds (1999). Number of hospitals has increased until 1960, and has actually declined in the last ten years. Number of hospitals has fallen by about 130 units between 1990-1998 years. The reasons for these changes resulted from a combination of cost-containment policies, changing in technology of treatment modality and changes in the role of primary care.

## Figure 63: Number of hospitals in Georgia



# Source: Centre of Medical Statistic Information, (1999)

<b>T</b> <sup>1</sup>	101	NT 1	C ·	1 .	1 1	•	•	$\alpha$ ·	•
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0								0	

	Number of hospitals				
Regions	1997	1998	1999		
Tbilisi	67	69	74		
Achara A.R.	34	31	29		
Poti	6	7	7		
Guria	10	10	10		
Racha-Lechkhumi Kvemo-Svaneti	6	6	6		
Samegrelo	21	22	22		
Upper Svanety	9	3	2		
Mtskheta-Mtianeti	10	7	9		
Samtskhe-Javakheti	18	16	15		
Kvemo Kartli	27	28	27		
Imereti	40	35	34		
Kakheti	23	21	21		
Shida Kartli	15	5	15		
Cxinvali			1		
Georgia	287	272	273		

Source: Centre of Medical Statistic Information, (1999)

Most hospitals are general hospitals (80 %), meaning that they provide a broad range of care with most patients. Some special-purpose hospitals address specific areas, such as psychiatry, tuberculosis, traumatology, oncology, or eye care, or specific population groups, such as Children hospitals. There are also so called clinical hospitals, were provide medical education and research (19 clinical hospitals). Clinical hospitals closely affiliated with a university. General hospitals, that serve a local area, are medium size (100-300 beds). There are also hospitals with outpatient department's (114).

- General hospitals 218
- Specializing hospitals 54
- Hospitals with outpatient departments 114
- Clinical hospitals 19

## **10.6.1.** Rural hospitals

In those rural areas where there are problems of access, a smaller I `rural~ hospital may provide care in addition to that offered by the larger district hospital. Such hospitals serve a population of 10 000 15 000 and are estimated to provide only 20 % of inpatient care to the rural population, the remaining 80 % being delivered in central district hospitals. This suggests that rural hospitals are used less intensively than central district hospitals. All rural hospitals and their outpatient clinics perform blood and urine analyses and some 30 % can also carry out more complex laboratory or biochemical tests. They offer a restricted package of services that includes the core specialties and basic surgery only and refer more complex cases to the district hospital.

### **10.6.2.** District hospitals

Currently, each district or municipality (with the exception of the capital) tends to be served by a single hospital with between 30-300 beds (depending on the population covered). They are intended to meet the secondary and inpatient care needs of 16000 - 100 000 people and offer a full range of general medical and surgical specialists. They also provide pediatric, obstetric and gynecological care unless they are in the same catchment area as a dedicated children's or woman's hospital. Standard diagnostic tools available in central district hospitals include a comprehensive battery of laboratory, clinical and biochemical investigations, endoscopy, etc. Some of central district hospitals have ultrasound and other specialized radiology equipment. In the past central district hospitals were able to cover most surgical

eventualities but deteriorating economic conditions have led to severe restrictions on surgical activity at district level. In many areas surgery is now only carried out in case of emergency and as much as 80 % of the estimated need remains unmet.

Like rural hospitals, central district hospitals are responsible for an associated polyclinic offering outpatient services. Central district hospitals, however, offer a far higher degree of specialization, including internal medicine, cardiology, endocrinology, neurology, paediatrics etc.

The population density of municipal areas may warrant extra hospitals.

## **10.6.3.** Regional hospitals

Each region has a hospital that accepts referrals of complex cases from district hospitals and polyclinics. All specialists are represented and the qualifications of staff and the care offered are more sophisticated than at the district level. The regional hospital will also serve as the teaching unit of the local medical school.

### **10.6.4.** Special focus hospitals:

There are hospitals devoted to pediatrics with a full range of specialties offered. There are also hospitals exclusively for woman, although these tend to specialize in obstetric and gynecological care only. They will take referrals of more complex cases from lower down the system, both for inpatients and outpatients.

Other specialist institutes or single specialty hospitals include the:

- Institute of Oncology
- Centre of Cardiology
- Research Institute for Mother and Child Health
- Hospital of Infectious Diseases
- Republican Psychiatric Hospital
- Republican Tuberculosis Hospital
- Republican Diagnostic Centre

This last offers a complete range of laboratory and diagnostic tests including, computerized tomography etc.

### 10.6.5. Republican hospitals

Offer the most complex care at large and highly specialized hospitals, which are mostly located in the Tbilisi, Kutaisi. There are often associated with research institutes in their respective fields and offer highly sophisticated secondary and tertiary services. Specialist clinics also provide the opportunity for post-graduate medical training, which is run in conjunction with the State Medical University. Republican Clinical Hospital covers over 30 specialist areas including various types of cardiac surgery, complex neurosurgery and kidney transplantation, some of which are not offered anywhere else in the Republic of Georgia.

A clear distinction is made between these hospitals according to the manner in which they are managed. Some hospitals are public, state and some are private. Public hospitals are non-profit. The form of management and the decision-making structure is also determined according to the legal and operational form of the hospital. At hospital level, the management generally consists of a representative of the administrative sector (the administrative director), the medical sector (the medical director). Hospital directors typically exert enormous influence over the direction of health care delivery within their hospital. The reform process has placed a greater onus on them to manage the financial resources of their institution and allows them the possibility of generating income and retaining it at hospital level to be disposed of in line with priorities established locally.

The relationship between local government and hospital is still strongly influenced by historical precedent. The Ministry sets overall policy objectives and monitors standards overall and the role of local government is primarily as a funding source rather than an active partner in determining hospital policy.

Hospital departments are headed by leading departmental doctors (head physicians) who are given considerable responsibility for the way in which their department is run. The administrative manager has direct responsibility for the oversight of all financial matters relating to the operation of the hospital. The care service maintains responsibility for personnel and training in the caring professions.

#### **10.6.6.** Physical Infrastructure

But conditions in most hospitals are quite inadequate: no reliable electricity, water or heating. Buildings are often leaking and unstable. Equipment is often unrepaired and inoperable because of power supply problems and lack of materials such as X-ray film or chemical reagents. However, the main rehabilitation programmes have not been implemented because of lack of money.

Conditions in hospitals have declined over recent years due largely to the collapse of the investment program. Equipment and facilities fall short of the aspirations of both policy makers and providers. Furthermore the range of services offered is now so constrained by economic conditions that clinical services can no longer meet the needs identified.

After the independence, due to the economic crisis, lack of electricity became the crucial problem in Georgia, which affected the medical facilities in terms of service itself and medical apparatus. Most of medical equipments still functioning are very old, in bad condition, and not reliable, but the resources for repair and maintenance of equipment are very limited. In addition to this, there is a lack of appropriate knowledge of using sophisticated apparatus by medical personnel, lack of specialists-engineers skilled in maintenance of medical equipment.

There seems to be a long way to go improve the general conditions in Georgia, as the country has been in the doldrums after independence, and to make the matter worse, global economy has been dwindling in recent years, and the way ahead is not necessarily bright and clear.

Most of facilities by value need complete replacement or major repair. The cost of upgrading and rehabilitation far exceeds the available funds. The Ministry of Health and Social Affair is expected to propose, in the national planning framework, transformation to a smaller hospital estate, which is properly maintained. Facilities that are in very poor condition would in most cases be written off.

Data on the national pool of medical equipment are poor. Ministry of Health and Social Affair suggest serious problems with deterioration of medical equipment. Medical equipment requires substantial ongoing maintenance and has a short life-span requiring substantial replacement costs. But requirement cost is far below existing expenditure levels and unless addressed, the state of medical equipment will continue to deteriorate.

For the same reason, it seems quite importable for the each clinical facility to procure modern medical equipments, as the health sector is being under the process of reorganization, and the health facilities are in le process of privatization. Even the hospitals and clinics which are to  $\mathbf{e}$  remained in the public sector have difficulty finding resources for the day-today

running of their facilities at the moment, because the only way for them to obtain revenues now is the reimbursement from the State Medical Insurance Company and direct payment from the patients, which are far satisfactory to maintain medical equipments and supplies, let alone the procurements of new ones.

Obviously, there is no immediate cure for the situation, but something must be done for the benefit of people in Georgia and the problems faced by the government concerned now is how to improve the situation with the cooperation from international communities.

### 10.6.7. Hospital Beds

In Soviet period in Georgia there has been a large number of hospitals and hospital beds per head of population compared with Western Europe. This has tended to be the result of norm-based planning which set hospital catchment populations at levels very much lower than elsewhere in Europe. Number of hospital beds has increase by about 1,6 from 30302 to 55190 in 1960-1990 years. In 1994 in general, the Georgia (8,1 beds per 1000 population) have more beds than Western Europe (7, 8 beds per 1000 population), mainly as a, result of the higher admission levels, higher level of morbidity. Also this may have reflected a much heavier reliance on hospitals and public preference for high levels of access combined with long distances and lower levels of private transport. The number of hospitals appears to be much more important than size of the hospitals in explaining the high level of bed provision. This is result of the large number of comparatively small hospitals.

Country	1090	1095	1000	1004	Change	Change
Country	1980	1985	1990	1994	1985-1994	1990-1994
			CEE count	ries		
Albania	4,18	4,01	4,03	2,77	-31 %	-31%
Bulgaria	-	9,11	9,79	10,24	12%	5%
Croatia	7,23	7,45	7,38	5,91	-21 %	-20%
Czech	10,85	11,01	10,92	9,81	-11%	-10%
Estonia	12,19	12,27	11,6	8,35	-32%	-28%
Hungary	-	9,61	9,84	9,92	3%	1%
Latvia	13,89	14,31	14,04	11,93	-17%	-15%
Lithuania	12,07	12,78	12,44	11,09	-13%	-11%
Poland	6,67	6,59	8,22	0	_	_
Romania	8,78	8,94	8,92	7,7	-14%	-14%
Slovakia	-	-	7,46	0	_	_
Slovenia	6,95	6,33	6,04	5,78	-9%	-4%
			CIS countries			
Armenia	8,4	8,7	9,09	7,58	-13%	-17%

Table 122. Hospital beds per 1000 population I n CEE and CIS countries, 1980-1994

Azerbaijan	9,75	9,9	10,10	10,06	2%	0%
Bealarus	12,55	13,07	13,23	12,42	-5%	-6%
Georgia	10,17	9,97	9,8	8,09	-19%	-17%
Kazakhstan	13,09	13,59	13,67	12,14	-11%	-11%
Kirgizstan	12,01	12,03	11,98	9,59	-20%	-20%
Moldova	12,05	12,22	13,15	12,22	0%	-7%
Russia	-	12,98	13,06	11,94	-8%	-9%
Tajikistan	-	10,64	10,69	9,11	-14%	-15%
Turkmenistan	10,46	9,74	11,49	11,47	18%	0%
Ukraine	_	13,14	13,56	12,75	-3%	-6%
Uzbekistan	9.18	11.83	12.48	8.81	-26%	-29%

Sources: OECD; Health for all databases, WHO Region Office for Europe

After reforms in health care system, in order to optimization health services to public strata, number of hospital beds has fallen significantly by about 42,7 per cent between 1990 and 1997. Some clinical departments have closed in most of the hospitals. The reasons for these changes probably reflect a combination of cost-containment policies, changes in technology or methods of treatment, and changes in the roles of primary health care. In many cases, the bulk of the changes have taken place since 1995, reflecting changes in policy towards bed provision and changes in health sector funding. Reduction in the number of hospital beds varies within the country.

According by the dates in 1999 Georgia has 22 496 hospital beds (4,01 per 1 000 population). The overall bed/population ratio may still be high. This together with low bed occupancy rates and an inability to maintain the existing bed infrastructure suggests that greater efficiencies can be achieved through further bed closures and hospital consolidation. A more efficient bed infrastructure could lead to better resourcing of a smaller, more moderate infrastructure.



Figure 64: number of hospital beds, Georgia, 1913-1999 years

Source: Centre of Medical Statistic Information, (1999)



Fig 65: Number of hospital beds in Georgia per 1000 population (1913-1999)

Source: Centre of Medical Statistic Information, (1999)

As shown in table there are major variations between regions in the number of hospital beds and number of beds per 1000 population. There has been an overall pattern of reducing bed numbers in virtually every region. With the reduction of beds there has been some convergence in the bed/population ratios between regions. However the available beds/ 100000 population is still inequitable, varying substantially between regions. In 1997, for example, the number of beds in Samegrelo was 3,1 per 1000 inhabitants, compared with 5,4 per 1 000 inhabitants in Adjara A.R and 9,2 in Poti.

It is expected that the demand for district beds will be less in urban areas, a deficient district bed infrastructure leads to higher cost structure, because hospital staff tend to care for patients at the highest level at which the facility is capable of providing services. These beds need to be reduced in order to shift funds to the resourcing of lower level beds, or resourced appropriately for multiple levels of care. The lack of clarity as to the levels of care provided within the affected hospitals impedes national planning.

Specialized hospital beds principally reflect chronic beds, of which the major categories are allocated to mental health care and tuberculosis. The data suggest an inappropriately high level of chronic beds in many parts of the country.

A shift to contracting, using case payments, would certainly be one mechanism by which to reduce length of stay. Contracts are expected to create incentives for day case surgery and for broader cost containment policies. The introduction of health insurance will influence the balance between modalities of care.

		Beds			Per 100000	
	1997	1998	1999	1997	1998	1999
Georgia	24481	23578	22491	474,9	456,96	435,9
Tbilisi	9522	8967	8770	718,3	675,33	660,5
Achara A.R.	2147	1832	1812	526,7	447,92	443,0
Poti	470	468	412	817,15	812,5	715,3
Guria	543	625	575	336,24	387,24	356,3
Racha-Lechkhumi Kvemo-Svaneti	295	300	300	516,25	525,4	525,4
Samegrelo	1163	1070	1084	243,9	224,55	227,5
Upper Svanety	89	55	50	511,85	327,38	297,6
Mtskheta-Mtianeti	251	219	211	178,28	154,99	149,3
Samtskhe-Javakheti	1110	1040	864	464	432,79	359,5
Kvemo Kartli	1325	1210	1174	216,8	197,45	191,6
Imereti	3044	2719	2694	364,2.	325,98	323,0
Kakheti	1020	961	870	226,6	213,56	193,3
Shida Kartli	1351	1216	1222	361,2	324,27	325,9
Cxinvali			50	195,35	195,35	

Table 123: Number of hospital beds per 100 000 population by regions (1997-1999)

Source: Ministry of Health of Georgia. Center of Medical Statistics and Information

### Table 124: Number of beds by Hospital I Department

Hospital Departments	1998	1999
Internal medicine	2838	2536
Cardiology for adults	957	947
Cardiology for children	51	25
Surgery for adults	2733	2647
Surgery for children	395	383
Oncology for adults	690	690
Oncology for children	40	40
Obstetrical	2551	2553
Gynecology	1957	968
Tuberculosis for adults	1233	852
For bone Tuberculosis	20	20
Tuberculosis for children	70	70
Dermato-venerology for adults	110	115
Dermato-Venerology for children	25	25
Pediatric	1952	1873

Source: Centre of Medical Statistic Information, (1999)

The intention of the reform is to provide targets for the country's hospital portfolio and to provide a framework for the hospital rehabilitation program. One method of managing the development of hospital services is the certificate of need. This provision could regulate the licensing of facilities (and therefore beds) in both private and public sectors if implemented.

The following table shows the Georgia regions, their population, existing secondary and tertiary care beds, number of required beds according to the existing methods of practice and the deference between the existing and needed beds which is the excess beds.

	Dopulation	Existing designed	Required beds & 80
	ropulation	beds	% util
Tbilisi	1185600	8770	4464
Adjara A.R.	365900	1812	732
Poti	51600	412	226
Guria	143900	575	288
Racha-Lechkhumi Kvemo-Svaneti	50800	300	102
Samegrelo	425000	1084	850
Upper Svanety	15000	50	30
Mtskheta-Mtianeti	126000	211	252
Samtskhe-Javakheti	214400	864	430
Kvemo Kartli	547100	1174	1094
Imereti	743700	2694	1490
Kakheti	401000	870	802
Shida Kartli	334500	1222	670
Total	4604500	20038	11430

Table 125: Number of existing and required hospital beds 1999

Source: Centre of Medical Statistic Information, (1999)





Source: State Medical University, Centre of Medical Statistic Information

Country	Hospitals per	Hospital beds per	Admissions per	Length of
	unit of population		unit of population	Stay
	1	CEE countries	1	
Albania	-70%	-31%	-	-33%
Bulgaria	20%	5%	-7%	-1%
Croatia	-37%	-20%	-17%	-10%
Czech	10%	-10%	14%	-16%
Estonia	-6%	-28%	-3%	-18%
Hungary	-	1%	0%	-10%
Latvia	-5%	15%	-6%	-5%
Lithuania	0%	-11%	8%	-11%
Poland	-	-		-
Romania	1%	-14%	5%	-10%
Slovakia	-	-	-	-
Slovenia	10%	-4%	0%	-7%
		CIS countries		
Armenia	-10%	-17%	-42%	5%
Azerbaijan	-2%	0%	-40%	-1%
Bealarus	-2%	-6%	-1%	0%
Georgia	-17%	-17%	-60%	3%
Kazakhstan	-9%	-11%	-23%	5%
Kirgizstan	-	-20%	-26%	3%
Moldova	0%	-7%	-8%	5%
Russia	-5%	-9%	-5% .	1%
Tajikistan	6%	-15%	-	-
Turkmenistan	-12%	0%	-16%	-3%
Ukraine	0%	-6%	0%	3%
Uzbekistan	-9%	-29%	-21%	-3%

Fable 126: Changes in key hospital indicators in CEE and CIS Countries 1990-1994

Sources: OECD; Health for all database, WHO Regional Office for Europe

## **10.6.8. Bed occupancy in hospitals**

A large proportion of hospitals have apparently had over half their beds empty for several years. Many patients prefer to attempt to treat themselves, and even some cancer cases do not return for treatment after being diagnosed. Lacking paying patients, many hospitals cannot cover all their expenses and pay taxes.

As a result, in 1999 the bed occupancy rate was extremely low (average 106,2 of 365 days) and suggests inefficiency and potential for bed reductions. Although state programmes cover all treatment of psychiatric patients, because of insufficient funding, psychiatric facilities cannot provide sufficient food, cleaning and laundry services and often drags to their absolutely unprotected patients. If bed occupancy were assumed to be 75 % - 80% across all hospitals, substantially fewer acute beds would be necessary than are currently available.

# Table 127: Bed occupancy rate, Georgia, 1995-1999 years

1995	1996	1997	1998	1999
100,5	102,2	100,8	119,4	106,2

Source: Centre of Medical Statistic Information, (1999)

# Table 128: Bed occupancy rate, Georgia, 1998-1999 years

	1998	1999
Internal medicine	83,98	70,31
Cardiology for adults	100,2	92,6
Cardiology for children	64,3	
Surgery for adults	95,72	81,3
Surgery for children	79,5	
Oncology for adults	136,11	122,3
Oncology for children	196,8	
Obstetrical	114,35	103
Gynaecology	45,16	45,12
Tuberculosis for adults	316	254,3
For bone Tuberculosis	259,6	
Tuberculosis for children	187,2	
Dermato - Venerology for adults	71,44	39,3
Dermato - Venerology for children	3,4	
Paediatric	116,83	114,2
Total	119,43	106,15

Source: Centre of Medical Statistic Information, (1999)

## Table 129: Bed occupancy rate by regions 1998-1999 years

	1	998	1999
	rate	%	rate
Tbilisi	117,2	32,11	117,3
Achara A.R.	104,2	28,53	101,3
Poti	115,6	31,66	128,45
Guria	81,5	22,33	77,7
Llacha-Lechkhumi Kvemo-Svaneti	73,3	20,1	78,4
Samegrelo	141,5	38,77	117,8
Upper Svanety	67	18,36	63
Mtskheta-Mtianeti	88,5	24,25	69,1
Samtskhe-Javakheti	88,2	24,16	103,3
Kvemo Kartli	85,7	23,48	77,8
Imereti	149,6	40,99	128,2
Kakheti	80,5	22,06	74,7
Shida Kartli	73,5	20,12	62,7
Tskhinvali	96,8	24,16	50,5
Total	119,43	32,72	106,15

Source: Centre of Medical Statistic Information, (1999)

# 10.6.9. Length of stay

Recent years the average lengths of stay in hospitals has fallen, but at a slower pace than the reduction in bed numbers. The average lengths of stay in hospitals is unjustifiably long (10 days), especially for tuberculosis hospitals (66,4 days).

Table	130:	Average	length	of stav.	Georgia.	1998-1999	vears
				<u> </u>			,

1995	1996	1997	1998	1999
13,14	10,9	10.09	11,77	10,6

Source: Centre of Medical Statistic Information, (1999)

Hospital Departments	1998	1999
Internal medicine	11,9	10,7
Cardiology for adults	9,4	8,9
Cardiology for children	11,2	
Surgery for adults	8,7	7,6
Surgery for children	6,8	
Oncology for adults	18,6	33,7
Oncology for children	26,8	
Obstetrical	4	5,6
Gynecology	3,8	3,9
Tuberculosis for adults	96,7	66,4
For bone Tuberculosis	32,1	
Tuberculosis for children	47,3	
Dermato-Venerology for adults	14,3	15,5
Dermato-venerology for children	5,7	
Pediatric	9,9	10,4
Total	11,77	10,6

 Table 131: Average length of stay, Georgia, 1998-1999 years

Source: Centre of Medical Statistic Information, (1999)

	1998	1999
Tbilisi	11,8.	11,44
Adjara A.R.	9,3	9,16
Poti	17,21	23,6
Guria	8,4	7,9
Racha-Lechkhumi Kvemo-Svaneti	8,1	8,19
Samegrelo	8,44	8,67
Upper Svanety	6,6	6,72
Mtskheta -Mtianeti	5,41	5,05
Samtskhe-Javakheti	11,13	11,8
Kvemo Kartli	8	7,87
Imereti	10,65	10,94
Kakheti	6,59	6,7
Shida Kartli	10,3	9,6
Tskhinvali	22,67	7,48
Total	11,77	10,64

 Table 132: Average length of stay by regions, 1998-1999 years

Source: Centre of Medical Statistic Information, 1999

## Fig 67: Bed rotation rate, Georgia 1998-1999 years



Source: Centre of Medical Statistic Information, (1999)

	1998	1999
Internal medicine	7,04	6,57
Cardiology for adults	10,64	10,6
Cardiology for children	5,8	
Surgery for adults	11.02	10,87
Surgery for children	11,7	
Oncology for adults	7,33	3,63
Oncology for children	7,4	
Obstetrical	19,09	18,56
Gynecology	12,03	11,7
Tuberculosis for adults	3,27	3,89
For bone Tuberculosis	8,1	
Tuberculosis for children	3,96	
Dermato-venerology for adults	5	2,54
Dermato-venerology for children	0,6	
Pediatric	11,75	11,14
Total	10,14	9,99

## Table 133: Bed rotation rate, Georgia 1998-1999 years

Source: Centre of Medical Statistic Information, (1999)

# Table 134: Bed rotation rate by regions, Georgia, 1998-1999 years

	1998	1999
Tbilisi	9,91	10,29
Adjara A.R.	11,12	11,03
Poti	6,17	5,48
Guria	9,7	9,85
Racha-Lechkhumi Kvemo-Svaneti	9,14	9,58
Samegrelo	16,7	13,55
Upper Svanety	10,2	9,4
Mtskheta-Mtianeti	16,32	13,67
Samtskhe-Javakheti	7,91	8,73
Kvemo Kartli	10,69	9,89
Imereti	13,97	11,73
Kakheti	12,22	11,13
Shida Kartli	7,14	6,56
Tskhinvali	3,34	6,68
Total	10,14	9,99

Source: Centre of Medical Statistic Information, (1999)

### 10.6.11. Admissions

In Soviet era there has been an increase in the admission rate. Higher admission level is more likely to be the result of a heavier reliance on hospitals, high levels of morbidity, public preferences, underdeveloped primary care system, lower level of private transport, also, of supplier-induced demand and, in some cases, the proximity of patients to hospitals.

After reforms in Health care there has been decrease in admission rates, which is likely to be attribute not only to health budget cuts, the latter trend has accompanied changes in management of patients, improvements in clinical techniques such as minimally invasive surgery, and incentives to reduce lengths of stay and ensure that patients who no longer need acute care are discharged to other settings. Reduction of admission rate also may be associated with the removal of incentives lo record admission to obtain payment.

	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Number of hospitalization	854666	777800	745725	683003	467343	374970	307537	272390	241426	237657	233356	219411
Hospital Admissions rate per 100	15,8	14,4	13.8	12.6	9,1	7,3	6	5,3	4.7	4.6	4.5	4.3
Number of hospitalization (children)	188417	158143	154456	137609	87023	73065	60070	59357	60121	53288	53555	50260
Hospital Admissions rate per 100 (children)	13,7	11,5	1 1,4	10,6	7,0	5,9	4,9	4,8	4,9	5,2	5,4	

Table 135: Hos	pital Admissions rate	per 100 000 (1988-1999)
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Source: Centre of Medical Statistic Information, (1999)

## 10.7. Maternal and Child Health

## 10.7.1. Health of Children

The protection of children's health is an essential component of Ministry of Health. With regard to the care of children, there are 94 licensed polyclinics in Georgia, of which 50 are independent child polyclinics, and the rest of 44 are child departments in the general polyclinics settings. For the provision of inpatients services for children, there are 65 licensed hospitals, of which 12 are independent child hospitals, and the rest of 53 are child departments in the general in the general hospitals settings. This substantial part of the national health care system provides follow-up measures for physical growth and mental development of children.

Those of pre-school and school age are provided with health care in kindergartens or schools. Children with mental retardation and those with disability are educated in specialized schools.

	Number of establishments				Number of pupils, 1000.				).	
	1995/	1996/	1997/	1998/	1999/	1995/	1996/	1997/	1998/	1999/
	1996	1997	1998	1999	2000	1996	1997	1998	1999	2000
Pre-school	1277	1752	177/	17/1	1770	Q1 Q	QQ 1	74.0	74.2	74
establishments	1322	1255	1224	1241	1229	81,9	05,1	74,9	74,2	74
kindergartens	629	622	626	660	560					
Nurseries-Kindergartens	680	619	587	567	657					
nurseries	13	12	11	14	12					
Child's homes	12	13	13	12	12	0,647	0,615	0,852	0,965	0,902
Schools for mentally										
and physically retarded	16	17	17	18	18	1,6	1,7	1,8	1,9	2,0
children										
Boarding schools for										
mentally and physically	14	14	14	15	14	1,128	1,488	1,551	1,641	1,696
retarded children										

<b>Table 136:</b>	<b>Educational</b>	network.	number	of r	oupils,	1000.
				~ r		

Source: State Department for Medical Statistics of Georgia 2000.

In Georgia there are about 1 042 099 children up to 14 years old who accounted for 20,4 % from the total population. The number of annual births in 1999 amounts to 40 778.

Infant mortality during last years has been decreased and amounts to 17,5 per 1000 live births in 1999, from which children under 1 years arc 76,6 %, under 4 years 85,5 %. In spite of its reduction infant mortality rates are still high, especially among families of Internal Displaced Persons (IDPs). Mortality under 1 week accounts for 68 % of all infant mortality, between 1 week and 1 month 10,1 %, and over 1 month 21,3 %. Infant mortality is consistently higher among boys (60,3%) than girls (39,7 %). Infant mortality accounts for 76,5 % of all mortality under the age of 14. Death rate for children between 1 and 14 is 22 per 100 000 population. According to statistical data of the Ministry of Health, 1079 stillbirths were registered in 1997. Of these, 801 died before delivery started (74.2%). Stillbirths are registered separately and are not included in infant mortality statistics.

In the maternity homes are born 3024 (from 45 408 live birth - 6,7 %) low birth weight babies (less then 2,5 kg). Morbidity rate was 116,7 per 1000 newborn babies (number - 5298), mortality rate - 13,01 per 1000 newborn babies (609). At present a considerable number of children were born with hereditary and inborn anomalies (410 cases, rate - 9,1), inborn traumas (935, rate - 20,6), intrauterine hypoxia and asphyxia (1722, rate - 37,9), sepsis (30, rate - 0,7). Considerable numbers of children were born with hypotrophy (97 cases).

During last year's there was a constant growth of diphtheria, TB and hepatitis among children and adolescents. In 1999, 684 335 (65,7 %) Children were screened and 226 610 (21,7 %) were with detected pathology.

In the field of child's health protection, WHO recommendations have been implemented through elaboration of national programs and establishment of national and regional centers for Acute Respiratory Infections, Diarrheal Disease control, immunizations, breast feeding promotion, family planning, rehabilitation of babies with inborn pathology.

The child health protection in Georgia is carried out long before its birth as a control of girl's health (future mothers) and women's health protection at the work place. There is a systematic antenatal care of pregnant women and great attention is paid by pediatric services to the new born babies and the children up to 3 years.

According to the `Care of children 0-3 years of age~ State Medical Insurance Program the SMIC covers the medical care of children less than 3 years of age. SMIC issues insurance policy, which is provided to pregnant woman at Women's Consultation Clinic, when

registered. Then she submits this policy in Maternity House and after giving birth, takes | to the children's policlinic.

State program offered outpatient and inpatient care. Outpatient care consists of a preventive and a curative part. In the preventive part, nurses and doctors screen all children for morbidity during their first year of life according to a protocol, including a blood test. Immunization is not included in the policy (immunization included in Public Health Program). During the first year SMIC covers seven visits to pediatrician including one home-visit of pediatrician just after check out from Maternity house); consultation of four specialists; blood test two times and one urine analysis. During second year and third years: visit to pediatrician every three month; anthropometry of child twice per year. In curative outpatient care, children can obtain all necessary diagnostic tests and forms of treatment for all diseases, excluding drugs. Inpatient care means that children can be hospitalized without cost for all forms of treatment, except for a short negative list of services which are excluded such as plastic surgery.

Preventive activities for children such as immunizations are conducted m the basis of Immunization Program. Immunization Program is a state run program administered by the Public Health Department of Ministry of Health and pediatric services at Public Health Care level. The vaccination schedule and policies on contraindications were elaborated in conformity with WHO recommendations.

#### **10.7.2. Immunization Coverage**

Table 138 showed that vaccination coverage is high in Georgia. Tin-overwhelming majority of child-respondents were immunized according to appropriate immunization plan. The percentage of vaccination coverage was as following: BCG 1 - 95,2 %, DPT3 - 97,7 %, DPT4 - 96,6 %, Polio - 98 %, Measles - 97 %.

As far as BCG vaccination of newborns at Maternity House, the percentage was higher -95,2 %. Newborns were not vaccinated in 4,8 %. Among the reasons of this shortage of vaccine, allergy and severe prenatal condition were reported.

Vaccine	Contingent	Total number of Vaccination	Among them Vaccinations by Calendar	Coverage %	Date of Birth
BCG-1	46827	44581		95 2	1999
DPT-3	46827	49709	45750	97,7	1999
OPV-3	46827	49858	45890	98	1999
Measles	49588	54029	48127	97	1998
Mumps	49588	5668		0,11	1998
DPT-4	49588	47912		96,6	1998
OPV-4	49588	47783		96,4	1998
DT (5W)	56880	55365		97,3	1994
OPV-5	56880	52979		93,1	1994
BCG-R	56880	6373		0,11	1994
TD	86447	59555		68,9	1985

Table: 137: Immunization Coverage Georgia, 1999

Source: Centre of Medical Statistic Information, (1999)

## 10.7.3. Adolescence

Adolescence is characterized by efforts to take on adult roles. This transition involves experimentation and imitation, which can make young people vulnerable to damage to their health. Acute health problems can result from accidents, experiments with drugs, unsafe sex or unwanted pregnancies. In the longer run, the adoption of specific lifestyle patterns can lead to chronic degenerative diseases. This is also the phase when social insecurity can be compounded by, for example, unemployment. Young women are particularly at risk as they make up almost two thirds of unemployed young people. One of the few routinely available indicators of adolescents' sexual health and behavior is the frequency of teenage pregnancies, which can reflect social factors as well as access to and use of contraceptive methods. The number of births to young women aged 15-19 years has falling in Georgia since 1990. The fertility rate for this age group decrease from 60,2 per 1000 females to 34,8 (1999). However, this indicator is highest comparison with European countries. Improved sexual education programs aimed at reducing the number of teenage pregnancies and ensuring adequate antenatal care - including psychological and social support - should be provided in order to avoid the medical and psychological problems encountered by young women.





Source: State Department for Statistics of Georgia. 2000

## **10.7.4.** Physical Development of Children and Adolescents

During the last years stagnation of the height and weight - for - age development of small children (0 to 3 years old) was observed. At the same time, with the 4 to 18 years old, the survey showed acceleration of pre-puberty and puberty development (11 to 16 years old), particularly with boys and with respect to height.

There is a remarkable difference with respect to children's development between urban and rural areas, to the detriment of the latter. These differences are highest at puberty and prepuberty age, and tend to lessen when children near 18 years of age.

The average age of girls in urban areas at the apparition of the menarche (12 years, 9 months and 15 days) is in advance of rural areas (13 years and 6 months).

Dentition of children in urban areas is earlier, both in the eruption of the first teeth (incisors, eye-teeth, first and second premolar) and the completion of temporary dentition.

Obvious acceleration is a particularly at puberty and post puberty period. A stagnation of the somatic development is a particularly with small children; A stagnation and even a regress with both the 0 to 3 years old and the 6 to 15 years old.

## 10.7.5. Women's Health

Women in Georgia account for 52,2 % (2 662 086) of the total population. Women occupy a central place in Georgian society being workers and housewives and playing at the same time multiple roles including reproductive one. The highest proportion of working women was in the health sector and education. There is a greater equality between men and women within the family, as well as the rights of both legitimate and illegitimate children. Single mothers and their children have the same family rights as married women.

Women generally live longer than men and have lower mortality rates for all causes of death. According to the official statistical data there are 7,5 deaths per 1000 women which is 1,1 times less than these for men. However, maternal mortality rate is more than two times the European Region (15 per 100 000 live births). Major causes of maternal mortality are hemorrhage (39%), toxemia (23%), and extragenital diseases (13%).

Women have higher reported rates of morbidity and utilization of health care services (especially around childbirth), and can be indirectly more affected by population and other social welfare policies, Cancer morbidity is the 5 % highest than for men (1998-1999). Morbidity rate from cancer has increased over the past ten years from 70,4 to 96,2 (1999). Morbidity rate from breast cancer has increased to 35,6 per 100000 in 1999. Morbidity rate from cervical cancer also has increased 'from 8 to 9,6 (1999).

A raise in the level of risk factors contributing to chronic diseases and the maintenance of high breast and cervical cancer morbidity rates will continue to contribute negatively to women's health. A recent study comparing women of reproductive age had had a test for cancer screening within the previous year. However, more women in higher socioeconomic groups (65 %) were likely to know how to examine their own breasts than in lower socioeconomic groups (35 %). The reported frequency of abortions and unplanned pregnancies has increased sharply, potentially reflecting the liberalization of abortion. Abortion significantly increased the risk of the subsequent development of secondary infertility.

Other female health problems are not limited to women's reproductive function or reproductive age. The cessation of ovarian function at menopause puts women at special risks,

notably of osteoporosis due to bone loss. Osteoporosis-related morbidity, periodontal disease and tooth loss, and fractures of the hip, vertebrae and wrist, is affecting increasing in women.

Women with gynecological diseases have a wide access to obstetrics/gynecological ambulatory network, occupation health facilities and specialized hospital departments.

There are 71 licensed Woman Consultation Clinics in Georgia in the year 2000, of which 18 are independent clinics, 25 are outpatient departments within the Maternity House settings, and 28 are in the general hospitals with close relations with the maternity departments.

The majority of women gave birth in maternity house. Obstetric team assisted most deliveries: obstetrician, midwife, nurse, as well as neonatologist. In terms of delivery, there are 78 facilities in this country, of which 45 are independent maternity houses, and the rest of 31 are maternity departments in the general hospitals. There are approximately 53,000 deliveries per year in Georgia.

When the then Ministry of Health drew apian for maternal and child health services using the World Bank loan, the establishment of prenatal care center or complex in downsized and rehabilitated sites in Tbilisi and Kutaisi was included in the program of Healthy children and Safe Motherhood. Referral system for the emergency car for the pregnant mother and children is somehow working at present and it is said in have attributed to improve the situation within the Capital City of Tbilisi and surrounding area. However, for the patients living in a far area from Tbilisi, it takes too much time to get access to higher level of services anyway, which gives rise to some doubts about the effectiveness of the referral system.

In the case of Tbilisi, 4 maternity houses, including Institute of Obstetric/Gynecology and 2 pediatric hospitals are to provide high level of care to function as the prenatal center to cover the eastern part of Georgia under the order of Minister of Health on the referral system for pregnant women and newborns. In this system, on request from the other maternity houses, the coordinate-controlling service unit dispatches specialist on duty on the ambulance specially equipped with highly sophisticated apparatus with the special arrangement with those hospitals designed to function as the sort of prenatal center. After the consultation at the hospitals pregnant women or children in need of highly specialized care are to be transferred to those hospitals in Tbilisi. The guideline for the referral system has been worked out for this purpose and in it includes the protocols for emergency care and stabilization before transportation. The establishment of referral system is a great advance towards the improvement of quality of care, but if we take the case of bleeding, it is preferable to equip each woman's

consultation clinic with ultrasonic devices to detect the high - risk pregnancies such as placenta previa and send the pregnant mothers before deliveries to the highly equipped center. However, in any case, to ensure safe blood transfusion, there is an urgent need to establish blood bank system.

In the Soviet Era, outpatient service for pregnant mothers and delivery services are provided in separate settings in Georgia, but now integration of prenatal care and delivery care is encouraged and accepted to improve the quality of care to share the information and detect the risk as early as possible, through it reduces the accessibility in terms of traveling time.

State Medical Insurance Company has contacts with facilities to provide delivery services. State Medical Insurance Company covers Child Hind Obstetric care program with total budget 15,7 million GEL (2000 year). Concerning maternal and child health, from total State Medical Insurance Company budget (39,2 million GEL) about 15 % of money is allocated for obstetric care and roughly 20 % is allocated for the care of children under 3 years. It surely secures the accessibility for the expectant mothers and children to the health care services, though co-payment is required for delivery services. This could be acting as the money barrier and the reason for the home delivery.

In the case of Tbilisi, the State Medical Insurance Company is reducing the number of contracts, for example from 29 in 1999 to 10 in 2000 for women's consultation clinics. In terms of accessibility, the situation seems worsened, but in reality there are many facilities in the capital and some of them tend to have private patients who can afford to pay for the services, and even some facilities refuse to have contracts with the insurance.

In 1999, 42 000 first consultations at women's consultation clinics were covered by insurance. In terms of deliveries, the figure was 37 000. On the other hand the total number of deliveries in Georgia in the same year was 47 669. It is not easy to explain the difference in figures, but the insurance coverage might not be sufficient because of co-payment at the clinical facilities, although, in the capital of Tbilisi, some facilities do not have contracts with the SMIC, which exclude the number of deliveries covered by insurance. The delivery figures include 1868 home delivery cases. (Report on the maternal and child health in Georgia, 2001).

Prenatal care should not only start early, but also should continue throughout pregnancy according to recommended standards of periodicity. Women were asked about the time of their first visit for prenatal care and fulfillment of all required visits according the state

program on `Care of Pregnant Women and Women at Delivery~. Women's consultation clinic is the principal source for prenatal care for all pregnancies.

According to the `Care of Pregnant Women and Women at Delivery~ program, the State Medical Insurance Company covers six prenatal visits to the Women's Consultation Clinic and delivery, through since August 2000 (at 12, 20, 30, 34 and 36 weeks of gestation), including laboratory tests and treatment of complications of pregnancy (overall 38 GEL per case):

If additional visits are necessary, they must be paid by the patient. According to the SMIC program, the company reimburses 65 GEL out OF 80 GEL for delivery (the rest 15 GEL is patient's copayment).

One of the present most intensive activities of Ministry of Health is family planning. It is supposed to influence the survival, health and development of children through lengthening of interpregnancy interval, reducing childbearing at very young ages, reducing births of higher order. It should also protect women from higher-risk pregnancies.

In order to assess the impact and provide planning data for women's reproductive health services, USAID and UNFPA supports the first nation-wide reproductive health survey. The project has multiple donors including USAID, CDC, UNFPA, UNICEF, NGO-JIHA, and Ministry of Health of Georgia. USAID does not fund the program directly: the grant recipient is CDC. The RHS is a sixteen-month program. It started in 1999 and finished in January 2001. On July 52000 UNFPA organized the Preliminary Report Dissemination Seminar.

In 1993 UNFPA supported `Contraceptive Supply Project~ aimed to decrease the number of induced abortions by provision of health care facilities with contraceptives.

In women's consultations are organized special consulting rooms where contraceptives free of charge are given to women who like to use them. Family planning activities are conducted in accordance with WHO recommendations. Despite from this, contraception coverage of women in fertile age is very low.

One of the objectives of breast-feeding program was to reduce consumption of milk powder. According to WHO recommendations, early breast-feeding should be promoted following all spontaneous deliveries. Early initiation of breast-feeding is beneficial for the health of both the infant and mother. If the mother initiates breast-feeding immediately after she gives birth, the nipple stimulation during suckling triggers the release of oxytocin and uterine contractions that help reduce postpartum bleeding.

Law on breast - feeding and supporting mothers during the lactation has been ratified in Parliament and respective counseling centers have been established in Tbilisi and other cities.

National lactation management centers are active in regions and collaborating canters have undertaken training of trainees and other executive authorities with the collaboration of WHO.

With this programs child mortality rate due to diarrhea and respiratory infections was reduced. Commissioning maternity facilities as well as training rural midwives have reduced unsafe delivery cases and as a result have drastically reduced mother and infant mortality rates.

	Physiological deliveries	Pathological deliveries	Caesarian sections
Tbilisi	9794	2817	1489
Adjara A.R.	3469	487	390
Guria	983	169	92
Racha-Lechkhumi Kvemo-Svaneti	334	83	9
Samegrelo	2896	564	247
Imereti	6019	775	889
Kakheti	2789	430	194
Mtskheta-Mtianeti	894	205	30
S amtskhe-Javakheti	2182	417	89
Kvemo Kartli	4253	668	217
Shida Kartli	2811	290	217
Poti	408	84	58
Upper Svanety	79	14	8
Tskhinvali	72	33	1
Total	37469	7113	3950

## Table 138: Deliveries in Hospitals, Georgia. 1998

Source: Centre for medical statistics and information of Georgia, 1999.

### **10.8. Community Care**

Community care services include long term inpatient care, social services for the chronically ill, the elderly and handicapped. Elderly and single citizens are admitted in various health facilities. Health services are provided by health facilities.

Invalids, war and Chernobyl veterans receive social and medical allowances. The number of disabled children has been increased during the last decade. Disability is most wide spread among children with neurological and mental diseases. Disabled children are admitted in special institutions; children home, boarding house or boarding school, were they receive medico-social rehabilitation including social allowances, free medicines etc.

In spite of the above-mentioned social and health protection, elderly people, invalids and chronically ill suffer from various restrictions and social alienation. The prosthesis industry is very weakly developed. There is lack of eye and ear prosthesis. Working places for disabled persons are limited.

The lack of material and financial support is conducive to the inefficient medico-social and educational rehabilitation. Home care for disabled is limited because of the underdeveloped patronage services in all sectors (social protection, health, education). Family members provide home care and relatives are not stimulated. Non-governmental societies of blind, deaf, invalids and veterans are not able to solve the complex problems of the most vulnerable groups in the society because of financial difficulties.

Social care is provided according to an integrated model by The Ministry of Health, Labour and Social Protection.

There is very small number of `homes~ for the elderly people. Long-term inpatient care for the chronically ill, the elderly and those with psychiatric illness continues to be carried out within the acute sector. Nor are there adequate strategies for the care or support for people with mental or physical handicaps, which results in inappropriate use of medical facilities by special needs groups.

Social services in the soviet era were relatively underdeveloped and they have yet to take on the range of responsibilities, (in particular for the elderly) of other of other European countries.

Medical staff from health institutions in accordance with general rules performs home visits. There is no other public community care institutions like nursing homes or day-care

centers in Georgia. The chronically or mentally ill are in a similar position being treated within mainstream hospitals rather than in nursing homes or long-stay institutions. There is no formal system of providing helpers to allow people to continue to live independently in their own homes.

The Ministry of Health regards this situation as inappropriate, and hopes that on-going reforms will reserve beds in secondary/tertiary health institutions for patients requiring medical assistance and treatment while separating out long stay beds from the Ministry of Health into a structure for special care groups.

#### **10.9. Mental Health Services**

Psychiatric service in Georgia is provided in psychiatric hospitals and dispensaries. In psychiatric dispensaries are registered 67 418 patients to 1999 year. Psychiatric dispensaries carry out primary psychiatric examination; render consultations of diagnostic services, treatment, and also dispensary observation.

In-patient psychiatric care is provided for in special climes which are operated as public institutions. Outpatient psychiatric care is provided in special psychiatric dispensers by practicing specialist doctors. They have developed numerous activities for the medical rehabilitation of the mentally ill. The enquiry called for a major reform of the service based on the principle of bringing care closer to the community. As a result of the progress made, the overall length of stay in psychiatric hospitals has been reduced and in some cases it has been possible to avoid hospital treatment altogether.

The patient himself must approve registration of a patient with mental disorders and dynamic observation, and if he/she is under 16, the parents and legal representatives must give consent.

Psychiatric establishments follow the rule that only patients who need long-term active treatment, social and labour rehabilitation should be followed - up. Medical consultative commission at psychiatric dispensary makes a decision on dispensary registration, and on the necessity of clinical observation.

The frequency of examination depends on the patient's state and treatment. In case of stable recovery and improvement of health the patient is followed - up by a consultant only. His medical card is submitted to archives, if he has no problems within a year. The decision of

the dismissal from dispensary register is made by High medical consultative commission attached to the dispensaries or central regional hospitals, including one psychiatrist. Patients with mental disorders, who are not subject to dispensary dynamic observation but who seek help in psychoneurological dispensaries are referred to the group of consulting observations.

Consultations and treatment services are rendered only, if the patient himself asks for it. Outpatient establishments focus their particular attention on the dynamic observation of the patients with threatening behavior for the surrounding people.

In this category there are also patients with potentially dangerous symptoms with imperative auditory hallucination, fixed delirious ideas of jealousy, action, persecution. The particular attention is focused on persons, in whom the above mentioned factors are combined with social disorder and troubles, such as lack of dwelling or family, unemployment, disability, social environmental availability, alcohol and drugs abuse.

Day hospitals are, very important in outpatient psychiatric treatment, as both dispensary (outpatient) and hospital (inpatient) services are combined. The patient feels to be at home and this contributes to the quick adaptation, rehabilitation and promotion, and also maintenance of social links. The patients in day hospitals need active, but not urgent treatment that is why they do not require admission to the psychiatric hospital. Those discharges from psychiatric hospitals go to day hospital for further treatment and care.

The admission to the psychiatric hospital is made by indication (order) of psychiatrists at psychoneurological dispensaries, psychiatric teams at emergency services, psychiatrists at regional hospitals. The admission of a person to psychiatric hospital is carried out on voluntary basis, on his own request; if the patient is teenager then his parents or guardians must give consent.

In the department the patient is examined by the ward doctor and by the head of the department. Thus in the process of hospitalization the patient is examined by psychiatrists and this excludes the possibility of error. The emergency hospitalization of mentally handicapped is done without relatives consent. It occurs when the patient is obviously dangerous for himself and surrounding people. These patients are subject to examination by commission of consultant - psychiatrists, which check the validity of hospitalization. If commissions find it necessary to keep patient for treatment in hospital, they send notification within a day to the chief psychiatrist of the territorial health care body and inform relatives and legal

representatives. If emergency hospitalization is considered groundless and the patient doesn't want to stay in hospital. He must immediately discharged.

#### 10.10. Anti-tuberculosis Care

Anti-tuberculosis care consist of a central level based on the Republican Tuberculosis Dispensary, an intermediate (regional) level with regional Tuberculosis dispensaries, a district level dispensaries, cabinets.

The Republican Dispensary is the referral center for all TB control Activities in the country. It also carries out clinical, epidemiological and research work as well as control of program management.

There are also specialized tuberculosis hospitals. The basic tuberculosis hospitals are quite well equipped for precise differential diagnostics and modern treatment including operating theatres and reanimation departments.

### **10.11. Endocrinology Care**

The endocrinology patients in Georgia are treated in endocrinological consulting rooms of polyclinics and ambulatories. There are also specialized endocrinological departments. Laboratories or lazer therapy, tests of plasma hormones and plasma enzymes are available. Most diabetic people have access to blood glucose monitoring equipment; also anti-diabetic drugs are made available.

### 10.12. Other Special Care

Other special care provided on the basis of dispensary referral structures is provided in areas such as cardiology, oncology, venereal diseases and ophthalmology. The specialized network of AIDS control consists of one Republican center and regional centers with laboratories testing for HIV - infection.

### 10.13. Pharmaceuticals

The pharmaceutical sector in Georgia involves several actors. Georgia has small number of pharmaceutical manufacturing company and tin-Pharmaceuticals needed have always been mostly supplied by import. Private pharmaceutical importers represent the international pharmaceutical companies. These importers act as purchasers and distributors both to the state and to private pharmacies or clinics.

From independence until 1995, the market for medicines was entirely unregulated. Now the market amounts to USD 70-80 million per year and is more effectively regulated. Private and government purchasers (29%) supply Pharmaceuticals, humanitarian aid (41%) and a grey market (30%). The illegally imported drugs in Georgia have a quality certificate but are often unregistered and less expensive. Pharmacy networks and pharmaceutical supply bases were privatized and licensed, this supported the elimination of deficit of pharmaceuticals and related negative processes. The number of licenses has increased by 87% in comparison with the last year. The Ministry of Health also licensed drugs imported by state and private purchasers (USD 24 million) and by humanitarian assistance. The provision of humanitarian aid is unstable and often temporary. The import of 38 humanitarian organizations amounts to USD 33 million per year. The cost to the consumer of legally imported drugs increased by 130% as compared with the previous year.

In 1997 drugs were imported from 46 countries to Georgia versus 30 countries in 1996. The largest providers are Ukraine (19%), Germany (10%), France (9%), Poland (7%) and the Russian Federation (6%). In 1992, the registration of drugs that took place while Georgia was part of the USSR was prolonged until the end of 1998. The process of new registration is now being actively carried out. During 1997 in Georgia 3139 drugs were imported, of which 187 correspond to the 147 generic drugs of the national essential drugs list.

Certain steps were taken to revive the medical industry. The first line of a pharmaceutical factory was launched with quality output that is comparable to standards of quality in modern international drug manufacturing. Investment of twelve million dollars is anticipated to [complete the construction of a second line of this factory. The project Resign is completed for the disposable syringes factory, construction of which is also planned by foreign investment.

Adoption of state regulatory mechanisms due to Georgian Low on `Drugs and drug policy~, establishing price ceiling on most highly used pharmaceuticals is becoming an issue

of critical importance for solving the problem of drug affordability. Ministry of Health carries out certification and controls pharmaceutical supplies. Legislation relating to dialers, manufactures, pharmacies and pharmaceutical activities is enforced by the Ministry of Health. The government also regulates licensing of pharmacies and requires a qualified pharmacist to be in attendance at all times.

The objective of continued reform of the pharmaceutical sector is to provide the population with safe, effective and high-quality Pharmaceuticals and ensuring that they are appropriately prescribed and used. The patient-oriented priorities are as follows.

- Access has the highest priority, as it affects the patient immediately and has a great political and social impact. The Ministry of Health, State Medical Insurance Company, health care providers and suppliers, should contribute to improving affordability for the whole population.
- Better management is important for optimizing the efforts and investments in various areas. A further strengthening of public-sector structures includes the development of the national pharmaceutical industry in Georgia. A substantially improved drug information system will be established. It will contribute to the effective dissemination and exchange of information about the latest developments, drug use, rational selection and prescribing and other topics.
- The pharmaceutical sector should move from quality control to quality assurance. Gradual implementation of the standards of good manufacturing practice, good pharmacy practice and good distribution practice is planned.
- Promotion of rational drug use will include a sustainable programme for using lists of essential drugs at curative and preventive facilities. Better use of pharmacists in the health care system is envisaged.
- Improvement of the system of basic and continuing postgraduate education for pharmaceutical staff will redefine their future functions and roles.

### **10.14. Health Technology**

The quality of health services will be improved by providing appropriate medical and diagnostic equipment and improved infrastructure. The task is to bring the existing network of health facilities in compliance with the real demands of the country through comprehensive renewal programmes. Health facilities' design and construction norms will be adapted according to the corresponding conditions (climatic, seismic and geological) and international

standards of medical and technical supplies and medical technologies. Normative regulation regarding their use will be prepared. A special database about medical and technical information and a coding system will improve the priority use of the basic equipment and medical supplies. Development of a national medical equipment industry is envisaged to promote this process. National and foreign investment will be solicited to finance the rehabilitation of health facilities and the supply of appropriate equipment.

### 11. Human resources for health

### **11.1 Introduction**

The health sector is one of the biggest employers in Georgia. In Georgia it is about 4, 5 % of total work force. The health care sector in Georgia is overstaffed with physicians. There are a highest number of medical students in the European Community. This reflects the soviet approach to health care provision, which was to provide large numbers of health centers, clinics and hospital beds with relatively high staff-to-bed, or staff-to-facility rations since doctors and nurses were "non-productive elements" of society they were cheap to employ, and hospital and clinic directors had few incentives to control staffing levels. This situation has been slow to change.

A number of problems and issues are common to all personnel within the health care sector. Health care staff consider themselves to be underpaid even through their salaries are lower. Health care workers attempt to boost their incomes by working extra hours or carrying out second jobs. These produce system with few incentives for productivity or efficiency. Health professionals lack sufficient managerial and technological support and complain that they spend too much time carrying out tasks which do not require the skills of trained health care staff.



*Fig* 69: *Number of physicians per* 1000 *population in Georgia and developed countries* 1998.

## Source: Ministry of Health of Georgia, OECD health data, 1998.

Whether the higher numbers of physicians are the result of tradition, the lack of control over medical school places or a tendency to substitute staff for capital – intensive approaches, this overcapacity needs to be addressed. Market forces and unemployment among the medical professions do not appear to be reducing the supply of physicians at a sufficient rate, and still reporting increases in the number qualifying. There is a need, therefore, to review recruitment to medical schools, particularly those is private sector.

The largest proportion of recurrent expenditure in health care systems is typically staff costs, making human resources a critical factor to be addressed in any reform of health care

delivery. Successful health care reform involves careful consideration of key human resource implications, incentive policies and industrial relations.

It is the common to divide medical practice into primary care (the initial visit by a patient and follow-up for general services) and specialty care (for complex illnesses) provided by referral. In reality, the distinction is often hard to make, because many people seek their primary care from specialists. As shown in table, the vast majority of physicians are "specialists" in that they concentrate their professional practice on a certain set if illnesses. There are a number of other types of doctors: pediatrics, ophthalmologists...

Given the poor rates of pay of medical staff, poor working conditions and high levels of dissatisfaction reported by existing members of the work force, the apparent popularity of the medical and related professions requires some explanation. This evidence suggests that those applying to join both medicine and nursing are struck by the prestige of their respective professions and believe them to be well respected despite complaints by consumers about the system as whole. Their expectations are linked to a belief that levels of pay will rise in coming years or to an acceptance of the system of under – the table payments. The majority of students continue to express a desire to specialize, and in particular, to enter high tech medicine, despite the hopes of planners and policy makers that primary care will become increasingly important.

	Physicians	Nurses	
Numbers	Per 100 000	Number	Per 100 000
	population		population
21 520	467.37	28 638	621.7

Table 139: Numbers of physicians and nurses in Georgia (1999)

Source: Centre for medical statistics and information of Georgia, 1999.

Management skills and related training needs are also being addressed coherently for the first time although there is still no special career path for hospital or polyclinic managers. As in soviet time, the chief doctor of a hospital or clinic acts as the de facto chief executive officer. They take responsibility for staffing decisions, budgets, the maintenance of facilities and negotiations with third party payers. Now, with support from international partners, programs are being developed which will provide more concrete skills for managers in health services.

Human resources for health care will be subject to reform with regard to the quality and quality of health care personnel. The Ministry of Health has chosen not to undertake detailed workforce plans but gradually to reduce the excess medical staff based on regulated market forces. Through the already established system of accreditation of health facilities and licensing of medical staff, those who cannot attain an acceptable professional quality or for whom there is insufficient work will be leaving the functioning health care system.

It is hoped that reductions in staff numbers together with changes in the payment of physicians, will ultimately create a better rewarded and better motivated workforce who prioritize patient satisfaction and abandon the practice of under-the table payment. An

exercise to analyze staffing levels in all units and re-deploy people from over-staffed to under-staffed areas is being carried out as part of the health care reforms.

An alternative is available: reorientation training of unemployed physicians, both those with inadequate qualifications and others who are excessively specialized to become general practitioners or health managers. Additional training is envisaged for the physicians working in the polyclinics who are willing to become family physicians.

The number of doctors recognized as specialists is high, in part because of the proliferation of specialties and in part because the soviet system, with its specialist ambulatory services, encouraged reference to secondary and specialized care. The Soviet Union certainly undervalued the generalist and primary care physicians. The need to shift the emphasis of provision to the primary sector has now been recognized. With this has come recognition of the importance of training for general practitioners. A tree year training program has been introduced which will make general practice a specialty in its own right. In addition to enhancing the skills of family doctors, it should raise their status.

Redistribution of staff is another aspect to be considered in rationalizing human resources. Deployment strategies involve establishing incentives (financial and non-financial, such as targeted training) to promote work in areas suffering from a lack of staff, especially in rural areas. The principle of competition will be officially implemented for all kinds of health professionals applying for vacant posts. The thorough recruitment process will require analysis of the need for the job, new job descriptions, assessment of candidates and a selection interview. Reimbursement mechanisms will be based on the performance assessment, including new criteria and norms concerning quality of care, severity of cases, permanent improvement of professional qualifications and others. Thus, the rational use of human resources will be achieved through better management.

High-quality training is fundamental to delivering quality health care. The aim is to implement advanced forms of and methods for undergraduate and postgraduate professional training, bringing training programmes into compliance with international standards. State standards for professional training of graduates, training programmes in different medical specialties and standards for appropriate ways of professional training will be defined. The content of training for all health personnel will reflect the needs of society.

## 11.2. Physicians

The number of physicians has increased steadily during the 1970-1980s. There are about 21 520 physicians in Georgia (1999). That is approximately one physician for every 237 people (comparison with USA one physician for every five hundred people). There are 467 physicians per 100 000 population (see Fig). These still remains relatively higher rate that in the United States (1.9 times more), Germany (1.8 times more), Canada (2.2 times more) and the United Kingdom (4.8 times more). In Western Europe, the highest numbers of physicians per 1000 population are in Italy (4.7 - 1994 year), Spain (4), and Greece (3.9). This figure is expected to decrease to due to a change in policy, which has resulted in more restriction on university entry to the medical doctor course.
The higher employment ratios for physicians in Georgia led to higher levels of unemployment among physicians. The ratio of physicians is even higher than in other services (Transport, Defense, Internal Affairs and Security) are included. An apparent nurse to doctor ratio is approximately 1.3:1. The productivity of physicians in Georgia is low because they often perform tasks that would be performed by nurses or other paramedical personnel in more affluent countries. Georgia has fewer supporting staff than do Western Europe and other industrialized countries. For example, the ratio of physicians to nurses in Georgia was 1:4, which was about one that in Canada (4:4) or other countries in Europe.

		1	1	1		1	1
	1988	1994	1995	1996	1997	1998	1999
Internal medicine	4471	3340	3135	2345	2917	2473	2625
Surgical specialties	1625	986	813	855	1074	1095	1128
Pediatricians	3221	2784	2487	2129	2405	2271	2309
Infectionists	368	422	425	345	396	400	412
Otolaryngologists	462	331	327	303	360	360	377
Neuropathologists	718	687	651	608	723	712	709
Ophtalmologists	457	471	371	327	324	388	387
Dentists	2187	1891	1827	1634	1749	1614	1698
Obstetricians	1598	1493	1511	1429	1636	1663	1693
Phthisiologists	336	259	270	233	217	219	208
Venerologists	407	321	311	264	328	311	312
Endocrinologists	240	279	232	240	281	267	271
Total number of	26179	22578	21252	19062	21706	20824	21520
Physicians							
Nurse and midwives	56361	43321	38541	29978	29775	28642	28638

Table 140: Numbers of physicians and nurses in Georgia (1998-1999)\*

Source: Centre for medical statistics and information of Georgia, 1999.

Data for 1988-1996 concern only medical personal working in State Medical Facilities.

Table 141: Numbers of physicians per 10 000 population in Georgia and USA

	Georgia	USA	Comparison
Administration	1.7	0.6	2.8
Family doctor	-	2.9	-
General internal	6.1	2.3	2.6
medicine			
Pediatricians	5.4	1.3	4.2
Obstetricians	2.8	1.1	2.5
General surgery	1.8	1.1	1.6
Specialties internal	4.2	1.8	2.3
medicine			
Surgery specialties	3.2	2.3	1.4
Psychiatry	0.7	1.2	0.6
Neuropathologists	1.3	0.3	4.3
Anesthesiology	1.6	0.9	1.7
Dermatology	0.6	0.3	2.0
infectionists	0.8	0.1	8.0

Source: Ministry of Health of Georgia. National Management Center. 1998



# Fig 70: Numbers of physicians in Georgia (1913-1999)

Source: Centre for medical statistics and information of Georgia, 1999





	physicians	Per 100 000	nurses	Per 100 000
Georgia	21520	467.37	28638	621.7
Tbilisi	9991	842.7	9294	783.9
Achara A. R.	1220	333.4	2772	758.9
Guria	444	308.55	814	565.7
Racha-Lechkhumi	178	350.4	360	708.7
Kvemo Svaneti				
Samegrelo- Upper	980	230.59	2152	506.4
Svanety				
Mtskheta-Mtianeti	340	269.8	855	499.8
Samtskhe-Javakheti	389	181.4	1021	438.15
Kvemo Kartli	1218	222.6	3717	466.67
Imereti	2293	308.3	1757	476.2
Kakheti	1297	323.4	1932	353.13
Shida Kartli	793	237.1	1511	451.7
Poti	215	416.7	383	742.3
Upper Svanety	29	193.3	67	446.7
Tskhinvali	35	-	30	-

Table 142: Members of physicians and nurses by regions (1999)

Source: Centre for medical statistics and information of Georgia, 1999

There are also relatively high numbers of clinic psychologists, dental hygienists, dental laboratory technicians, health inspectors, medical laboratory analysts, medical laboratory technologists, occupational therapists, operating department assistants, optometrists, physiotherapists, radiographers, and pharmacists.

#### 11.3. Nurses

The numbers of nurses to patients is also relatively high when compared with Western Europe countries, excluding Scandinavia and Benelux countries. There were 6 nurses per 1000 population in 1999 year. This gives an apparent nurse to doctor ratio of approximately 1.3:1, which is unusually lower. Nurses in polyclinics and hospitals are little more than doctors and have almost no role in clinic work. The only instances of nurses taking a part in patient management and treatment decisions is in the feldsher-midwife model were following additional training of between one and two years, nurse-practitioners are able to take on the first call primary care role.

One of the basic mechanisms of the health reform should be the increasing leadership role of nurses in primary health care facilities, public health and self-supporting hospitals. Training nurses about modern principles of health management, epidemiology and the role of nurses will empower them to make independent decisions and become experts in mental health, community nursing and public health.



Fig 72: Number of nurses in Georgia (1913-1999)

Fig 73: Numbers of nurses per 10 000 population in Georgia (1913-1999)



Source: Centre for medical statistics and information of Georgia, 1999

	Country	Physicians	Nurses
1	Italy	4.7	3
2	Spain	4	4.1
3	Greece	3.9	2.6
4	Belgium	3.8	7.7
5	Austria	3.3	4.3
6	Norway	3.2	12.7
7	Germany	3.2	3.9
8	Switzerland	3	7.8
9	Sweden	3	7.1
10	Portugal	2.9	2.7
11	Denmark	2.8	8.3
12	France	2.8	3.7
13	Iceland	2.8	7
14	Finland	2.8	10.7
15	Netherlands	2.5	9
16	Luxemburg	2.1	9.7
17	Ireland	1.7	6.5
18	United Kingdom	1.6	5
19	Turkey	1	0.9
	Western Europe	2.9	6.2
1	Lithuania	4	9.3
2	Hungary	3.4	3
3	Bulgaria	3.3	6
4	Slovakia	3.2	7.1
5	Estonia	3.1	4.9
6	Latvia	3	4.9
7	Czech Rep	2.9	8.3
8	Slovenia	2.2	6
9	Macedonia	2.2	2.7
10	Poland	2.1	5.3
11	Croatia	2	4.1
12	Romania	1.8	3.9
13	Albania	1.3	4.5
	CEE countries	2.7	5.4
1	Georgia	4.4	8.4
2	Ukraine	4.3	11.3
3	Azerbaijan	3.9	9.3
4	Russian	3.8	6
5	Belarus	3.8	8.9
6	Moldova	3.6	9.9
7	Kazakhstan	3.6	6.5
8	Turkmenistan	3.5	10.9
9	Uzbekistan	3.3	9.5
10	Kyrgyzstan	3.1	8.5
11	Armenia	3.1	7.3
12	Tajikistan	2.1	6.7
	CIS countries	3.5	8.6
	Average	3	6.7

Table 143: Numbers of physicians and nurses per 1000 population in the WHO European region

#### **11.4 Medical education**

The general education policy of the Georgia is determined by the Ministry of Education. The Ministry of Health is responsible for graduate and postgraduate professional training of physicians, pharmacists, dentists, medical nurses and midwives.

According to the data, provided by the Ministry of Education, by December, 1995, 36 registered medical schools and 71 registered nursing schools were functioning in Georgia, 36 medical schools were state-owned and 33 private. Altogether there are 11.970 students in these schools. Among 71 nursing schools, 14 are state-owned and 57- private, with total number of students more than 12 000.

The education and training of doctors is carried out at the Tbilisi State Medical University which offers a 5 year undergraduate course with additional a minimum 2 years of postgraduate residence for those going into specialties. The clinic input for both graduate and republican and municipal clinics and hospitals in Tbilisi provide post-graduate training.

A State programme of standard medical education is mandatory, involving 5 years of academic training followed by a minimum 2 years of internship before qualification. All students at state or private institutes are to make a uniform final examination. In 1998, of 2000 students in their final year at private colleges, only 183 opted to make this exam, and 70 passed.

There are a further special medical colleges which prepare "middle level" staff i.e. feldshers, medical nurses (general and pediatric), midwives, laboratory assistants, pharmacists, and dental assistants. The duration of study in these areas is from 2 to 3 years.

The existing system of medical education in Georgia doesn't meet modern international standards and the current increasing requirements. Very high prestige of medical profession, implicitly of receiving diploma, and consequently, the right to independent practice, shortcomings in the advanced professional training system in near past caused overproduction and low skills of health personnel. Emergence of a large number of private medical schools has extremely strained the situation. Finally, the anarchy in the system of medical education led to the necessity of this fundamental reorganization.

According to the results of analysis of structure of medical education in different European and American countries, based on EU recommendations and taking into account the number of population in Georgia, Georgian health system needs 300-400newly graduated physicians and 900-1200 nurses annually.

Over the last few years, serious employment problems have emerged for health care providers due to the "hyper production" of medical graduates. In the process of reforms the Ministry of Health was obliged to make complicated and unpopular steps. During this period has taken decisive steps to reduce the overproduction of doctors. The number of admissions to the Medical University has been reduced and there is increasing focus on optimizing the quantity of providers and meeting health care needs.

To reduce the excess supply of physicians and to stimulate higher quality levels of medical education, an extended staff meeting of Ministry of Education and Ministry of Health is currently testing and certifying colleges, including 58 private colleges, most of which cannot afford qualified teachers, libraries and equipment and the necessary variety of patients for clinical training. Certification is procedure for evaluation of the level of knowledge of medical personnel and ability to use their professional skills. Licensing is giving the certified medical personal the right to professional activity.

The success of the personal certification process is closely linked with medical certification, as quality of health services for the population is highly dependent on the qualifications of human resources. Every physician and all middle level medical staff have to take "refresh" training courses in their field once every five years. Completion of such continuing education is part of the licensing system for all practicing physicians in the medical facilities. The core challenges facing the human resource specialists of the Ministry of Health include the reduction of staff numbers and the creation of sustainable levels. However, they are also addressing the need to enhance quality and effectiveness of care by providing appropriate specialist training.

Licensing health institutions determine the improvement of quality of care and control over it, as well as optimum use of resources, which, in turn, will guarantee achieving the major goal of health reform strengthening the effectiveness of provision of population with health care. Licensure is a collective extension of the doctor-patient relationship of agency; it helps to solve the problems caused by uncertainty and information asymmetry.

The License is issued for specific volume of activities and the specified period of time, upon expiration of which, re-certification in accordance with upgrade standards is requested.

In order to ensure certification and licensing of health care employees was established the educational standards and criteria for assessment of knowledge. The process of certification and licensing of health system employees carried out with direct participation of experts in corresponding areas and initiation of this process globally related to changes in the system of medical education.

In the frame of the partnership program "Tbilisi-Atlanta" Training Center of Emergency Medical Care and National Informational Learning Center have been established and equipped by modern technical means, Association of Nurses began functioning, the programs of retraining of nurses have been elaborated.

In addition to the introduction of post-graduate training for medical specialists, the Ministry of Health is considering the most appropriate training package for general practitioners and reviewing the experience of pilot areas to clarify the role and training needs of family doctors. New forms of employment, in particular the introduction of contract based work, are being considered and general practitioners in pilot areas have moved over to new contracts.

There is a growing emphasis too, on the need for management training for physicians if they are to respond to the strategic and financial demands of their changing roles and in the pilot areas senior medical staff has been trained in management and health economics. The National Health Management Centre will manage the relationships between the decisionmakers and those who are expected to implement policy by:

- Ensuring co-ordination between the activities of the departments of the Ministry of Health and those of the health administrations at the regional and municipal levels;
- Ensuring the timely implementation of the activities for reforming the health system;
- Ensuring quality standards in implementation;
- Monitoring and evaluating the implementation and, in accordance with the results achieved, to revise ineffective plans;
- Advising the Minister for Health to ensure intersectional coordination in implementation;
- Coordinating the contributions of international organizations in implementing the Plan; and

 Managing the organizational context and the psychological environment in which changes can occur.

During this period nearly 400 young physicians are trained are the best universities of western countries. Retraining programs of public health physicians, managers, epidemiologists, statisticians and others are under way. This is occurring with support and collaboration of foreign specialists.





Source: Georgian health system reorientation: major directions. Ministry of Health of Georgia. National Health Management Centre. Tbilisi. 1996.

#### **11.5. Health Research**

Currently there are 31 research institutions of medical profile (including State Medical University and Medical Academy), where 5824 staff members engaged in research are employed. There are 117 members of different academies of medical and biological profiles, 122 professors, 191 Doctors of Medical science and 1244 Candidates of Medical Science among them.

During the period of 1990-1995, 341 these for degree of Candidates of Science and 136 doctoral theses defended, 104 inventions and 56 proposals for technical innovations were registered, 167 methodological recommendations and instructions were published.

All health research institutions are under the authority of the Academy of Science and Ministry of Health, who co-ordinate and finance all health research in Georgia. As with all other scientific research, funding for health research has been drastically cut in recent years. Some institutions have attempted to move towards self-financing, creating small pharmaceutical factories, diagnostic laboratories and chemists.

Prior to the collapse of the Soviet Union the topics of research used to be planned, approved, funded and controlled in a centralized way by Ministry of Health of the USSR. Beginning with 1992 research programs carried out in Georgia were planned and registered in the Ministry of Health of Georgia. During 1992-1994 298 projects were registered. 54 of them were completed during 1992-1994, 166 – during 1995. These activities were carried out under budgetary financing, providing funding for institutions independently from the number if registered projects, rather than for specific work.

In the process of the reform, organizational changes, closely related to implementation of new model of financing are expected, which will inevitable impact on the future of research institutions and their staff.

By the Decree of the State of July 5, 1995, the Ministry of Health was charged to prepare project of short-term (2-3 years) state program for maintain and development of Georgian medical science.

In order to implement the above Decree, intensive work with participation of leading scientists was carried out, resulting in definition of the following major issues related to organization of medical science:

- Defining priority directions in medical research;
- Development and promotion of research culture and standards making use of suitable research methods;
- Optimization of functioning of research institutions;
- Training research staff;
- Development of mechanisms for funding research in medicine;
- Establishing communication with international organizations;

Finally, the following areas were defined as research priorities

- Scientific support of current health reform;
- Scientific support of medical education;

Social needs and existing economic situation of the country are taken into consideration in defining health research policies. Some of the main research objectives are as follows:

- Acquiring new knowledge about people's health and ill health and the ability of the human organism to adapt to environmental changes;
- Searching, developing and implementing new methods for preventing, diagnosing and treating diseases, rehabilitating people and expending their active life;
- Involving practicing physicians in health research work;
- Providing a well functioning knowledge management system;
- Creating and following up the implementation of evidence-based medicine standards;
- Improve reporting system, statistical information registration through adoption of modern data system.

The grant based financing method was adopted for improving the management and process of medical research. Though due to the continuous lack of financial resources this method was not fully utilized. Georgian scientists initiated successful professional cooperation with foreign partners and the number of grants obtained due to this cooperation is increasing yearly, which may serve as an evidence of the international recognition of Georgian intellectual potential. The Soros Fund and other foreign organizations provided grants for some of the most promising research. In 1998, GEL 670 000 (USD 335 000) was allocated from the state budget to finance competitive research grants on 52 topics at 26 institutions. Funds however are transferred late and only in part. Many researchers have been forced to stop their scientific work and to join the private sector or to leave the country.

Despite the obvious difficulties, the rate of publication and participation in international conferences has increased notably over the last year. The independence and authority of committees assessing higher research degrees and their demands in terms of the quality of research have increased.

The new legal basis for health research development will protect intellectual property rights and provide correct criteria for evaluating research work funded through the state and on a competitive basis. Attraction of external funding, support for young promising scientists and carrying out scientific meetings is envisaged.

#### **11.6 Professional Groups**

The Soviet Union had a wide range of scientific and professional associations but they never established a tradition of genuine independence. A number of associations exist for the various professional groups. These include the Medical Association of Georgia, Dental Association, Nursing Association of Georgia, Midwifery Association and a number of specialist associations are also active mostly in the field of providing continuing education. Some of these associations carry out union –like activities.

The Georgian Medical Association is beginning to voice a distinct and united professional view on medical and health policy issues. Nurses and midwives have proved less successful in articulating or securing recognition for their collective views, while specialist professional groups still tend to be divided along regional lines. These limitations notwithstanding, doctors are lobbying on health legislation and are increasingly being approached by the insurance industry with a view to securing their support.

The Soviet tradition of clinicians taking on research and policy making roles persists, and although policy institutes are restricted in their access to research funds, contributions to the policy debate are normally informed by the medical experience of personnel. It is commonplace for doctors to enter politics and the Ministry of Health is always medically qualified. This secures the medical professions a certain degree of access to decision-makers and ensured a sympathetic hearing of professional concerns.

#### **12. HEALTH CARE FINANCING**

#### **12.1. Introduction**

Economic and financial aspects are among the most the most important constituents of health system reorientation. Due to the specific character of health sector, market economic relations in this field develop less freely.

In Georgia, the trends in health care expenditure can be divided into three distinct periods. The first was the 1960s and 1970s, when health spending rose at a relatively rapid pace. The second period was in the 1980s, in which health care spending in Georgia was broadly stable. This overall economic stability lasted until late 1980s.

The third period began in late 1980s, when Georgia has significantly reduced capital spending. Until 1980s, capital investment as a share of total public expenditure on health ranged more level, then in early 1990s. During the transition capital spending declined in real terms throughout 1994 year. This process reflected in response to the economic crises.

The country denied both the former soviet bureaucratic and strictly centralized management in public health and budget financing of the system itself. In Georgia, like in all the postcommunist countries, the permanent budgetary crisis, the political situation and the aforementioned troublesome legacy gave rise to the misbalance between the material, human and financial resources available to the health care system and the actual needs and requirements of the population.

It became essential to work out such a model for financing health care system, which would provide adequate medical service to the population with due account of the existing financial realities in the country. After reforms, existing state financing forms and methods of state financing of health care system underwent radical changes. Following strategic objectives and problems have been identified and solved during this period:

- Financing system of medical facilities has been changed, economic methods of management has been implemented; payments for a volume of provided services considering quality of those services;
- Legislative documents on Compulsory Medical Insurance, licensing of medical organizations and medical care quality assessment have been adopted.
- Scheme of financial interrelations between medical organizations and structures of medical organizations and structures of medical insurance have been worked out.

The health care system that had been hitherto funded from the central budget was transferred to more flexible and result-oriented financial system, with basic program-based budgets, allowing more effective and adequate distribution of public resources. Within the framework of the concept of the reform, the state assumed the responsibility to balance between the needs on medical service and available public resources.

Georgia has decided transformation of national health services system into a form of social insurance system (so called "Bismarck's" model), with substantial changes in roles and

responsibilities of the central governments and as on outcome, the responsibility for people in health would be equally shared by the state, the employer and the individual himself.

Social insurance evolved from risk spreading by groups of individuals, who voluntarily pooled in order to have some financial security in the event of hardship. Social health care system started up in Germany in 1883, and made worker's membership of the previously voluntary funds compulsory. Accident, old age, long-term disability, survivors and unemployment insurance legislation was subsequently enacted in the years up to 1927. It was financed partly (1/3) by employer and partly (2/3) by employee. The role of government in Bismarck's social insurance system is minimal as compared with other systems. Government defines conditions form management of hospital funds, provider and patient relationships, but it does not intervene direct in health care funding and provision. Hospital funds were responsible for fulfill funds was based on contacts. Insurance was obligatory only for workers having income lower than a certain level. Bismarck's concept of social insurance became a model for many countries and by 1930 social insurance widespread throughout Europe. In all cases, the evolution of social insurance involved the inclusion of more groups in insurance schemes, thus gradually increasing coverage of the population.

Social insurance system in Georgia differs significantly. Many of the differences derive from the social and economic conditions. The necessary legal preconditions were laid down in 1996 when a compulsory health insurance proposal was submitted to the parliament. A supplementary proposal on State Medical Insurance Company was submitted at the same time. The legal framework was completed in 1997 by passing act "Law of Georgia on Medical Insurance"

#### **12.2 Health Care Benefits**

The Constitution of the Republic of Georgia and Law on the Health Care guarantee each citizen, irrespective of personal income, the right to a minimum volume of free health care. The economic disruption facing the country on its independence meant that health institutions were no longer able to provide assistance at a maximum level of quality. Georgia is under severe financial pressure to limit public sector spending by reducing benefits. In order to alleviate the situation and in response to the extreme economic conditions facing the newly independent Georgia state the Ministry of Health submitted to the government a draft "basic package" of services which would be provided free of charge and another list of services which would have to be paid for. It helped the country to concentrate on main health problems of the population and development of Basic Benefit Package for the population, which is financed by the Federal and Municipal programs.

Basic package means that service having utmost influence on population's health should be basically financed by public resources and it will give opportunity to obtain maximal effect by means of existing limited financial resources.

Taking into account social, economic and political realities of the country government determine four basic targets for health care financing:

1. Financing of services mostly required by poor section of the population and distinguished by the most elastic prices, i.e. at decrease of such service prices demand from poor sections of population rise much faster. Selection of such a target is based on the principle of social insecurity, or it gives government the ability to help socially insecure sections and give them opportunity to receive medical service in good time.

2. Financing of those health care facilities and services that have maximal effects first on public health and then on personal health are: environmental safety provision, struggle against infection carriers, clean drinking water, education of the population on sanitation, etc... Immunization of the population may also be considered here, but it's more quasi-public health because common health is achieved by vaccination of the individual and not vice-versa. This target of health care financing is based on the principle of common health priority over personal one, i.e. the state takes care of those things that are of benefit more for community than for a person.

3. Financing of treatment of those diseases that prevail in the population of the country, i.e. determination of diseases that do most harm to the economics of the country. This target of financing is founded on the epidemiological status of the population and finances are directed to those pathologic conditions that disturb populations most of all. This goal is very pragmatic; its points of departure are only epidemiological situations and economic effectiveness.

4. Financing of regions with the lowest economic potential in a country. It is usual that in regions with a low economic potential the economic state of population is also poor. The latter condition directly impacts the low level of health care utilization by the population. In the end results in a negative influence on that population's health. The government has the ability to choose target regions based on geographic principle and purposefully devote health care resources to such regions.

Setting priorities involves several levels of decisions, ranging from the overall funding of health services to treatment of individual patients. Priority setting is the responsibility of Ministry of Health, who considers the options available and weight a range of objectives. Decision- making in the area inevitable involves trade-offs between objectives as a balance is sought among universal coverage, comprehensiveness of services, equity, efficiency, cost containment and broader social values.

In Georgia particular priority has been attached to care for vulnerable groups. The first program, which was a major element of to be financed by the Insurance system, was financing the special state program for socially vulnerable population. A commitment also has been made to give priority to the diseases of social importance.

Health care in The Georgia is divided into federal and municipal responsibilities. The statutory health care system guarantees the insured population a comprehensive range of services of benefits. According to the State order, the State Medical Insurance Company implements what services are included under statutory health insurance.

Regional (municipal) Fund underwrites care for those who have not arranged insurance cover for themselves. All districts and municipalities are expected to fund the basic package of care as determined by the Ministry of Health.

The actual structure, number and composition of the programs selected the Ministry of Health for inclusion in the "basic package", became the subject of intense. Concern about existing inequities in health services, in terms of access to essential, high-quality care, has been replaced by cost-containment as the top health related priority In Georgia. These are the consequences of market-oriented competitive reforms. The implications and cost-benefit analysis under laying the decisions regarding the allocation of funds among these programs were more political, rather than based on the "medical need" or economical efficiency.

In Basic Benefit Package Is Included:

a) Basic public health measures, such as immunization, sanitary and epidemiological services;

- b) Limited primary care in policlinics;
- c) Specified in-patient services in hospitals.

Since introduction of the basic package in 1995, when package was comprised from 9 Federal and obligatory Municipal Programs, in 2001 the package was gradually expanded to 37 Federal and 5 Municipal Programs, about 70 270 000 GEL (app. 35 135 000 US\$). Federal Programs are grouped as preventive, insurance and so called healthcare programs.

	Programs	Financed by	Executed by
	Public Health Care Programs	13 100 00	
F E	Immunization Prevention of infectious disease Health promotion Prevention of STD 7 Prevention of AIDS Epidemiological surveillance Safe blood, Screening	Central budget transfers (app. 22,5% of consolidated Central Health Budget (CCHB)	Public Health Depart. (PHD)
D	Miscellaneous Health Care Programs	3 900 000	
E	Monitoring of health care programs Statistic and information system	Central budget transfers (app. 6.7% of consolidated	
R	support program Program for catastrophic events and	Central Health Budget (CCHB)	Ministry of Health
A	natural disasters		
L	Medical science and education Management of reforms Provision of forensic expertise		
	State Medical Insurance Programs	41 100 000	
Р	Psychiatric program		
п	Ptiziatric program	(Ame 70.70) of	
K	Ubstetric program	(App. /0,/% of	
0	Program for vulnerable population	Health Budget (CCHB)	State
Ŭ	Treatment of oncology patients	Obligatory Medical Insurance	Medical
G	Treatment of infectious diseases	Premium	Insurance
	Renal dialysis program	"3%+1%" (app. 57,4%	Company
R	Treatment of ischemic heart disease	of SMIC budget)	(SMIC)
	Organs transplantation program	Central Budget	
A	Program for refuges population in	Transfers (app. 42,6%	
ъл	Samegrelo-upper Svanety region	of SMIC budget) in total	
IVI	Tekhinyali region	40,0% OI CCHB	
S	Provision of selected chronic patients		
<sup>D</sup>	with pharmaceuticals		
	Municipal Programs	12 170 000	
M	Outpatient care for population		12
N N	Critical care for population	Local (Municipal)	Municipal
I	Provision of painkillers for oncology	Budgets	Funds
	patients		
D			
I.	Program for preparation of		
A L	Program for preparation of adolescents for compulsory military		

At a primary care level the package includes physician's consultations, minor treatment and preventive programs including immunization and screening. Patient out- of- pocket must pay for the cost most pharmaceutical prescribed to outpatients.

Last year state initiated Primary Health Care program, which financing 660 facilities and assures of almost 2 million populations to primary care.

Within the hospital setting, these are wide of State Medical Insurance and Municipal Programs, which covers diagnostic and therapeutic interventions and most complex procedures. Inpatient drugs are included in the basic package.

It can be seen that sometimes are not covered, such as:

- cosmetic surgery
- Homeopathic or alternative therapies and other forms of "non-professional" medicine.
- Dental services
- Medical prostheses including dentures
- Rehabilitation or convalescence, massage and reflexology
- Pharmaceuticals for out-patients.

A number of government health care services including pharmaceuticals, is only made available to specific categories within the population.

The Ministry of Health further believes that with the recovery of the Georgian economy the basic package of benefits may be extended to cover a wider range of interventions. However, the immediate priority remains to ensure the rational delivery of essential, core services to the population within existing resource constraints.

#### 12.3. Health Care expenditure

During transition, pre-paid resources as a share of total health sector revenues declined. In 1994 per capita spending for health care by public payers reached alarming levels 0.81 US\$. After the political and financial stabilization, started in 1995, the Ministry of Health embarked on a comprehensive reform program. Studies carried out by experts of Ministry of Health and international organizations made obvious, that about 300 million GEL (148,8 US\$) is spent on healthcare in Georgia. It makes approximately 60 GEL (29,8 US\$) per capita, 87 % of this amounts is out of pocket payment. Out-of-pocket spending includes:

- "formal" cost-sharing for government programs;
- "informal", illegal payment demanded by providers for services covered by government programs;
- Other legal, direct payments for services not covered by the government's programs.

	GEL	US\$
GDP	5513,2	2734,7
Total health care expenditure (million)	300	148,8
Per cent of GDP	5,4%	
Per capita (million)	60	29,8
Public health Care expenditure (million) by plan	65,159	32,32
Public health Care expenditure Per capita by plan	11,97	5,9
Public health Care expenditure as% of total health	21,7%	
expenditure (by plan)		
Public health Care expenditure (million) in fact	42,187	20,93
Public health Care expenditure Per capita in fact	7,95	3,97
Public health Care expenditure as% of total health		
expenditure (in fact)	14,1%	
Lari exchange rate to US\$ (average)	2,016	

Figure 145: Total health Care expenditure in Georgia 1999

Public expenditure In Georgia as a share of total health expenditure is one of the lowest in Europe. It was adversely affected by the ethnic conflict of the early nineties and the enormous economic upheaval of the post-independence era. Inflation and the collapse of much of the country's industrial base have both reduced GDP in real terms and devalued the health share of revenue.

During 1995-2000 years public spending in Georgia increased approximately from 5,72 GEL (4,45 US\$) to 30,86 GEL (US\$ 5,7) per capita. While clearly having made progress in reforming the health system, most of these reforms have not reached the level of the consumer and have yet to have an impact on the quality or accessibility of health care.

	1995	1996	1997	1998	1999	2000
GDP (million GEL)	3694	3793,2	4518,8	4863,4	5513,2	6186,9
GDP US\$	2874,7	3010,5	3478,7	3493,8	2734,7	3093,4
						5
Public health Care	31,009	33,803	61,622	66,529	65,159	61,720
expenditure (million GEL)					5	
Public health Care	24,13	26,78	47,47	47,79	32,32	30,86
expenditure (million US\$)						
Per cent of GDP	0,84%	0,89%	1,36%	1,38%	1,18%	0,99%
Per capita (million GEL)	5,72	6,24	11,36	12,24	11,97	13,4
Per capita (US\$)	4,45	4,94	8,75	8,8	5,9	6,7
Lari Exchange rate to US\$	1,285	1,262	1,298	1,392	2,016	2,0
(average)						

Country	1970	1975	1980	1985	1990	1991	1992	1993	1994	1995
Austria	5,4	7,3	7,9	8,1	8,4	8,5	8,9	9,4	9,7	9,6
Belgium	4,1	5,9	6,6	7,4	7,6	8	8,1	8,3	8,2	8
Denmark	6,1	6,5	6,8	6,3	6,5	6,6	6,7	6,8	6,6	6,5
Finland	5,7	6,4	6,5	7,3	8	9,1	9,3	8,8	8,3	8,2
France	5,8	7	7,6	8,5	8,9	9,1	9,4	9,8	9,7	9,9
Germany	5,9	8,1	8,4	8,7	8,3	9	9,3	9,3	9,5	9,5
Greece	3,4	3,4	3,6	4,1	4,3	4,3	4,5	4,6	5,2	-
Iceland	5	5,8	6,2	7,3	7,9	8,1	8,2	8,3	8,1	8,1
Ireland	5,3	7,6	8,7	7,8	6,7	7	7,3	7,4	7,9	-
Italy	5,1	6,2	6,9	7	8,1	8,4	8,5	8,6	8,3	7,7
Luxembourg	3,7	5,1	6,2	6,1	6,2	6,2	6,3	6,2	5,8	-
Netherlands	5,9	7,5	7,9	7,9	8,4	8,6	8,8	9	8,8	8,8
Norway	4,6	6,1	6,1	5,9	6,9	7,2	7,4	7,3	7,3	-
Portugal	2,8	5,6	5,8	6,3	6,6	7,1	7,2	7,4	7,6	-
Spain	3,7	4,9	5,7	5,7	6,9	7,1	7,2	7,3	7,3	7,6
Sweden	7,1	7,9	9,4	8,9	8,6	8,4	7,6	7,6	7,7	7,6
Switzerland	5,2	7	7,3	8,1	8,4	9	9,4	9,5	9,6	-
Turkey	2,4	2,7	3,3	2,2	2,9	3,4	2,9	2,6	4,2	-
United Kingdom	4,5	5,5	5,6	5,9	6	6,5	7	6,9	6,9	6,9

Table 147: Total expenditure on health as a percentage of GDP in western European countries, 1970-1995

Source: OECD health data 95. Paris, Organization for Economic Co-operation and Development, 1995.

Tab: Public expenditure in health in selected countries

	1960	1970	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Australia	2,2		4,4	5,4	5,3	5,5	5,5	5,4	5,5	5,5	5,6	5,7	6
Austria	3	3,3	5,2	5	5,2	5,2	5,5	5,9	5,9	6,2	6,2	5,7	5,8
Belgium										6,1	6,4	6,1	6,1
Canada	2,3	4,9	5,4	6,2	6,7	7,3	7,5	7,2	6,9	6,6	6,4	6,3	6,5
Denmark			8	7,4	7	7	7	7,2	7	6,8	6,8	6,8	6,8
Finland	2,1	4,1	5	5,6	6,4	7,3	7,3	6,3	5,9	5,7	5,8	5,6	5,3
France	2,4	4,2	5,8	6,4	6,7	6,9	7,1	7,4	7,3	7,5	7,4	7,3	7,3
Germany		4,6	6,9	7,2	6,7	7,1	7,6	7,5	7,6	8	8,3	8	7,8
Greece	1,5	2,4	3,6		4,7	4,7	4,2	4,7	4,7	4,8	4,9	4,8	4,7
Hungary						5,8	6,1	6,1	6,5	5,7	5,4	5,2	5,2
Iceland	2,5	4	5,4	6,2	6,8	7	6,9	6,9	6,8	6,9	6,8	6,7	7
Ireland	2,8	4,2	6,8	5,8	4,8	5,2	5,5	5,5	5,5	5,3	5,1	5,3	5,2
Italy	3	4,5	5,6	5,4	6,3	6,5	6,4	6,2	5,8	5,3	5,4	5,6	5,5
Japan	1,8	3,2	4,6	4,8	4,7	4,8	4,9	5,2	5,4	5,6	5,7	5,9	5,8
Korea				1,1	1,7	1,5	1,6	1,6	1,6	1,7	1,9	2,1	2,4
Mexico					1,8	2,2	2,6	2,5	2,6	2,3	2,2	2,3	2,6
Norway	2,3	4	5,9	5,7	6,4	6,7	6,9	6,7	6,6	6,7	6,6	6,7	7,1
Poland					4,8	5	5,1	4,7	4,3	4,4	4,7	4,4	4,2
Portugal		1,6	3,6	3,3	4,1	4,3	4,2	4,6	4,6	5	5,1	5	5,1
Spain	0,9	2,3	4,3	4,4	5,2	5,3	5,6	5,5	5,6	5,5	5,5	5,4	5,4
Sweden	3,3	5,9	8,4	7,9	7,6	7,4	7,4	7,4	7	6,9	7,1	6,8	6,6
Switzerland	1,9	3,1	4,6	5,1	5,7	6,1	6,5	6,7	6,7	7	7,5	7,6	7,6
Turkey		0,9	0,9	1,1	2,2	2,4	2,5	2,5	2,5	2,4	2,7	3	3,5
United	3,3	3,9	5	5	5,1	5,4	5,9	6	5,9	5,9	5,9	5,6	5,7
Kingdom													
USA	1,2	2,5	3,6	4	4,7	5,2	5,5	5,7	5,9	6	6	5,9	5,8

Source: OECD Health data, 1998

# 12.4. Levels for financing

There are two main levels for financing public health programs: central (Federal) and local (Municipal). Central Health Budget is still the dominant source of health financing, than Regional Municipal Funds. In 2001 Central Health Budget expenditure accounted on 82.7 per cent of total public health expenditure.

Table 148: Funding, of Federal and Municipal Health Programs 1000GEL, by plan (1994-2001 year)

	19	94	19	95	19	96	19	97	19	98	19	999	20	00	20	01
Source of funding	1000 GEL	%	1000 GEL	%	1000 GEL	%	1000 GEL	%	1000 GEL	%	1000 GEL	%	1000 GEL	%	1000 GEL	%
Central Health Budget	1901,2	100	18700	60	21494	63,6	49313	80	54220	81,5	52800	81,3	49550	80,3	58100	82,7
Regional Municipa l Funds	0	0	12309	40	12309	36,4	23309	20	12309	18,5	12170	18,7	12170	19,7	12170	17,3
Total	1901,2		31009		33803		61622		66529		65159, 5		61720		70270	

Table 151: Funding of Federal and Municipal Health Programs (1999 year)

P	rograms		GEL		% of CCHB				% of CTHB			Fin ance d
	Plan     Execution     Payroll     Plan     Execution		Execution	Payroll	Plan	Execution	Payroll	execution	by			
	Public Health Care Programs	5800000	3223700	1417900	11	6,7	4,7	8,9	5,4	3,4	44%	PHD
Federal Progra	State Medical Insurance Programs	42450000	40387000	27161000	80,4	83,8	89,2	65,3	67,4	64,4	67%	SMIC
ms	Miscellaneous Health Care Programs	4550000	4580000	1883000	8,6	9,5	6,2	7	7,6	4,5	41%	МоН
Consoli Health	dated Central Budget (CHB)	52800000	48190700	30461900	100	100	100	81,3	80,4	72,2	63,2%	
Munici	pal Programs	12359500	11724963	11724963	-	-	-	18,7	19,6	27,8	949%	RMF
Conso Hea (	lidated Total lth Budget (CTHB)	65159500	59915663	42186863	-	-	-	100	100	100	64,7%	

Table 152: Funding of Federal an	d Municipal Health	Programs	(2000 year)
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		GEL	% of CCHB	% of CCTB	Financed by
Federal	Public Health Care Programs	5593000	11,3%	9,1%	PHD
Programs	State Medical Insurance Programs	39200000	79,1%	63,5%	SMIC
	Miscellaneous Health Care Programs	4757000	9,6%	7,7%	MoH
Consolic B	lated Central Health udget (CCHB)	49550000	100	80,3%	
Mur	icipal Programs	12170000	-	19,7%	RMF
Consolidate	ed Total Health Budget (CTHB)	61720000	-	100	

Table 153. Funding of Federal and Municipal Health Programs by plan (2001 year)

	Programs	GEL	% of CCHB	% of CCTB	Financed by
	Public Health Care Programs	13100000	22,5%	18,6%	Public Health Depart.
Federal					(PHD)
Programs	State Medical Insurance Programs	41100000	70,7%	58,5%	State Medical Insurance Company
	Miscellaneous Health Care Programs	3900000	6,7%	5,6%	Ministry of Health
consolid I	ated Central Health Budget (CHB)	58100000	100	82,7%	
Mur	nicipal Programs	12170000	-	17,3%	12 regional Municipal Funds
consolidate	ed Total Health Budget	70270000	-	100	

Source: Ministry of Health

During 1998-2001 years State Medical Insurance is still the dominant source of the health financing, than other sources of funding. During this time, State Medical Insurance Company spends more than half of all public health care expenditure. Between 1997 and 2001 years, health care expenditure from State Medical Insurance Company increased from 47,5% to 58,5% (percentage of consolidated Total Health Budget- CTHB) and as a percentage of consolidated Central Health Budget (CCHB), increased from 59,4% to 70,7%.

Table 154: Funding of Federal and Municipal Health Programs (1998-2001 year) 1000 GEL

	1997		1998		1999		2001	
Source of	% of	% of	% of	% of	% of	% of	% of	% of
Funding	CTHB	CCHB	CTHB	CCHB	CTHB	CCHB	CTHB	CCHB
State Medical Insurance Company	47,5%	59,4%	57,7%	70,8%	65,3%	80,4%	58,5%	70,7%

CTHB - consolidated Total Health Budget, CCHB - consolidated Central Heal Budget

## 12.5. Sources of financing

In Georgia, there are following income for financing health care:

- Insurance compulsory premiums
- Transfers from the State Budget
- Local government(municipalities)
- Out of pocket payment

The major source of funds for health care in Georgia is an Out of pocket payment (app.87%). Social insurance premiums accounted for 3% of total health care expenditure. Financing through the state budget from general taxation makes a notable proportion of total health care financing (app. 8%). Public expenditure in Georgia as a share of total health expenditure is one of the lowest in Europe. For example, in the early 1990s the contribution of budget financing to total health care financing were 39 % in Belgium, 21 % in Germany, 37,9% in Luxembourg and 33,9 % in Switzerland.

	Total	Transfers from central	%	Mandatory medical	%	Other	%
		budget		contribution		ie venues	
1994	1901,2	1901,2	100%	0	0	0	
1995	18700	11600	62%	2800	15%	4300	23%
1996	21494	14300	66,5%	4000	18,6%	3194	14,9%
1997	49313	36150	73,3%	13163	26,7%	0	0
1998	54200	31220	57,6%	23000	42,4%	0	0
1999	52800	28800	54,5%	24000	45,5%	0	0
2001	58100	34500	59,4%	23600	40,6%	0	0

Sources: State Department of Medical Statistics and information

# Table 155: Sources of financing

Source	Type and volume of contribution	Who Contributes and size of tax base	Who Collects	Per Capita and Share in Healthcare resources %
Social insuranc Premiums	Mandatory contributions of payroll tax 3% + 1%. 3% being employer's share and 1% employees	only these employed in formal sector of employment. Total number of contributors is 786, 000 (36 %) persons out of 2,195, 000 in active years	Funds are collected by Tax inspection but accumulated in the special account wich belong to State Medical Insurance Company (SMIC)	1,35 USD per Capita 3% of THE
General budget 1	Allocation from central budget approved under the budget law on an annual base. No earmarks.	All texpayers. Amount of total funding depends on negotiations between (MoH) who designs the programs) MoF (who prepares the budget law) and Parlament.	There are 3 recipients of these funds from Central budget. a) MoH b) Department of Public Helth c) SMIC	2.4 USD per Capita 6% of THE
General budget 2	Allocation from central budget approved under the budget law on an annual base. No carmarks	All taxpayers. Lump sum amount allocated for different government entities (not MoH) and within the budget law. There seems to be no state regulation how these budgets are developed or executed.	There are 5 recipients of these funds from Central budget. a) Ministry of defense (MoD) b) Ministry of Internal Affairs (MoIA) c) Ministry of State Security (MSS). d) State Border Defense Department (SBDD) e) Government Security (GS)	0.95 USD per Capita 2% of THE
Municipal budget	Municipal taxes and central budget transfers to municipal budgets approved under the budget law.	All texpayers. There is central mandate of minimum amount 2.5 Gel Wich municipalities have to allocate per resident per year. Municipalities have freedom to allocate as much as the want above this amount.	Municipal Health Fund (MHF) receives from municipal budget. There is no earmarking of these funds within municipality budgets	0.87 USD per Capita 2% of THE
Private	Private spending for healt services could be broken in three major groups: a) Co-payments b) Fee-for service; c) Direct "under the table" payment to providers.	<ul> <li>d) The government determines copayments. Government not only sets the price of service but also determines the share patient has to pay.</li> <li>e) Fee-for service payments are 100% covered by the patients. The price fore service are determined by facilities and approved by the government during licensing;</li> <li>f) Direct "under the table" payment to Providers is totally selfregulated. Quite frequently official fee schedules are used to collect the payment from a patient.</li> </ul>	<ul> <li>g) Co-payments are collected and retained by the facility to finance recurrent costs.</li> <li>h) Fee-for-services are designated to form additional income for healthcare facilities in order to cover part of their costs. These revenues are fully retained by the facility only applicable taxes are paid.</li> <li>i) Direct payments are collected by individual providers (health workers) and retained for personaluse.</li> </ul>	38.82 USD per Capita 87% of THE

Source: Ministry of Health

			Transfers from		Insurance	
	Programs	ML GEL	budget	%	contribution	%
	Public Health Care	8 545 000	8 545 000	100%	0	0
Federal	Programs					
	State Medical Insurance	29 300 000	16 137 000	55,1%	13 163 000	44,9%
Programs	Programs					
	Miscellaneous Health	11 468 000	11 468 000	100%	0	0
	Care Programs					
Consolidate	d Central Health Budge	49 313 000	36 150 000	73,3%	1 316 3000	26,7%
	(CHB)					
Mun	icipal Programs	12 309 000	12 309 000	100%	0	0
Consolidated Total Health Budget		61 622 000	48 459 000	78,6%	13 163 000	21,4%

# Table 157: Funding of Federal and Municipal Health Programs (1997 year)

Source: Ministry of Health of Georgia.

# Table 158: Funding of Federal and Municipal Health Programs (1998 year)

			Transfers from		Insurance	
Programs		ML GEL	budget	%	contribution	%
	Public Health Care	6 120 000	6 120 000	100%	0	0
Federal	Programs					
	State Medical Insurance	38 400 000	15 400 000	40,1%	23 000 000	59,9%
Programs	Programs					
	Miscellaneous Health	9 700 000	9 700 000	100%	0	0
	Care Programs					
Consolidate	d Central Health Budge	54 220 000	31 220 000	57,6%	23 000 000	42,4%
	(CHB)					
Mur	icipal Programs	12 309 000	12 309 000	100%	0	0
Consolidated Total Health Budget		66 529 000	43 529 000	65,4%	23 000 000	34,6%

Source: Ministry of Health of Georgia.

## Table 159: Funding of Federal and Municipal Health Programs (1999 year)

			Transfers		Insurance	
	Programs	ML GEL	from budget	%	contribution	%
	Public Health Care	5 800 000	5 800 000	100%	0	0
Federal	Programs					
	State Medical Insurance	42 450 000	18 450 000	43,5%	24 000 000	56,5%
Programs	Programs					
	Miscellaneous Health	4 550 000	4 550 000	100%	0	0
	Care Programs					
		52 800 000	28 800 000	54,5%	24 000 000	45,5%
Consolidate	d Central Health Budge					
	(CHB)					
Mur	icipal Programs	12 170 000	12 170 000	100%	0	0
Consolidate	ed Total Health Budget	64 970 000	40 970 000	64%	24 000 000	36%

Source: Ministry of Health of Georgia.

			Transfers		Insurance	
	Programs	ML GEL	from budget	%	contribution	%
	Public Health Care	13 100 000	13 100 000	100%	0	0
Federal	Programs					
	State Medical Insurance	41 100 000	17 500 000	42,6%	23 600 000	57,4%
Programs	Programs					
	Miscellaneous Health	3 900 000	3 900 000	100%	0	0
	Care Programs					
Consolidate	d Central Health Budge	58 100 000	34 500 000	59,4%	23 600 000	40,6%
	(CHB)					
Mun	icipal Programs	12 170 000	12 170 000	100%	0	0
Consolidated Total Health Budget		70 270 000	46 670 000	66,4%	23 600 000	33,6%

Table 160: Funding of Federal and Municipal Health Programs (2001 year)

Source: Ministry of Health of Georgia.

#### 12.6. Transfers from the State Budget

Before the reforms, the health system was greatly dependent upon general budget financing. After the creation of the social health insurance scheme the government made provision to the budget laws whereas approved budget transfers to provide sufficient funding for the State Health Programs.

Transfers from the budget cover the difference between the collected revenues though the payroll tax and health care expenditures, because low contribution rate (4%) is not sufficient to cover the cost of health care without a significant transfer of resources from the state budget. Conceptually, direct transfers from the State Budget (general taxation) are intended to provide sufficient funding for Federal Programs.

Transfers from the State Budget make a sizable contribution for financing Federal Programs. After the introduction of statutory insurance scheme percentage of State Budget transfer is declining over time.

Transfers from the State Budget are intended to finance Public Health Department (100%), Miscellaneous Health Care Programs of the Ministry of Health (100%), and the State Medical Insurance Programs. During the 1996-2001 years, percentage of State Budget transfers is declining from 55,1 % to 42,6 %, because at the same time increase percentage of statutory insurance contribution.

Table	161: Percentage	if transfers	from the	state Budget.	1997-2001	vear (by	plan)
I uoro	101. I ereemuge	II transfers	monn une	State Dudget,	1777 2001	your (by	piuni

Source of funding	1997	1998	1999	2001
Public Health Department	100%	100%	100%	100%
State Medical Insurance Company	55,1%	40,1%	43,5%	42,6%

Source: Ministry of Health Georgia

#### 12.7. Insurance Compulsory Premiums

In order to increase financial resources the government introduced compulsory health premiums. Insurance premiums are tax deductible. Central government plays a determinant role in decisions about the level of insurance premiums to be paid to the State Medical Insurance Company. Contribution rate is common in whole country. Contributions tend to be at a flat rate and related to income, and shared between employer and employee. The premium is equal to 4 per cent of wages, with 3 percent covered by the employer and 1 per cent paid by the employees. The premiums are accumulated in the Central Fund. In accordance with principles of insurance financing, all monies accumulated by State Medical Insurance Company are earmarked for health care purposes. During the last years, as shown in table, percentage of insurance contribution for financing Federal Health Care Programs has been increased from 15 % to 40,6 % (1996-2001)

At the same time insurance contribution is the major source for financing State Medical Insurance contribution for financing State Medical Insurance Company. During the 1997-2001 years, percentage of insurance contribution for financing State Medical Insurance Company has been increased from 44.9 % to 57.4 %

Table 162: Percentage of insurance contribution for funding State Medical Insurance Company (1996-2001 year)

	1997	1998	1999	2001
State Medical Insurance Company	44,9%	59,9%	56,5%	57,4%
	•			

Source: Ministry of Health of Georgia

A system of social insurance requires each citizen to make a contribution. There are three key issues:

- Identifying and registering eligible individuals
- Assessing the size of the contribution
- Collecting the contribution

The contribution base has continued to decline for several reasons:

**Increasing dependency ratio to aging and unemployment** - economic transition effected volumes and composition of labor force, mainly causing unemployment. The total population over 15 years old and labor force participation rate remained more or less stable fluctuating only slightly at around 66 % (3). Thus economic growth after recession has not lowered unemployment.

**Tax evasion in both the shrinking formal sector and growing informal sector** - It is apparent that employment is dominated by self employment (4) and the number of those salaried in formal sector only comprised 18.4 % of population. Only 741,400 person contributes compulsory health premiums while 989,000 participate in informal sector of employment do not share the burden of health care premiums (3). Evasion has taken several forms:

**Salary arrears accumulated in the public sector** - The situation is further aggregated with the state being the largest employer (17% employed in the budgetary sector (6)). Due to the shortage of funds and accumulated arrears public sector often avoid paying payroll taxes, which further diminishes volume of revenues for health sector. According to 1999 state data budgetary organizations only contributed 38% of the planned compulsory

health premiums while non-budgetary organizations paid 10% of planned amount that resulted 86% fulfillment of target but at the cost of private enterprises that are yet in developing stage.

**Under-reporting private sector earnings** - apart from compulsory health premium employers have also to pay social taxes are additional 28 %. Thus effective payroll tax rate for employers represent 31 % of payroll. The latter places substantial tax burden on formal employment that is so week in the country. The tax wage increases gross labor disadvantaged position in the competitive market, where unofficial labor force is readily available at its face value without any taxes. In orders to sustain employers sheltered themselves into shadow economy and contributed to further decrease of payroll tax base for the health tax.

Amendments to the legal bases - To find a solution to the problem of low collection of social taxes, the government introduced amendment to the Tax Code in August 2000. It is important to discuss this amendment, which was prepared by the Ministry of Finance, in detail, since it seriously challenges the situation in the social sector. By this amendment, the Ministry of Finances proposed to create a minimal mandatory social tax at a 16 GEL level. In other words, a mandatory 31 % social contribution remains, but it should not be less than 16 GEL, if the salary level is higher than 16 GEL. The logic of this amendment is obvious: the State is securing a minimum of 16 GEL equivalent of social tax collection. However, this move creates enormous financial problems for the governmental organizations that pay low wages. For instance, if the salary was 20 GEL the 31 % of the salary would have been 6.2 GEL, so the employer had to provide the total of 26.2 GEL (plus income tax) as an employee's income. With this new regulation, if the salary is 20 GEL and instead of 31 %, 16 GEL is the social tax, then the total payable for the employer is 36 GEL (plus income tax). This strategy can be qualified as a manual increase of the base taxable salaries. In turn, it may increase the cases of underreporting salaries; especially in the institutions than are state owned but are not financed from the state budget.

Decline in real incomes- the share of the average monthly salary comprised only 32.8 % of the minimum subsistence level of a family of four. Almost 97 %, employed make less than the minimum subsistence level (5). Nominal wages show little growth and real wage continue to fall. Many public sector employees are paid token salaries, the case of non-payment of salaries is widespread and arrears in the payment of budgetary employees persist. Evaluation of consumption rates through household survey revealed that actual volumes of HH consumption are much higher than officially reported salary rates (8).

# Weak administrative capacity to enforce tax collection in the new market context and corruption.

As a result, government's ability to collect revenues and total tax receipts needed to finance the social sectors has declined markedly. At the same time, expenditures pressures were growing.

While, the larger the proportion of the population is in the informal economy, very complicated to collect proper contributions from self-employed people. During last decades increased unemployment and real wages decreased, the real level of resources within the

health insurance system also decreased automatically. In Georgia, it has been difficult to identify individuals that should contribute, because many of them work for themselves or have many different forms of employment. It has very difficult also to identify many of refugees, because they move around the country. As a result, people with low income avoiding taxation.

For assessment purposes the eligible population divided into four groups:

- State or large private sector enterprises and civil servants
- Self-employed or small private sector workers
- Rural workers
- Dependants and the unregistered unemployed

The first group is usually relatively easy to asses since the size of the payroll is easily observable and it requires relatively little effort by collectors to ensure that the entire enterprise is registered. The second group is difficult to assess, because in Georgia large number of self-employed workers. Majority of the self-employed fail to be captured by official registration figures. It depends to a extent on self-assessment, supported by sophisticated statistical methods for identifying those businesses that appear to be underreporting income. Yet these methods do not generally exist in Georgia. The incomes of self-employed are significantly higher for all the sectors than for wage earners and salaried employers. This serves a very good incentive for those who have to choose, to shift to self-employment. Large number of self-employed continue to avoid registration, thus evading tax payment. In fact, there is no incentive for them to register and it is much simpler to operate in the shadow economy. At the same time, at the moment there is no mechanism of collecting taxes from them. (Georgian-European Policy and Legal Advice Centre. Georgian Economic Trends, 1998, N 3)

Rural workers are more diverse and scattered and collecting contributions much harder. Agriculture still accounts for the largest share in self-employment-approximately half of the economically active population-reflecting the assumption which treats those with access to agricultural land as self-employed.

The final groups are those that are non-working but not entitled to state subsidized insurance. One group is the wives or husbands of workers employed by enterprises. Another are those who are not entitled to register as unemployed, because of tight rules about eligibility, but who are still non-working or working in the informal sector.

Where registration is entirely voluntary the data are generally very incomplete and do not give a reliable indication of the extent of unemployment. The scope of employment office statistics is therefore most difficult to ascertain, and in very few cases can statistics is therefore most difficult to ascertain, and in very few cases can satisfactory percentages of unemployment be calculated. In general, these statistics are not comparable. However, if there are no changes in legislation, administrative regulations and the like, fluctuations within a country may reflect changes in the prevalence of unemployment over time (Source: International Labor Organization (1994) Yearbook of Labors Statistics. ILO; Geneva)

country	Contribution rate
Georgia	4
Czech Republic	13,5
Estonia	13
Hungary	12,5
Slovakia	13,5
Slovenia	12,8
<b>Russian Federation</b>	3,6

Table 163: Contribution rates in selected countries

Source: World Health Organization, Regional Office for Europe. Copenhagen 1997

Table	164.	Financing	Municipa	1 Programs	hy regions	1998 vear
raute	104.	rmancing	Municipa	1 I Tograms	by regions	1))o ycar

Region	population (1000)	obligatory minimum plan (1000 GEL)	execution (1000 GEL)	execution %	per capita (GEL)
Kakheti	458,9	1147	505	45,1	1,1
Kvemo Kartli	561,6	1405	656	44,1	1,1
Mtskheta-Mtianeti	140	350	170	49,4	1,2
Shida Kartli	335	837	547	60,5	1,5
Samtskhe-Javakheti	236,4	590	200	34,1	0,9
Imereti	766,5	1915	779	39,2	1
Racha-Lechkhumi Kvemo-Svaneti	56	140	84	61	1,5
Samegrelo-Upper Svanety	381,7	955	289	30	0,8
Guria	164,1	410	242	60,4	1,5
Poti	50	125	436	348	8,8
Achara A.R	393,8	985	2020	204,9	5,1
Tbilisi	1380	3450	8047	259,9	6,5
Total	4868	12309	13975	113	2,9

Source: Ministry of Health Georgia

Table 165: Per Capita Allocations for Compulsory Municipal Programs by fact (GEL)

Municipalities	1997	1998	1999
	Per capita allocation	Per capita allocation	Per capita allocation
Adjara	2,94	5,1	8,6
Tbilisi	2,5	6,5	2,4
Kakheti Region	1,3	1,1	1,1
Imereti Region	1,2	1,0	1,1
Samegrelo	0,64	1,7	1,5
Poti	4,56	8,8	5,6
Shida Kartli	0,79	1,5	1,1
Kvemo Kartli	0,67	1,1	1,0
Guria Region	0,71	1,5	1,5
Samtskhe Javakheti	0,45	0,9	1,0
Mtskheta – Tianeti	1,28	1,2	1,7
Racha – Lechkhumi	2,28	1,5	1,9
Average (GEL)	1,61	2,65	2,48
Average (US\$)	1,24	1,9	1,2

Source: Ministry of Health of Georgia

GEL – Georgian Lari

Tab 166: Average per capita income and average percentage of monthly income informally spend of health care and drugs\*

Average per capita	Average	Outpatients	Inpatients	Drug expenditure
income	Expenditure as % of	expenditure as % of	expenditure as % of	as % of income
	Income	income	income	
251 US\$	20,43	10,29	44,27	12,26

\*Exchange rates used are PPP – adjusted from the WDL. Per capita income is calculated from the WDI.

Sources: World Banks 1997a, 1997b, 1999b, and 1999c, and 2000a; Lewis 2000.

Table 167: Budgets of State Medical Insurance Programs (million GEL) 1996-2001

Insurance programs	1996	1997	1998	1999	2000	2001
Psychiatric program		3	3	3,3	2,9	3
Ptiziatric program		3,5	3	3	2,6	3
Obstetric program		6,9	7	6,7	6,2	6
Treatment of children under 3 years		7	11	10,4	10,2	10
Program for vulnerable population	4	5,9	9	6,6	5,6	7,75
Treatment of oncology patients		3	3	3	2,5	2,6
Treatment of infectious diseases			1,5	1,5	1,3	1,6
Renal dialysis program			0,4	1,9	1,35	2,5
cardiosurgery for children			0,5	0	-	-
Treatment of ischemic heart disease				0,125	0,225	0,3
Program for refuges population in Tskhinvali region				0,3	0,2	0,2
Organs transplantation program				0,125	0,125	0,15
Program for refuges population in Samegrelo-upper				0,4	0,3	0,3
Svanety region						
Program for rural population				2,438	1,6	
Provision of selected chronic patients with				1,6	2,150	2,5
pharmaceuticals						
Internal organization of SMIC				1,062	1,05	
total	4	29,3	38,4	42,45	40,4*	41,1

Source: Ministry of Health Georgia

	Table 168: State Medic	al Insurance Programs.	, million. GEL	(1997-2001)	vear)
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	1997	1998	1999	2000	2001
Transfers from budget	16,137	15,4	18,45		17,5
Insurance contribution	13,163	23	24		23,6
Total Million GEL	29,3	38,4	42,45	39,2	41,1
Total Million US\$	22,6	27,6	21,1	19,5	20,4

Sources: State Medical Insurance Company

	1997	1998	1999	2001
Consolidated Central Health Budget CCHB	59,4%	70,8%	80,4%	70,7%
(Federal Programs)				
Consolidated Total Health Budget CTHB	47,5%	57,7%	65,3%	58,5%
(Federal and Municipal Programs)				
(Federal Programs) Consolidated Total Health Budget CTHB (Federal and Municipal Programs)	47,5%	57,7%	65,3%	58,5%

Source: State Medical Insurance Company

Table 170: SMIC revenues from different sources, in	thousands GEL, 1998-1999
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		1998				1999			
Sources of funding	plan	Actually	Actually	Debts	plan	Actually	Actually	Debts	
		received	received/plan			received	received		
			(%)				/plan		
							(%)		
Central budget	15400	10408,7	68%	-4991,3	18450	11786,7	63,9	-6663,3	
transfer									
Insurance premium	23000	12634,8	55%	-	24000	16 100	67,1	-7900	
				10365,2					
Total	38400	23043,5		-	42450	27093,5		-14563,3	
				15356,5					

Source: State Medical Insurance Company

Table 171: Expenditures of SMIC, in thousands GEL 1998-1999

	plan	Approved	Paid	Paid	Debts	plan	Appro	Paid	Paid	plan
		claims	claims	claims/appro			ved	claims	claims/appro	
				ved claims			claims		ved claims	
				(%)					(%)	
Total	38400	33567,9	26854,49	80%	-6713,42	42450	40210,1	27886,7	69	-12467,5
Central	154000		10408,7	68%	-4991,3	18450		11786,7	63,9	-6663,3
budget										
transfer										
Insurance	23000		126,34	55%	-10365,2	24000		16 100	67,1	-7900
premium										

Source: State Medical Insurance Company

	Annual budget	Total Claims	Approved claims	Approved claim/budg	Paid claims	Paid claims/approv	Debts created
~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~							
Children 0-3	11,000,000	9,135,146	8,839,037	97%	6,326,161	72%	2,512,876
vulnerable	9,000,000	5,251,816	4,990,821	95%	3,574,372	72%	1,416,449
obstetrics	7,000,000	7,226,157	7,076,589	98%	5,280,216	75%	1,796,373
psychiatry	3,000,000	3,653,416	3,606,115	99%	3,335,572	92%	270,543
tuberculosis	3,000,000	3,852,748	3,635,358	94%	3,316,514	91%	318,844
oncology	3,000,000	4,054,397	3,595,741	89%	3,245,156	90%	350,585
inf. Diseases	1,500,000	999,991	973,396	97%	931,363	96%	42,033
cardiosurgery	500,000	431,451	430,726	100%	430,726	100%	-
hemodialysis	400,000	441,715	420,127	95%	414,410	99%	5,717
Total	38,400,000	35,046,837	33,567,910	93%	26,854,490	80%	6,713,420

Table 172: Expenditures of SMIC in GEL, 1998

Source: State Medical Insurance Company

Table 173: Expenditures of Georgian health care programs in GEL, 1999

	Annual	Approved	Approved	Paid claims	Paid	Debts created
	budget	claims	claim/budget		claims/approved	
			(%)		claims (%)	
children 0-3	8,400,000	8,019,300	95,5	4,945,400	62	3,073,900
vulnerable	6,600,000	6,998,700	106.0	5,219,600	75	1,779,100
obstetrics	6,700,000	6,245,700	93,2	3,884,100	62	2,361,100
psychiatry	3,300,000	3,376,800	102,3	2,405,100	71	971,700
tuberculosis	3,000,000	3,165,200	105,5	2,436,800	77	728,400
oncology	3,000,000	3,136,500	104,6	2,039,700	65	1,096,800
inf. Diseases	1,500,000	1,739,400	116,0	1,108,400	64	631,00
cardiosurgery	1,300,000	998,300	76,8	736,800	74	216,500
hemodialysis	1,900,000	1,127,000	59,3	1,119,500	99	7,500
orphans	700,000	502,200	71,7	321,300	64	180,900
ish. Heart disease	125,000	91,500	73,2	64,100	70	27,400
transplants	125,000	41,700	33,4	41,700	100	-
specific drugs	1,600,000	1,330,200	83,1	1,519,300	{?}114	-
rural health care	2,438,000	1,809,100	74,2	592,700	33	1,216,400
Tckhinvali	300,000	239,700	79,9	179,800	75	59,900
Samegrelo-Z.S	400,000	340,000	85,0	300,000	88	40,000
SMIC organization	1,062,000	1,048,800	98,8	972,400	93	76,400
Total	42,450,000	40,210,100	94,7	27,886,700	69	12,467,500

Source: State Medical Insurance Company

Region	inhabitants(1998)	SMIC payments	payment per capita
Tbilisi	1,327,000	12,463,644	9.4
Adjara	409,000	2,907,342	7.1
Guria	161,400	642,815	4.0
Racha-Lechkhumi	57,100	249,505	4.4
Samegrelo*	550,900	1,612,714	2.9
Imereti	834,100	3,112,584	3.7
Kakheti	450,000	807,052	1.8
Mtskheta-Mtianeti	141,300	245,264	1.7
Samtskhe-Javakheti	240,300	780,054	3.2
Kvemo Kartli	612,800	864,391	1.4
Shida Kartli	375,00	894,142	2.4

Table 174: SMIC payments to providers, per region, 1999

• Incl Poti and Zemo Svanety. Source: State Medical Insurance Company

Table 175. Variation in reiumbursement rate between providers

program	lowest rate	mean rate	highest rate*
children 0-3 years	23%	62%	106%
vulnerable groups	20%	57%	136%
obstetrics	26%	62%	117%

• Rates over 100% indicate that debts from previous periods have been paid as well Source: State Medical Insurance Company

Table 176. Final result of prevention programs, 1998-1999. As supplied by the Department of Public Health

			1999						
	a. budget	b. total	c. repayment	d. 1998	d/b	a. budget	b. total	c. 1999	c/b
		claims	of 1997	claims paid	(%)		claims	claims	(%)
			debts				approved	paid	
healthy life style	250,000	86,629	-	59,521	69%	200,000	84,300	13,100	16
Prevention infections	750,000	382,929	37,780	245,908	64%	430,000	329,600	181,500	55
immunization	2,200,000	753,932	24,249	652,118	86%	1,630,000	616,000	249,800	41
information systems	250,000	230,808	-	101,584	44%	200,000	200,000	59,900	30
AIDS prevention	400,000	177,499	-	79,802	45%	1,450,000	943,200	455,400	48
drug addiction	500,000	355,065	17,164	153,012	43%	320,000	291,600	84,600	29
goiter, radiation	400,000	254,665	-	117,120	46%	320,000	220,900	95,400	43
safe blood	300,000	373,824	3,818	222,350	59%				
STD prevention	350,000	383,326	3,599	157,146	41%				
morbidity screening	600,000	344,876	15,621	182,015	53%	475,000	240,300	183,200	76
cancer screening						175,000	64,600	15,800	24
microelements	1120,000	-	-	-	-	250,000	82,600	41,100	50
cardiovasc. Disease						250,000	129,900	38,1	29
injury prevention						100,000	20,800	100	0
total	6,120,000	3,343,552	112,131	1,970,578	59%	5,800,000	3,223,700	1,417,90	44
								0	

			1998				1999				
	a. budget	b.total	с.	d. debts	c/b	a.	b.total	с.	d. debts	c/b	
		claims	claimspai	created	(%)	budget	claims	claimspai	created	(%)	
			d	( <b>b-c</b> )				d	( <b>b-c</b> )		
High mountains	500,000	444,000	384,000	60,000	86%						
Recruits	200,000	250,000	106,000	144,000	42%	28,000	300,000	129,000	171,000	43	
Borderareas	300,000	263,000	223,000	40,000	85%						
Orphans, treatment	400,000	400,000	353,000	47,000	88%						
Orpahnschronic	300,000	117,000	73,000	44,000	62%						
diseases											
Catastrophes	500,000	520,000	352,000	168,000	68%	400,000	450,000	299,999	151,000	66	
Rehab. Med. Instate	900,000	682,000	619,000	43,000	91%	1,050,000	1,200,000	748,000	452,000	62	
IHD treatment	300,000	200,000	109,000	91,000	55%						
San Epid	500,000	500,000	77,000	423,000	15%	650,000	600,000	54,000	546,000	9	
Special patients	800,000	800,000	176,000	624,000	22%						
Diabetes	400,000	400,000	372,000	28,000	93%						
Science and	2,600,000	2,300,000	1,706,000	594,000	74%	1,600,000	1,500,000	425,000	1,075,0	29	
education									00		
management	800,000	800,000	673,000	127,000	84%	200,000	250,000	150,000	100,000	60	
Forensic medicine	300,000	300,000	100,000	200,000	33%	250,000	200,000	25,000	175,000	13	
Other expenditures	200,000	117,000	88,000	29,000	75%	120,000	80,000	53,000	27,000	66	
Debts	700,000	306,000	1,648,000	{?}	N/A						
				1,342,000							
Total	9,700,000	8,399,000	7,059,000	1,340,000	84%	4550000	4,580,000	1,883,000	2,697,0	41	
									00		

Table 177: Final results of Ministry of Helath programs, Georgia (1998-1999)

NB: the line of "debts" need further explanation, as it not clear what happened here.



Fig 76: Percentage of Public health (by plan) and Out-of-pocket expenditure





Source: Ministry of Health








## 13. Payment Systems for Provider

## 13.1 introduction

Payment methods generate powerful incentives that affect how providers produce health services. Payment mechanisms may induce movement toward or away from improved efficiency, equity, consumer satisfaction, and health status. For this reasons, provider payment reforms are a central part of broader health financing reforms. There is no single optimal method for paying providers. All methods generate both adverse and beneficial incentives affecting the volume, quality and mix of services. Mixed forms of provider payment are superior to reliance on any single method – they are more practical and allow a trade off of administrative costs and desirable incentives. Choice of forms of payment depends upon the decision-maker giving priority to central evaluation criteria. Optimal model of payments should take into account the economic and financial situation in the country, the development of the health care system. Besides, it should comply with the principle of equal availability of medical services and cover as many layers of the population as possible. It should be adapted to the existing traditional system in the way that processes develop and evolve and the new system itself is in need of transformation after a certain period of time.

Before reforms is health care system in Georgia, budgetary transfers was the most common form of payment to public facilities, usually through line – item allocations from Ministry of Health. Health workers within public facilities are paid for the services they provide on a salary basis. Funding of facilities based on norms and historical spending patterns. These types of publicly managed system face problems in generating adequate incentives for efficiency. Competition between providers was limited.

Georgia has already moved from this system to one with more competition among health care providers. A key principle of health care reform is the feasibility of separating, institutionally, as well as conceptually, the finance, and provision of health care.

Figure presents the flow of funds under one conception of a reformed health system where the source of finance, management of finance, and provision of services are separated. State Medical Insurance Company receives revenues from employers and employees, through Central budget, and from the central budget transfer. Regional Municipal Fund receives revenues from Local government (municipalities). Both, State Medical Insurance Company and Regional Municipal Fund transfer funds to service providers.

On the one hand, the transformation of the system and the acute financial crises in the country (which found its vivid reflection in the rate of funding of State Medical Programs) and the drastic rice of expenditure on medical services, on the other hand, made it the only viable option to introduce new payment models and ensure their approbation.

Different payment methods used for the different provider institutions such as hospitals, primary care givers, or for different types of services within an institution. In the case of first-level providers, it is normal for third parties to play a relatively enabling role, allowing

competition to be led by consumers. The question remains whether it is better to pay primary care doctors be capitation be fee for service, or be some mix of the two. In the case of hospital care, there are more choices and question about the distribution of public expenditure among major patient groups, such as those in need of acute and those in need of long term care. There are choices as to how global budgets are combined with work – related payment systems for hospitals. There are also choices as to whether public third parties confine their contracts to public hospitals, creating an "internal market; whether hospitals become or remain independent; or whether mixture of hospitals as envisaged. It remains to be seems how competition will work out in practice in those systems where the public sector has an interest in both sides of the market.

Payment systems that achieve the desired balance between protecting consumers from financial risk and controlling costs characterized by generous insurance coverage and financial incentives on providers to control costs. The best financial incentives for providers appear to be "mixed reimbursement systems, with some part of payment prospective and some part of payment cost based.

Most insurant programs are paid according to tariffs on the basis of standards: a cost of essential manipulations and service including the pharmaceuticals by nosologies, under the order of Ministry of Health N11/o-9.01.1998. Capitation as a payment method is used for outpatient children's care only (app. 2 GEL per month). Contracted facilities submit monthly (in 10 day after the end of month) essential documentation to SMIC for reimbursement: invoice (total required sum for month); discount (total number for cases by nosologies and corresponding sum) and appendix of discount (detailed list of performed works and corresponding sum per insurant). In addition to this, every year in July and January facilities sublime special semi-annual documentation for reimbursement. SMIC processes above-mentioned documentation in 15 days after presentation and calculates the insurance debt, according to which reimburses expenditures through the bank transfers.

Most other programs are paid according to the volume of work measured as cases: a standard treatment for a standard nosology. Payment is made for bed-days in psychiatry and for the inpatient part of the tuberculosis program. The special drugs program – mostly insulin – is paid in lots to importers after tender. Finally, the Tskhinvali assistance is contracted on a global budget basis.

## 13.2 Financing of Ambulatory Care

Reforms in Georgia have involved more structural changes of arrangement for paying physicians. Designed payment system for physicians involves recognizing the particular objectives and constraints that motivate their behavior. One key element is the uncertainty and asymmetry of information between doctor and patient, which is the source of the agency relationship between them. While this arrangement is intended first and foremost to protect the patient's interest, it can produce a supply-induced demand phenomenon by which doctors, acting as agents for patients, increase the demand for their own services in order to maximize their personal incomes.

Reforms health care system in Georgia has been move away from a model of salaried physicians employed by the state towards contractual relationships, with self-employed physicians paid by a mix of fee-for-service, salary and capitation methods, together with allowances to reward good practice, which combined with any of the first three.

Publicly financed "basic package" includes basic public health measures, such as immunization, sanitary and epidemiological services. Limited primary care services provided in the policlinics and reimbursed on capitation basic. There is no co-payment in the patient eligible for treatment through the Programs. Patient reimburses all other medical services not included in the "basic package". The user fees for these services are also charged according to the preliminary approved rates, so called Internal Standards.

The move towards insurance system in the Georgia has had clear implications for the methods by which physicians are paid. Georgia tend to perceive the reform of their funding systems as an opportunity to reform provider payment methods, with the aim of raising very low remuneration levels as well as improving efficiency. Some physicians paid on a mix of capitation and fee-for-service methods. Under the State Medical Insurance Program for children from 0 to 3 year, remuneration of doctors based on the number of children on their lists (per capita remuneration).

It is also important to recognize the role of debt in financing the health system. It has been standard practice for providers to fail to pay salaries and wages for weeks if not month at a time. Staff appears to accept this as the norm and the leeway, which this debt allows, appears to do much to buoy up the finances of the health system.

The expectations of physicians about target earning are key problem in Georgia. Economic recession has led to lower health spending, as well as the erosion of real wages for health personnel's. Among other problems, low salaries have prevented the eradication of informal or "under-the-table" systems of payment. These are the equivalent of an informal fee-for-service system, and they have been prevalent in Georgia since the Soviet era. There are few data on the extent of this phenomenon, but it appears to provide a significant proportion of physicians incomes in both outpatient and inpatient care. Informal payments have implications for equity of access, since patients of low socioeconomic status are unable to pay physicians for access to medical facilities and services.

Table 178: Principle methods of payment for Primary Physicians in western European countries

country	Type of payment	Annual visits	gatekeeping	Cost sharing
Georgia	Capitation fee-	5.6	No	Full cost for
Georgia	for-service	5,0	110	selected items
	salary			not covered in
	Server y			State Programs
Austria	Fee-for-service	5,1	No	20% of
		,		population pays
				10% or 20%
Belgium	Fee-for-service	8	No	Self-employed
				pay full cost
Denmark	28% capitation;	4,4	Yes	None
	Fee-for-service,			
	9% allowances			
France	Fee-for-service;	6,3	No	25% including
	salary in health			extra billing
	centres			
Germany	Fee-for-service	12,8	No	None
Ireland	Fee-for-service	6,6	Yes	None if lower
	if higher			income
	income;			
	capitation if			
	lower income			
Italy	Capitation	11	Yes	None
Luxembourg	Fee-for-service	-	No	5%
Netherlands	Fee-for-service	5,8	Yes	None if lower
	if higher			income
	income;			
	capitation if			
	lower income	1.1		
Switzerland	Fee-for-service	<u> </u>	No	10% of cost
United kingdom	Capitation; Fee-	5,8	Yes	None
	for-service;			
	allowances and			
E'sland	target payment	2.2		LIC¢ 0 17
Finland	Salary	5,3	yes No	US\$ 0,17
Greece	Salary	3,3	NO	None
Norway	05% Fee-10F-	-	res	50% OI COSIS IOF
	salary			selected hems
Portugal	Salary	3,1	Yes	None
Spain	Salary capitation	6,2	Yes	None
Sweden	Salary	3	No	US\$ 6-9

Sources: OECD; Abel-Smith

## **13.3. Financing of Hospital Care**

Historically hospitals were paid global budgets based on the number of beds, staffing levels and an allowance for costs such as heating and light. These budgets were inflation, growth etc. As notes, there were therefore, perverse incentives to expand facilities in order to command greater resources.

Reforms of health care sector changed the system of paying hospitals. From the beginning of 1995 a system of paying hospitals are shifting to contact – based systems to create incentives for hospitals to reduce the length of stay and use test and investigation more rationally. This system is on the basis of volume and quality of service provided.

Financing of hospital care in Georgia is divided into state and regional (district/municipal) responsibilities. All districts and municipalities are expected to fund the basic package of care as determined by the Ministry of Health. State Medical Insurance Company is another source of financing hospital care.

Processing of the statistical data collected during the period has shown that under the standardization conditions, the actual stay on a bed with a concrete illness was significantly changeable. This made it difficult to make prognoses on the program and decreased its economic effectiveness. Based on the submitted invoices the State fund made payments according to the standard tariffs. Besides, the receipts produced by payers were verified.

This procedure of payments was practically approved and was found to be useful, but use of this method leads to significant delays in payments. A good proof of this are the numerous unpaid receipts accumulated at the State Health Fund late in 1996.

This is why, under the conditions of the lack of funding, the state had to introduce mechanisms of control and limitations, which would ensure regulation of expenses on medical care. Taking into account the situation in the health care system, state had to use principles of payments for inpatient care according to bed days other than the existing forms of payments for medical care. Publicly finances "basic package" includes various inpatient services provided in hospitals, which are typically reimbursed on case base according to the preliminary approved rates, so called Federal and Municipal Standards. In 1997, two Federal Programs (inpatient care for psychiatric and tuberculosis patient) were using different reimbursement method – per diem, for the long-term hospital that were enrolled in those programs.

A mixed system is currently in use, as hospitals are paid by State Medical Insurance Company (for State Medical Insurance programs), and by Regional Municipal Funds (for State Medical Municipal programs). Annual hospital payments are determined on a prospective base and is bases on a negotiation between State Medical Insurance Company and hospitals (for State Medical Insurance programs) in one hand and negotiation between Regional Municipal Funds and hospitals (for State Medical Insurance programs) in another hand. The Regional Municipal Fund and the hospital administration agree on the range of services and on payment rates, depending on local financial resources. Given the problems with cost-containment, attempts are being made to introduce limits into the payment system. These developments mean that Ministry of Health now take on the awesome responsibility of setting policy on the level of the bulk of health expenditure.

For some services (obstetric health care) there is co-payment (patients pay 30 GEL). In municipal programs the patient co-payment varies across municipalities from 15% to 50% the standards price (e.g. in Tbilisi the co-payment rate for municipal programs in 1970 was 40%).

Patients reimburse all other medical services not included in the "basic package". The user fees for these services are also charged according to the preliminary approved rates, so called Internal Standards.

Each medical service was assigned with the standard price based on an "average level of the health services". This standard price depends on the quantity of physician services provided (doctors consultations), diagnostic tests, the cost of the "required" pharmaceuticals and other treatment and some indirect costs that depend on average number of inpatient days for each category.

Municipal programs is financed through 12 Regional Funds, were earmarked funds from local governments were accumulated. Local governments were required to allocate at least 2,5 GEL (1 GEL = 0,5 FOR 2001) per capita of local population for transfers to respective regional funds.

From the beginning of 2001 for financing hospitals was introduced Global Budget. Global Budget has recently been introduced on an experimental basis in following programs: Psychiatric program, Program for vulnerable population, Treatment of infectious diseases and Tuberculosis program. Prospective global budgets for hospitals are mainly determined on a historical basis, with adjustments for service quality and planned efficiency improvements. The introduction of a new approach was influenced by the need for cost – containment in an unfavorable economic climate, and the desire to increase the efficiency of the State Health Care Programs.

A negotiation are carried out with each hospital and takes account of fast expenditures and potential developments in the current year and in the next year and compares that hospital's costs with other comparable hospitals. A budget negotiated and on this basis the daily rate is determined on assumed rates of length of stay and occupancy. One aim of the new system is to ensure the covering of costs in the case of variations in occupancy.

The list of reimbursable services maintained by the Ministry of Health. Each reimbursable service has a fixed point value, but the value assigned to some services and procedures differs with respect to specialty. Hospital accounts include a per diem rate in point per day plus the points for specific services provided.

Contract – based system place heavy demands on information systems and require considerable administrative resources to develop, implement, manage and monitor. Contracting system are quite different from budgeting system; contracts tend to be institution specific, and they represent the outcome of negotiations between the purchasers and providers.