Financial Master Plan for Kakheti Region
Background paper

by Jiří Němec, Hubert Stueker and David Khubua

Tbilisi, 15th of September, 2005

Table of contents

List of pictures

List of tables

Abbreviations

BBP:	Basic Benefit Package
DFID:	UK Department for International Development
DOTS	Directly Observed Treatment Short Course
DSSHS	Department of Sanitary Surveillance and Hygiene Standards
EC:	European Commission
EU:	European Union
FAP	Feltscher Ambulatory Post
FDs	Family Doctors
FM:	Family Medicine
FMC:	Family Medicine Centre
FTs	Family medicine Teams
GEL:	Georgian Lari
GoG:	Government of Georgia
HPU	Health Policy Unit
IEC:	Information, Education, Communication
ILO	International Labour Organization
LLC	Limited Liability Company
MoLHSA:	Ministry of Labour, Health, and Social Affairs
NCDCMS	National Centre for Disease Control and Medical Statistics
NFMTC:	National Family Medicine Training Centre
PAUs	Policlinic Ambulatory Units
PHC:	Primary Health Care
SSHS	Regional department Sanitary Surveillance and Hygiene Standard
STD	Sexually Transmitted Diseases

SUSIF:	State United Social Insurance Fund
TB	Tuberculosis
ToR:	Terms of Reference
USAID:	US Agency for International Development
WB:	World Bank

1 Summary

The Financial Master Plan for Kakheti region was elaborated within the framework of the EU Tacis project "Support to primary Health Care Development in Georgia: Reform of the Health Care Financing System". The project is being accomplished by the consortium of companies GVG and EPOS.

Relevant basic data on the region that relate to the subject of the plan are reviewed. The network of the reformed PHC facilities is the result of the previous EU project and the latest agreements of the donor organization with the MoLHSA. This network is described and assessed. It is composed of 57 health facilities housing 266 PHC medical teams that serve approximately 1560 citizens each in first (so called) HPU option. The facilities are devided into three categories according to the size of catchments population: for mountain areas catchments population of 1000 citizens is considered, for rural areas – 1500, for urban areas 2000 citizens and 2200 citizens in capital urban area. Another two options are considered apart from the first one - fully optimized network with average catchments population of 2000 citizens and extremly optimized option with catchments population of 3000 citizens. All options are described in detail for Kakheti and simple projection is made for nationwide case.

The legal status of the new PHC facilities is discussed with strong affection to standalone facilities (maybe for non-profit) in public ownership that are legally separated from secondary and tertiary levels of health care provision and contracted by the public purchaser.

The comprehensive BBP for PHC is defined with five components: preventive, curative, laboratory, drug and administration components. Services included in preventive, laboratory, drug and administrative components are defined by the Master Plan positively by corresponding lists of services, the curative is specified negatively. A general drug benefit scheme is presented and comprehensive results of the modeling study are attached for evaluation of its cost based on three key parameters.

The remuneration mechanism is elaborated in options that blend budgetary and capitation remuneration and corresponding tariffs are calculated based on the cost model for different types of the PHC facilities.

The remuneration mechanism and the description of network of the reformed health facilities serve as input for calculation of total budget requirements for Kakheti region and for all Georgia as well.

The principal result of the calculations is per capita expenditures for PHC. The BBP and the planned network in Kakheti requires around 10 Lari annually including all depreciations depending on level of optimization of the network. If we add the drug component some 5-7 Lari per capita it would be needed on top of it to ensure both protection and attraction of the reformed PHC for population. A huge task is however to bridge the gap between current 4 Lari per capita (in Kakheti region even less) and desirable 10-15 Lari in the long-perspective. Different bridging scenarios that combine further optimization of network with moderate decrease of public funding of PHC practices, increase of public funding and potential official co-payments are assessed and calculated and presented in illustrative tables. Appropriate fiscal decisions can be drawn out of the tables that ensure long-term finantial sustainability of the reformed PHC.

The key operational procedures that have to be implemented for the reformed health facilities are described, and the needed implementation activities are listed in line with proposal for organizational structure for implementation.

2 Introduction

The Financial Master Plan for Kakheti region was elaborated within the framework of the EU Tacis project "Support to primary Health Care Development in Georgia: Reform of the Health Care Financing System". The project is being accomplished by the consortium of companies GVG and EPOS.

The objectives of the project are to support the reform of the health care financing system towards sustainable financing of the PHC services with emphasizes on provision of sustainable and affordable access to the PHC services for poorest part of the population and guidance of the reform of financial mechanisms and administrative processes for PHC. The proposals elaborated by the project have to be piloted in the region Kakheti with intention of nationwide roll-out in the future.

One of the targets to be achieved by the project is elaboration of this Regional Health Care Financing Master Plan for Kakheti Region which feeds into National Health Care Financing Master Plan efforts.

The objective of this Master Plan is to define principle parameters of the reformed PHC – especially the Basic Benefit Package for the PHC in Georgia and major conditions of its provision for the Georgian population, the status and the network of the PHC provider, status and activities of the public purchaser of the PHC, reimbursement mechanisms and corresponding tariff calculations and outline of administrative procedures linked to the reformed PHC. All this aspects are set into the Kakheti specific financial framework as well as Georgia wide.

The Master Plan is based on the achieved results of the project team and on mutual co-operation with other project teams acting in the field – DFID/OPM, USAID/CoReform and WB also on the preliminary decisions taken by the PHC board.

As not all the decisions have been taken by the MoLHSA yet, some parts of the Master Plan are presented in options that can serve as a foundation for subsequent discussion and decisions.

The methodology and major part of the factual text are quite common and they can be used for the other pilot regions as well. It applies especially to the regions Imereti and Adjara that will serve as pilot regions for other projects as well.

The Master Plan adheres to the following simple structure:

- presentation of relevant data for Kakheti population and comparison to nationwide data-demography, social status and health status,
- who provides and who will provide PHC in future-legal status and specialty of PHC providers, their accreditation, organization and management
- who will pay for the PHC-legal status of the principle public purchaser, its responsibilities and contracting issues and other purchasers
- what services will be population entitled to on behalf of public PHC funding and what conditions of provision will be associated with the services
- how the services will be remunerated from different sources
- what are budgetary impacts of the reformed PHC both in Kakheti and nationwide context
- what are the major implementation issues and what administrative procedures have to be implemented

3 Basic data on the region

3.1 Demographic and social status data

Kakheti Region is located in eastern part of Georgia, bordering with Azerbaijan in the east. Area is 11400 sq. km and total population 412,000. Administrative centre is Telavi with 28000 population. Distance from center to Tbilisi – 147 km. There are 8 administrative units – districts.

Population lives in 9 towns and 276 villages. Out of these inhabitants 52% are female and 48% male, 21% are living in urban areas and 79% in rural areas including high mountainous areas. The most urbanized rayon is Telavi (31% inhabitants in urban area and 69% in rural areas) and most rural – Lagodekhi (13% and 87%).

. The following table gives an overview of the age structure of population in Kakheti in comparison with the whole country[1].

Age group	Kakheti	Georgia
Below 10	8.7	9.8
10-19	14.5	15.4
20-29	14.4	15.4
30-39	11.7	13.3
40-49	14.7	14.8
50-59	10.2	10.5
60-69	13.2	10.6
70-79	9.5	7.9
80-89	2.5	2.0
90 and more	0.5	0.3
Average age, years	40.4	38.1
Population above 60	25.7	20.8
Population above 70	12.5	10.2

Table 1 Age structure of Kakheti population (in %)

The table shows that the population in Kakheti is generally older than the nationwide average.

Ethnic composition of Kakheti resident population is as follow, ethnic Georgians represent 85.9 %, followed by Azeris (9 %), Osetian (1.4 %), Armenians (0.7 %) and Russians (0.6 %).

Average size of household in Kakheti is 3.5 – lowest in the country.

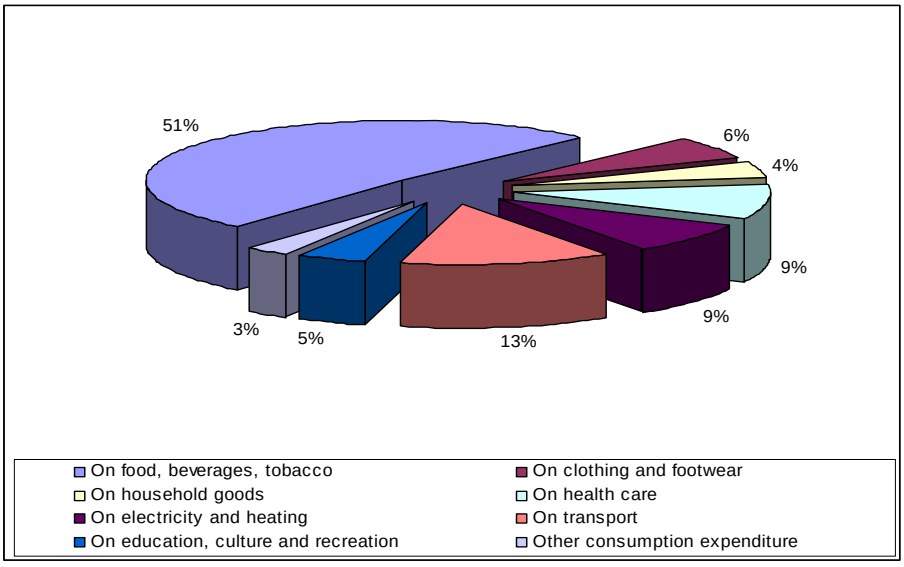
The main cash income of Kakheti population comes from selling agricultural production, and from borrowing or dissaving, and both sources have the same share in total income.

[1] Source: State Department of Statistics,2002

	Kakheti	Georgia
Cash income and transfers	***31.7***	***40.8***
From wage employment	7.9	15.4
From self-employment	6.0	7.7
From selling agricultural production	10.6	7.7
Property income (leasing, interest on a deposit etc.)	0.4	0.3
Pensions, scholarships assistances	3.1	3.3
Remittances from abroad	1.2	2.9
Money received from the kin and friends	2.5	3.4
Non-cash income	**26.1**	**19.8**
Income, total	**57.9**	**60.6**
Other cash inflows	**11.9**	**11.9**
Property disposal	0.7	2.4
Borrowing or dissaving	11.2	9.5
Cash inflows, total	**43.7**	**52.7**
Cash and non-cash inflows, total	**69.8**	**72.5**

Table 2 Average monthly per capita income in Lari (2002)

Structure of household expenditures is shown in the following picture:



Picture 1 Share of cash expenditures of households (2002)

The main cash consumption expenditure of Kakheti population is on food, beverages and tobacco (51%) and on transport (13%). These expenses with payments for electricity and heating aggregate about 2/3 of all cash spending. Health care expenditures are as high as 9% of cash expenditures, or 4.7 Lari per household. Taking into account that on average every fourth person in Kakheti is above 60 year (25.7%) it is obvious that this amount is very small to cover even minimal health needs of population.

The table below presents distribution of the population of Kakheti region by economic status according to settlement type and sex:

	Kakheti total	Urban	Rural	Female	Male
Population above 15	324.3	59.6	264.8	172.2	152.1
Labor force*[2], thousand persons	230.0	36.8	193.2	111.6	118.3
Labor force**[3], thousand persons	**232.7**	**37.7**	**195.0**	**113.0**	**119.8**
Employed, thousand persons	215.5	30.0	185.5	104.5	111.0
Wage employed, thousand persons	45.1	15.1	30.1	22.5	22.6
Self-employed, thousand persons	170.3	14.8	155.5	82.0	88.3
Other employed, thousand persons	0.1	0.1	0.0	0.0	0.0
Unemployed*, thousand persons	14.5	6.8	7.6	7.1	7.3
Unemployed**, thousand persons	**17.2**	**7.7**	**9.5**	**8.4**	**8.8**
Registered unemployed, thousand persons	1.3	0.5	0.8	0.8	0.5
Non-registered unemployed, thousand persons	13.2	6.3	6.8	6.3	6.8
Other unemployed*, thousand persons	0.0	0.0	0.0	0.0	0.0
Other unemployed**, thousand persons	**2.8**	**0.9**	**1.9**	**1.3**	**1.4**
Population outside labor force*, thousand persons	82.8	21.1	61.7	56.1	26.7
Population outside labor force **, thousand persons	80.0	20.2	59.8	54.7	25.3
Unemployment rate*, percent	**6.3**	**18.5**	**4.0**	**6.4**	**6.2**
Unemployment rate **, percent	**7.4**	**20.5**	**4.9**	**7.5**	**7.3**

Table 3 Economic status of the population above 15

Income is distributed quite unequally among various population groups. The wealthiest 20 percent of the households receive 44 percent of the total household income of the region while the poorest 20 receive only 5 percent. Unemployment is one of the major determinants of socio-economic situation. It is more common in urban areas, where the rate is 18.5%, which is about three times higher than in rural areas (4.5%).
There is separation in poverty indicators in urban and rural areas – it is higher in urban areas because of non-cash income difference which is substantially higher in rural area while cash income is comparatively equal.
The comparison of social status of population in Kakheti to the whole country shows the table 4[4].

[2] * – According to ILO strict criteria

[3] ** –According to ILO soft criteria

[4] In 2004

	Kakheti total	Urban	Rural	Georgia total
Poverty level	50.0	69.8	45.2	22.0
Extreme poverty level	28.9	47.4	24.3	
Poverty depth	23.4	37.2	20.0	21.1
Poverty severity	14.2	24.1	11.8	11.2

Table 4 Vulnerability according to categories (in %)

As it is shown above poverty level is up to 70 percent in the urban and 45 percent in the rural area. Also the share of the extreme poor is almost twice as high in the urban as in the rural area. Poverty depth and poverty severity are also substantially higher in the urban than in the rural area

3.2 Health status data

The following table shows prevalence and incidence figures of most prevalent diseases in Kakheti region in comparison to nationwide figures[5].

	Kakheti		**Georgia**	
	Prevalence	Incidence	Prevalence	Incidence
Endocrine diseases	5978.7	860.5	3628.1	684.4
Congenital Anomalies	84.5	11.1	147.3	27.3
Infectious and Parasitic Diseases	874.5	645.4	1786.1	1271.3
Diseases of the skin and subcutaneous tissue	450.9	306.3	774.5	543.7
Pregnancy, Delivery, and Post Delivery Complications	143.1	115.9	631.6	521.6
Nervous system and sense organs diseases	2067.6	681	3289.1	1178.5
Digestive system diseases	2260.9	693.5	2591.1	958.1
Neoplasm	1033.7	171.9	935.6	190.9
Circulatory system diseases	6001	1305.1	6494.8	1616.1
Blood and blood-forming organs diseases	375.5	188.4	370	196.8
Respiratory system diseases	5244.1	3734.4	7022.3	5387.9
Injuries and poisoning	899.1	795.5	845.2	743.2
Mental and behavioral disorders	2003.3	123.8	2445.8	174.7
Genitourinary system diseases	1127.5	466.9	1599.3	720.2
Diseases of the musculoskeletal system and connective tissue	661.4	279.7	731.5	245.5
Diabetes Melitus	1341.9	143.4	1144.4	165.4
TB	104.4	70.7	142.0	91.3

Table 5 Prevalence and incidence of diseases

According to NCDCMS data for 2004[6], diseases of respiratory, cardiovascular, endocrine, digestive system and infectious diseases accounted for the majority of incidence and prevalence of Kakheti population's health problems during the recent years. It should be mentioned that prevalence of endocrine diseases is higher then corresponding country data. Other diseases are in line or lower than country average. In regard incidence respiratory system

[5] Source: NCDCMS, Tbilisi 2004

[6] Source: Statistic Handbook 2003, NCDCMS, 2004.

diseases, as well as circulatory system diseases are the most frequent complications in Kakheti region.

Kakheti seems to have higher rates for diseases of circulatory system compared with other regions. Blood pressure is directly related to mortality from coronary heart disease and stroke. Hypertension increases an individual's risk of various cardiovascular consequences approximately two to three times. Therefore, it is highly important to ensure effective prevention and adequate case management of hypertension at primary care level.

High prevalence of goiter and diabetes mellitus calls for relevant preventive and curative measures to be taken at primary care level to ensure adequate control of these disorders. Available evidence suggests that neurosis and depression are prevalent in the population, which has also important implications for primary care[7].

Kakheti seems to have higher rates of malignancies compared with other regions. Smoking cessation/control and breast/cervical cancer screening programs need to be promoted at primary care level to tackle this problem.
TB incidence in Kakheti is comparable with other regions. There is urgent need to promote and institutionalize DOTS program at primary care level to ensure effective TB control.

The following table shows basic data on number of births and mortality rate:

Region	Deliveries		Caesarean Section		Maternal Mortality		
	Total	Home Deliveries	Total	per 1 000 Live Birth	Total	per 100 000 Fertility Aged Female	per 100 000 Live Birth
Kakheti	3,034	551	372	129	1	1	35
Georgia	46,631	1,180	7,773	168.05	21	1.81	45.28

Table 6 Births and maternal mortality

3.3 Health care facilities and their activity

There were 22 hospitals, 28 polyclinics, 8 dispensaries and 104 ambulatories (also 7 feldcher - midwife points) providing health care services for Kakheti population[8] in 2004. The most widespread type of PHC service provider is ambulatory. They are independent entities as well as incorporated in the polyclinic-ambulatory union. Since 2002 their number was decreased from 153 to104 in 2004. Quantity of polyclinics, representing secondary level of PHC providers remains practically unchanged during this period. Other types of facilities are represented by dispensaries, medical centers and feldcher-midwife points.

In-patient services are provided by 22 hospitals with up to 800 beds in total (including maternity houses and specialized hospitals).

7 Mamuka Djibuti, Health Needs Assessment in Kakheti, Tbilisi, 2005

8 Source: NCDCMS, Tbilisi 2004

		Hospitals				Polyclinics			Dispensarys			Total Medical Centers	Ambulatories		Cabinets (Excluding Dental)	Feldsher-Midwive Points United
		Total	Incl. Specialised	Incl. Maternity Houses	Beds	Independent	Incl. Dental	United	Total	Incl. with Beds	Beds		Independent	United		
	Kakheti	19	3	5	777	20	5	5	8			3	104	49		8
2002	Georgia	251	65	52	16550	274	83	96	78	10	250	43	674	287	9	306
	Kakheti	20	3	5	769	19	6	7	8	1	6	1	55	49	2	11
2003	Georgia	248	62	52	15816	277	93	102	77	11	253	44	394	282	17	335
	Kakheti	22	8	6	769	20	7	8	8	1	6	2	68	36	1	7
2004	Georgia	246	105	51	15513	276	93	102	76	11	253	52	453	229	17	381

Table 7 Structure of health care facilities

	Physicians	Middle Med. Personnel	Total	Physicians per 100 000 population.
Kakheti	1319	1199	2518	323.93
Georgia	21396	21622	43018	489.44

Table 8 Workforce in healthcare

Regarding PHC, 56% of all medical staff is working in PHC in Kakheti Region. In PHC, the ratio for the region is 144 specialist doctors per 100,000, 131 nurses, 8 midwives and 28 dentists and 23 administration and finance personnel per 100,000.

Profession	Per 100 000 population
Doctors	144
Nurses	131
Midwives	8
Dentists	28
Administration	23

Table 9 Medical workforce in PHC in Kakheti

There were in total 1.612 persons working in the PHC in Kakheti in 2003.In total there were 584.5 physicians of different specialties providing health care in the PHC. In terms of specialisation, paediatricians and general therapist are the most numerous; the majority of them are working as village doctors in ambulatories.

Detailed distribution of PHC staff is the following:

Profession	Number
Physicians	584.5
Diagnostic staff	119.5
Pharmacists	2,5
Dentists	113
Midwives	31
Nurses	532
Administration/finance staff	98
Other staff (maintenance,cleaning etc.)	131.5

Table 10 Detailed distribution of PHC staff

On average the specialist doctors represent 36% of the total staff of PHC facilities The medical staff represent 86% of the total staff (100% for Medical Points and FAP, 62% for Railway Ambulatory); Nurses represent 38% of the medical staff, though midwives 2%.The administration/finance represent 6% of the total staff (25% for Diagnostic/Treatment Centre and 0% for Medical Points and FAP); Other staff represent 8% of the total staff (33% for Railway Ambulatory and 0% for Medical Point and FAP).

The table below shows the data of referrals/admitions to the PHC facilities and emergency care services (per person) in Kakheti region. All indicators are below the country average.

Region	Total Visits	Ambulatory-Polyclinic Services				Reff. to Emergency Care	
		Visit to Doctor	Children under 15	Home Visits	Children under 15	Total	Children under 15
Kakheti	1.62	1.52	1.27	0.08	0.17	0.03	0.000
Georgia	1.97	1.80	1.64	0.12	0.26	0.05	0.003

Table 11 Referral/admissions rate

Immunization rates in general are above the country average, only BCG-V vaccination is below and also it is the one of the lowest in the country.

Region	Immunization of target population %				
	BCG -V	DPT - 3	OPV-3	VHB-3	MEASLES -1
Kakheti	75.3	83.1	69.2	86.5	90.9
Georgia	88.0	78.0	65.8	63.7	86.5

Table 12 Immunization rate

In total 569,708 consultations/activities were reported in all facilities in 2002[9] in Kakheti Region, of which 35% for preventive care, 50% - curative consultations in the facility for adults and children and 4% for home visits (not including “unofficial” non-recorded consultations).

Study shows[10] that in Kakheti region in total 94,158 laboratory or diagnostic tests were performed in 2002, and the majority of them are performed in the rayon polyclinics – 5184 on average annually compared to 133 tests per ambulatory.

9 Dr Dineke VENEKAMP, With contributions of Dr Marianna Fotaki, Ms Natia Rukadze, Mr Giorgi Tsakadze, Dr Ingo Neu, GIS & RIS Consulting Centre-Geographic, Vincent Delaunay

10 Development of a Regional Master plan for the Primary Health Care system in Kakheti Region, Final Report; Dr Dineke VENEKAMP, With contributions of Dr Marianna Fotaki, Ms Natia Rukadze, Mr Giorgi Tsakadze, Dr Ingo Neu, GIS & RIS Consulting Centre-Geographic, Vincent Delaunay

4 Network of PHC providers

4.1 Current status of the PHC network and its financing

. PHC facility building conditions are as follows: a large majority of the facilities have been constructed between 1980 and 1989. The majority of the buildings (67.9%) need major repairs. Nearly 4% is beyond repair. Nearly half of the facilities needs roof repair, with as second priority the repair of the interior (39.6%).

85% of all facilities receive their electricity from a public company. 30 to 34% has no electricity supply during summer and winter time and more than half irregularly. Vast majority of 94% of all Kakheti PHC facilities declared that the water supply is good for drinking. 40% of all facilities have no problems with the water supply and a quarter has supply difficulties. The water supply situation seems to be much better than the electricity supply.[11].

As regards the public financing of health care, direct transfers of the money for health care are currently made as follows:

- From the Ministry of Finance, Treasury to providers;
- From the local budgets to providers;
- From the Ministry of Finance, Treasury to the authorities running the parallel health care systems and, consequently, to providers.

Concerning the private financing of health care, direct payment flow from the patients as well as the population payment channeled through the private insurance companies and community-based insurance schemes should be considered.

Private insurance companies are demonstrating the growing trend as regards the private medical insurance market. According to the expert estimation, currently a share of medical insurance presents about 17% of the private insurance market. However, the corporative insurance predominates in the sphere while individual medical insurance is a minor one. Consequently, there is likely a lack of capacity to insure the population outside the big cities (where commonly no big local companies are operating).

Out-of-pocket expenditure is estimated to constitute from 75% to 87% of the total health spending in the country[12].

On the basis of 2002 Household and Individual Health and Health Care Issues survey, it could be crudely estimated that Kakheti population spent about 1.2 million Lari for outpatient health care services during three winter months. Payment to medical worker constituted the major part (about 60%) of this expenditure .

In the filed of the PHC public financing, the main in-flow is related to the State Outpatient Program financing.

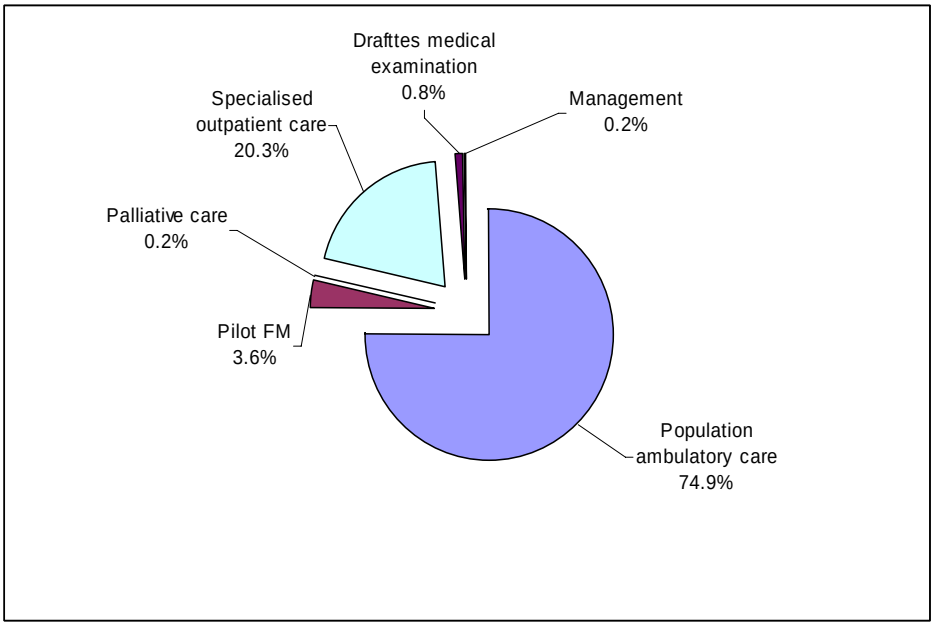
2005 State Outpatient Program budget is 19 673 000 Lari (33% more than 2004 budget estimation).

The program covers different components:

The biggest one (17 736 300 Lari) is the population ambulatory care component (among them "Highlands Territories Programmes").

11 Using applied decision-making criteria, derived from European models for FM delivery, it was recommended that forward planning focus on 57 units of the 159 PHC facilities. Therefore, during 2005 the decision-makers estimated that up to 57 prioritised PHC units might be refurbished with EC resources.

12 Georgia: Review of the Heath Sector. The World Bank. Report No.29413-GE. June 2004. Washington, D.C.: Human Development Sector Unit; Europe and Central Asia Region. P. 108.



Picture 2 Structure of expenditures of the State Out-patient Program

The second biggest component is focussing on particular specialists, commonly working in dispensaries or women clinics, services. This component covers outpatient consultations in the fields of TB, psychiatric, cancer diagnostics/treatment and care of pregnant women.

One more component of countrywide scope provided under the State Outpatient programme through the SUSIF is medical examinations for the boys (who in future will be obliged to serve in military forces).

Under the first component the following groups of population should receive free of charge services:

- Children (aged 0-14);
- Population elderly than 65 years ;
- Chronically ill (7 diseases are listed) 15-65 aged persons;
- Some other groups of population (veterans, terminally ill cancer patients etc.).

The service volume (consultations, laboratory examinations, supplying with emergency medications) determined by the population ambulatory care component did not significantly change as compared to this component financed in 2003-2004[13].

	GP team		GP team working in highlands	
	2004	2005	2004	2005
Physician salary	100	115	135	147
Nurse salary	70	80.5	94	103
Taxes	53	39.1	71	50
Medicines	30	20	30	20
Laboratory tests	50	45	30	30
Administration	70	65	50	50
Total per month	373	364.6	410	400

13 For more details see: PHC Roles and Functions in Georgia – the Current Situation. Georgia Health Sector Reform Programme – CNTR 02 4201: Primary Health Care – Human Resources Policies Work Stream. Oxford Policy Management. September, 2004.

Total per year	4476	4375.2	4920	4800

Table 13 PHC team budget in 2004-2005

In 2005 budgets of the teams (as compared to 2004) slightly decreased due to reduction of funding for medicines and taxes (laboratory tests and administration costs as regards a standard GP team). However, the wages of medical professionals increased. Average per capita spending for basic outpatient services are almost the same in 2004-2005 in Kakheti – about 2.7 Lari

According to the Kakheti SUSIF office data about 90 thousand Lari were transferred to outpatient health care providers monthly. The payments are made under contractual agreements made in the end of 2004. Due to reduction of the social tax to 20%, an average monthly transfer was recently reduced to approximately 85 thousand Lari. Actual payments derive from the budget estimation only by 2%.

Moreover, approximately 177 708 Lari were spent for so called "specialized outpatient services" in 2004 in Kakheti. Those services (covering gynaecology-obstetrics, psychiatric and TB care) were delivered by 14 providers (no specialised cancer treatment provider in Kakheti).

The services provision is reimbursed differently:

- Fixed wages for medical professionals in the field of TB;
- Fees for consultations in the field of gynaecology-obstetrics;
- Fixed budget in the field of psychiatry.

Funding for those services contributes additional 0.44 Lari per capita.

In total about 3.2 Lari are spent per capita in Kakheti for all types of outpatient services through the SUSIF.

Additional public money to the PHC providers network (commonly, to the rayon polyclinics) are channelled through the PHD programmes. Local PHC are mostly financed by municipalities (in the framework of unified public health programmes about 1.5% of the local budgets are allocated. E.g. for Telavi centre it is about 37 000 Lari in 2005. The flow from the PHD (monitoring for immunisation scope) is relatively small (700-800 Lari).

In 2000 the sample of revenue structure of the PHC providers in rayons[14] was as following:

	Polyclinics	Ambulatories
FFS	43%	43%
Fee for Lab. tests	20%	11%
Fee for issue of med. documents	17%	19%
Reimbursement by State Payer	17%	24%
Fee for drugs	1%	0%
Fee for registration	1%	0%
Donation	1%	3%

Table 14 Revenue structure of PHC providers

14 PHC Network of Western Georgia: Guria, Imereti and Samegrelo. Technical report. Curation International Foundation. 2000.

It is important to stress that the providers strongly depended on out-of-pocket payments while the shares of public funding were 17% in polyclinics and 24% in ambulatories correspondingly. Since 2001 the targeted public financing for outpatient health care services in rayons was launched (by the PHD and later on by the SUSIF). However, as it is estimated by international projects in Georgia[15] the public financing does not cover even current costs of the practices (to function on reasonable level). The major part of the public money as well as out-of-pocket expenditure (due to the estimations based on the household surveys' data) is spent to reimburse the personnel.

4.2 Planned development of the PHC network

During the July 2003 – January 2004 IRIS/ECOTEC has prepared Regional Master plan for the Primary Health Care system in Kakheti Region for the European Commission. The main objective of this project was to assist the MoLHSA in developing and implementing a more effective system for allocation of resources in Primary Health Care in Kakheti region specifically and Georgia as a whole.

The following Tools and methods were used for development of the regional Master Plan:
Indicator list
Questionnaires for the facilities assessments
Focus Groups discussions and in-depth interviews with key persons
Geographic Information System (GIS)
For restructuring and optimization of the PHC network the following general criteria have been used:
Geographic accessibility in terms of travel time from settlements to nearest health facility
Population catchments area of those selected health facilities within pre-defined travel time
Most suitable facility in terms of appropriate size for catchments area
In order to achieve maximum coverage and accessibility with present (financial) means the following criteria have been chosen for the national level:

- 15 minutes travel time[16] from settlements to nearest health facility
- Filtering out any overlap in population catchments areas of those selected facilities
- Population catchments areas between 2.000 and 15.000 people depending on urban or rural location and within this 15 min travel time

Some regional adaptations had been used because of the existing PHC facilities in fixed locations:

1. Areas outside 15 minutes travel time (by vehicle)
Select nearest facility
Determine travel time to this nearest facility. Acceptable? (20-30 min). If not acceptable take population size into consideration.
If population size is below i.e. < 1000 organize mobile health services and/or Family Health Physician going on home visits on a regular basis to these villages.

2. Areas within 15 minutes but with small population size.
If the population is i.e. < 1000 persons, organize mobile health services and/or Family Health Physician going on home visit

15 The GVG and OPM projects.

[16] Travel time is defined as the time needed to reach the facility by vehicle, but taking the type of road into consideration. So will a tarmac road do 80 km/h and a mountain road 5 km/h.

3. Selected health facilities too small or too large for corresponding catchments area.
Select nearest larger or smaller health facility (but travel time and population catchments area might change)
Enlarge selected existing in case it is too small, close down a part if selected facility appeared too large or construct new facility

4. Gradually close down facilities, but the ones which still serve small populations and/or of those populations which accessibility decreased being the last ones
.
With this model the number of facilities serving the population within 15 minutes[17] travel time decreased from 159 to 50[18].
The 50 facilities which were selected with above mentioned criteria cover 99% of the population within 15 minutes travel time. This is a reduction of 69% of the previous number of facilities. 83% of all villages are covered, but the remaining population outside this 15 minutes zone consists of only 3.816 people.

	Before re-organisation	After re-organisation	Reduction n %	Int. Standard
Facilities	159	50	69	
Village coverage	315	260	17	
Population coverage	100%	99%	1	
No of people not covered within 15 min travel time		3.816		
Population per doctor	701	1.322		2.000
Population per nurse	513	934		1.000

Table 15 reduction of the number of health facilities

	Number of facilities	%
Located in own building	25	51,0
Located in shared building	20	40,8
Located in non -PHC owned building	4	8,2

[17] The argument supporting the 15 minutes travel distance was SCF household survey data that lack of transport is not one of the main constraints for seeking medical care when being ill.

18 Using applied decision-making criteria, derived from European models for FM delivery, it was recommended that forward planning focus on 57 units of the 159 PHC facilities. Therefore, during 2005 the decision-makers estimated that up to 57 prioritised PHC units might be refurbished with EC resources.

Total	49	

Table 16 Distribution of PHC facilities according to ownership

	Number of facilities	%
The building has to be repaired	42	93,3
The repair does not make sense, new building required	3	6,7

Table 17 Distribution of facilities according to physical status

It can be seen that nearly all selected facilities need to be repaired either replaced.

The detailed list of selected PHC facilities is in the annex 1.

Three options are given in the annex 1. First option is according to the proposal of HPU with differentiated catchments areas from 1500 to 2200 people[19], second (fully) optimized version is with catchments population exclusively 2000 but a few mountain facilities and third (extremely) optimized version with catchments areas around 3000 people[20]. All options differ only in number of medical teams (PHC practices housed in each facility).

The table below demonstrates distribution of selected facilities by catchments population.

Catchment area facilities in %	No	%
>15.000 pop.	5	9%
5.000 - 15.000 pop.	28	49%
2.000 - 5.000 pop.	13	23%
1.000 - 2.000 pop.	3	5%
<1.000 pop.	8	14%

Table 18 Distribution of PHC facilities by catchments area

4.3 Legal status of PHC facilities and PHC staff

Decisions taken and recommendations accepted by the PHC Board regarding the legal status of the reformed health facilities are as follows[21]:

- The pilot project should not start earlier than 1st of April 2006 and that allows the stakeholders to receive sufficient time from state budget adoption to approval of state programs, procurement and contracting procedures.

[19] Catchments area of 1000 people for mountains areas, 1500 for rural areas, 2000 for district urban areas and 2200 for urban areas

[20] Catchments area of 3000 people can be still served by one medical team provided that assumed utilization rate 1 curative visit per person won't be increased remarkably. Approximately 50% of working time of a PHC practice will be used for curative services in that case.

[21] Meeting of the PHC Board on 21st of July 2005

- The current legal status of for profit organizations (LLCs) and existing organizational arrangements/affiliations (Polyclinic Ambulatory Units – PAUs) will be retained during the transitional period.
- Contractual terms, financial accounting and reporting procedures for PHC services should be clearly defined, transparent and easily monitored to avoid misuse and misappropriation of funds allocated to reformed PHC facilities, particularly in case if PAU, where pilot and "non-pilot" ambulatories and polyclinics co-exist.
- In locations where legally established PHC facilities were absent the new PHC facility will be established as nonprofit legal person – "foundation", which will create more favorable legal and tax environment for such facility.
- The FM doctors may adopt the legal status of "individual entrepreneurs" and will be contracted by respective local governments and the MoLHSA. It is recommended for local governments to include special provisions in these contracts for retaining FM doctors in remote areas (e.g. refunding the retraining resources if they decide to move prior the specified time period).

The MoLHSA will introduce the changes in the "Law on Health Care", removing the licensing requirements for ambulatory-outpatient care, thus allowing "individual entrepreneur" FM doctors to practice.

4.4 Accreditation and licensing of the PHC providers

4.4.1 Accreditation of the PHC providers

The MoLHSA is committed to pursue the state policy in the field of health care based on the Georgian Health Care Law. One of the mechanisms of the state health care management is the licensing and certification of medical personnel and medical institutions (accreditation).

4.4.2 Licensing of the PHC providers

1. article of the current Law of Georgia On Licensing of Medical and Pharmaceutical Activities (Presidential order, May 8, 2003, #2254-IIs) according to Georgian Law on "Enterprise Activity Licensing and Bases of Permission Issues" regulates relationships concerning licensing of medical and pharmaceutical activities, defines regulations for licensing, introduction of amendments, abeyance and reactivation, disaffirmation, and besides, defines types of activities subjected to licensing and additional conditions for licensing. **2. Article** Definition of terms regulates the used terms in this Law and has the following meaning:

a) Medical activity – activity related to disease prevention, diagnosis, treatment and rehabilitation and meets professional and ethical standards of medical care acknowledged in the country;
b) Care quality audit – assessment of health care quality, i.e. evaluation - how much the care quality meets the set norms;
c) Passport of health care or pharmaceutical facility – minimal requirements (building characteristics - design for a building, staff, equipment, work content) defined by the standard act of the Minister of Labour, Health and Social Affairs that the facility should meet to receive license for particular activity.

4. Article describes the types of medical activities subjected to licensing.

As a result of the implementation of the PHC this activity should be subjected to the licensing by the MoLHSA (see Point). The current law needs to be passed basing on the experience of the WB project in Adjara and Imereti and the EU project in Kakheti.

4.5 Organization and management of PHC

This part of the Regional Master plan is focused on the involvement of major authorities in the PHC financing in Georgia. It considers roles, functions and interactions of the relevant institutions. On the basis of the project analysis it provides proposals for improvement of financial management and organization of the PHC sector on macro- and micro-levels.

4.5.1 Organization of the involved institutions and their role

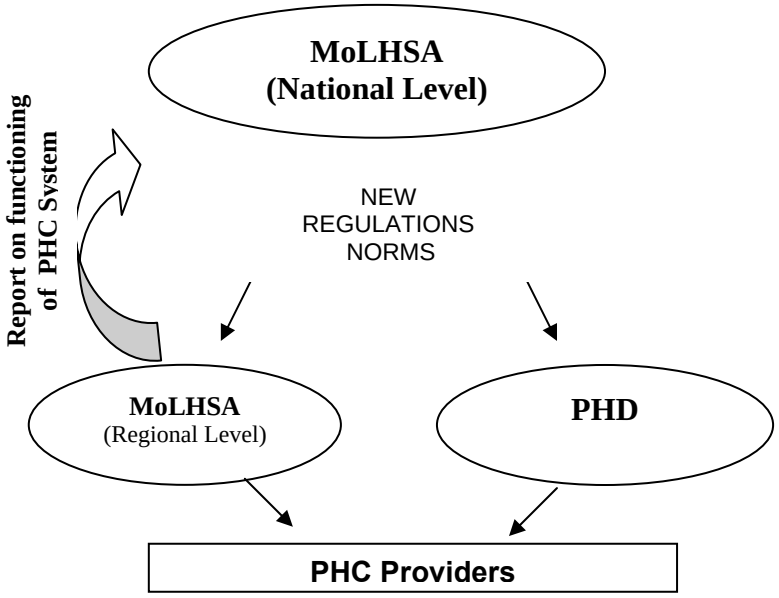
- **The MoLHSA – National level**

The MoLHSA, within the state budget allocation, decides on the allocations for each state program. This includes particular the Primary Health Care budget estimation and the content of these programs. The MoLHSA Department of Healthcare Policy has to develop the state health care programs. The main objective of this Department is "to elaborate the strategy and tactics of support the health care sector for the purposes of perfection the medical aid to the population of Georgia"[22]. Among other functions of the department, there are the following ones: to elaborate proposals to develop healthcare, state programs, modern medical technologies; to acquire the equipment of core medical services and to participate in providers' licensing procedures. The MoLHSA issues licenses for health care providers to deliver particular heath care services and the norms of accreditation of the facilities.
The MoLHSA should regularly inform the regional level of the MoHLSA and the PHD about new regulations and norms. Further information should be also available in the direction of the providers and patients.
The MoLHSA should regularly control the results of the work of the SUSIF at the national as well at the regional level.

- **The MoLHSA – Regional level**

The Regional Health Department is obligate to inform the regional PHDs, providers and patients about new regulations and norms. In case of the retraining and refurbishment the PHC-facilities and -FTs should be selected and appointed in close cooperation between the municipalities (local governments) and the Regional Health Department.
The Regional Health Department should provide feed back to the national level in terms of functioning of the PHC system, identified problems which should be solved, health needs of the population and local developments.
The regional office of the MoLHSA should be in charge of the selection of the General management of PHC facility together with the local authority (Municipality-local governments or the MoE-Agency).

22 Regulations on Experts of the Ministry of Labour, Healthcare and Social Security of Georgia.



Picture 3 Regulation Information Flow

- **The SUSIF – National level**

The Minister of the Labour, Health and Social Affairs stated that the SUSIF will be in charge of execution of the Primary Health Care programs through several major functions as contracting the providers, commitment control, monitoring, performance IT Database like national register of the catchments population and budget execution including the remuneration of the providers. Information exchange in form of reports should be transmitted to the MoLHSA and MoF.

During the transitional period (2006-2008) public purchaser (SUSIF) will sign the contract on provision of health services and drug benefits with legal entity of private law. Appropriate amendments should be made to National Budget Law on providing exclusive privileges to the optimized PHC facilities. Contracting will be done with all selected FM based PHC providers and facilities in the future (after 2008) according to the State Procurement Law provisions.

The commitment control provisions cover the stages/procedures of:

- Invoices collection once per month,
- Verification of the invoices,

  Option 1: Presenting the invoices to the Treasury and clarification of appropriateness of the payment against the contracts.

  Option 2: Clarification of appropriateness of the payment against the contracts and paying the providers directly.
- Reporting on the budget execution based on the remuneration of the providers
- Managing the Health financial Information System (HFIS)

The monitoring should be done based on the IT database, agreed and contracted results, delivered indicators, the invoices and the registered catchments population. Every provider should be monitored minimum once a year.

- **The SUSIF – Regional level**

The administration of the regional SUSIF will be directly in charge with:
Contracting to be done with all selected FM based PHC providers and facilities and in the future (after 2008) according to the State Procurement Law provisions.

The commitment control provisions cover the stages/procedures of:

- Invoices collection once per month,
- Verification of the invoices,

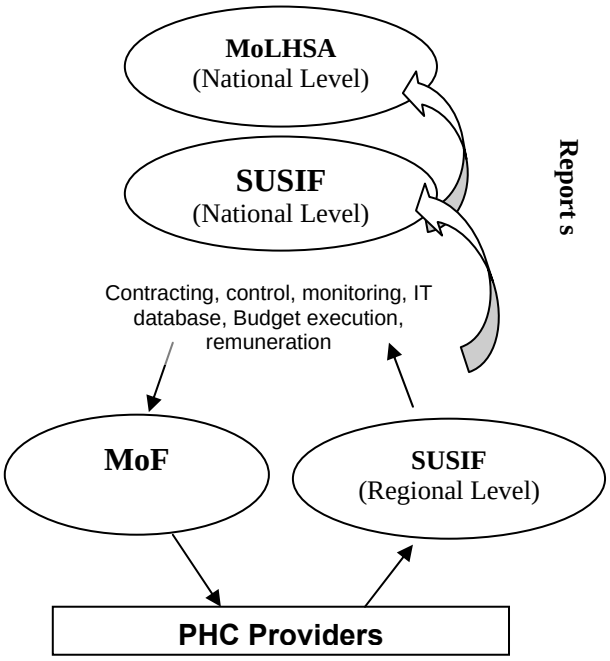
Option 1: Presenting the invoices to the Treasury and clarification of appropriateness of the payment against the contracts.

Option 2: Clarification of appropriateness of the payment against the contracts and paying the providers directly.

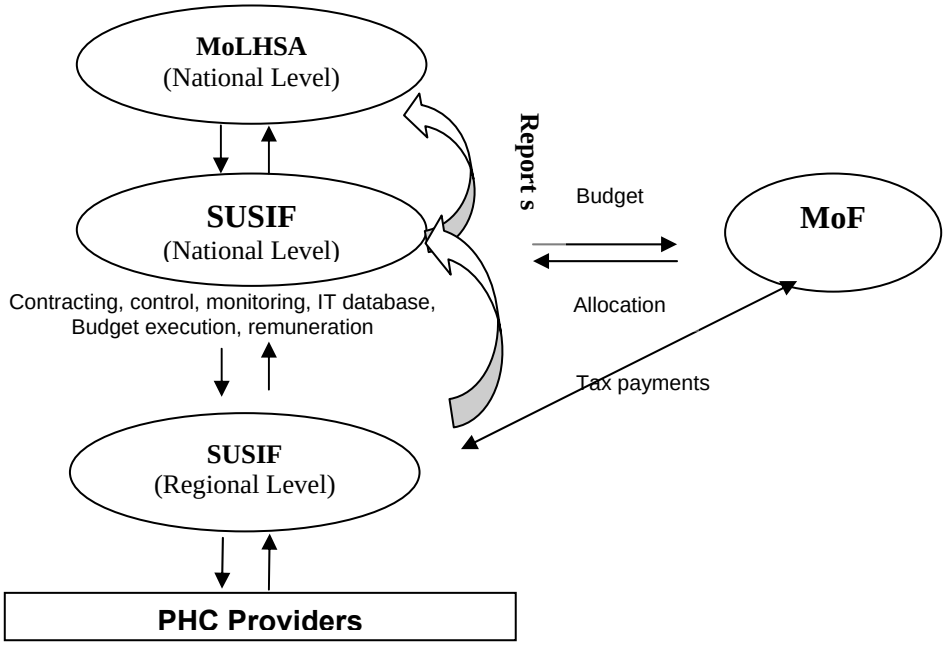
- Reporting of the budget execution based on the remuneration of the providers
- Managing the Health financial Information System (HFIS)

The monitoring should be done based on the IT database, agreed and contracted results and delivered indicators, the invoices and the registered catchments population. Every provider should be monitored minimum once a year.

The local SUSIF reports to the national level and to the regional MoLHSA and will transmit the IT database to the national Level.



Picture 4 Option 1 – Financial Information Flow and payments by MoF



Picture 5 Option 2 – Financial Information Flow and payments by SUSIF

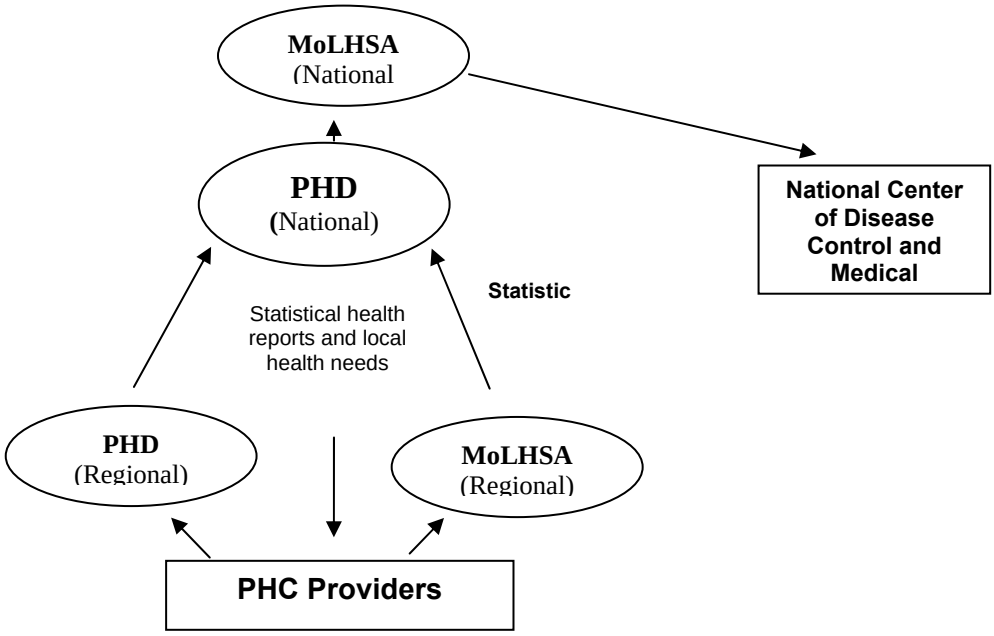
The project team strongly recommend installing the option 2.

- **The PHD**

The national PHD and regional PH centres should inform the providers, the regional MoHLSA about the statistical health reports and local health needs. The Regional PH Centers coordinate the public health issues within the region; collect the statistical information from local healthcare

service providers and process and distribute this information to the National Center for Disease Control and Medical Statistics and other relevant institutions.
The main responsibilities of Regional PH Centers are:

- analyzing and managing the epidemiological situation in the region;
- organizing, coordinating and implementing public health measures to prevent disease;
- reducing disability and premature mortality;
- managing the Healthcare Management Information System (HMIS).



Picture 6 Statistic Information Flow

- **Municipalities**

The regional MoHLSA should prepare a plan of health needs and the needed local staff and facilities together with the municipalities and PHD's. The respective local governments of the municipalities will be responsible for contracting if the FM doctors may adopt the legal status of "individual entrepreneurs". Only the municipalities have the ability to establish a non-profit organization. It is recommended that local governments should include special provisions in these contracts for retaining FM doctors in remote areas (e.g. funding the retraining if they decide to move prior the specified time period).

The Department of Sanitary Surveillance and Hygienic Standards under the responsibility of the municipalities should increase the effectiveness of the certification of enterprises by ensuring compliance with sanitary and hygienic norms..

The national network of the DSSHS consists of Regional SSHS Inspections, which assume responsibility for most tasks formerly delegated to the Sanitary–Epidemiological Department: cleaning and laundry, nutrition, occupational health, child and adult hygiene and certification of enterprises.

The municipality owned facilities will be rent out to FT's.

The Municipality (local government) should be in charge to contract the General management of PHC facility together with the local authority (regional office of the MoLHSA and the MoE-Agency).

- **The MoE**

The MoE has no role in Primary Health Care. The state owned facilities will be rent out to FT's.

The MoE-Agency should be in charge to contract the General management of PHC facility together with the local authority (regional office of the MoLHSA and Municipality).

- **The MoF**

Calculation of the state budget and integration of the MoLHSA proposal into the national health accounts.

- *Option 1 (see4.5.1):* The MoF will settle via the regional tax inspectorate the payments for PHC services after the SUSIF has presented the invoices to the Treasury and after clarification of appropriateness of the payments against the contracts. The MoF should not evaluate and monitor the invoices of the providers because this duplicating the work. The MoLHSA should control the regional and national SUSIF.
- *Option 2 (see4.5.1):* The SUSIF or the public purchaser will settle the payments after they prepared the invoice verification. The MoF should receive the budget report and should allocate the budget to the SUSIF. The MoF does not need to evaluate and monitor the invoices of the providers because the SUSIF is the subject to supervision by the MoLHSA.

4.5.2 Organizational status of the PHC facilities

In the areas with not less than 5 PHC teams establish the legal entity of private law – non-profit organization (PHC delivery organization- PHCDO).
Optimized branches and departments of PHC facilities of ambulatory-polyclinic units in the cities and district centers, where yet it is not possible to set up independent PHC units (based on Kakheti region experience).

Branch of legal entity- is separated sub-unit which is situated out of the premises of legal entity and fully or partially fulfills the functions of optimize PHC facility;
Department of legal entity- division of legal entity which shares the premises of legal entity (has the same address);

During the transitional period the facilities established through the governmental participation, where the government's share makes up 100%.

The legal status is mentioned under point4.3. The health delivery organization or provider will be a state organization under the ownership of the government. The provider could be leaded by implementation management during the project period. The doctor and nurses will be employed by the provider or physicians could work under a private contract as a private entrepreneur.

4.5.3 Organization and management tasks of the PHC provider as a legal entity of private law – non-profit organization

The major management tasks of the family medicine team (FT) as a PHC provider are the following:

Management of patient flows

- is normally the point of first medical contact within the health care system, providing open and unlimited access to its users, dealing with all health problems regardless of the age, sex, or any other characteristic of the person concerned.
- makes efficient use of health care resources through co-ordinating care, working with other professionals in the primary care setting, and by managing the interface (referrals system) with other specialities taking an advocacy role for the patient when needed.
- develops a person-centred approach, orientated to the individual, his/her family, and their community.
- has a unique consultation process, which establishes a relationship over time, through effective communication between doctor and patient
- is responsible for the provision of longitudinal continuity of care as determined by the needs of the patient.
- has a specific decision making process determined by the prevalence and incidence of illness in the community.
- manages simultaneously both acute and chronic health problems of individual patients.
- manages illness which presents in an undifferentiated way at an early stage in its development, that may require urgent intervention.
- promotes health and well being both by appropriate and effective intervention.
- has a specific responsibility for the health of the community.
- deals with health problems in their physical, psychological, social, cultural and existential dimensions.
- inform the patient about the patient's rights

Management of the practise

- registering the population in their catchments area during the enrolment process
- managing the practice bank account
- managing practice account based on the tax code and submit of the necessary data to the responsible tax inspectorate (balance sheet, profit and loss calculation and several accounts)
- preparing the monthly request of payment and submit that to the regional SUSIF
- organize the practice and the staff
- reporting to the regional level of SUSIF, PHD and MoHLSA
- settling payments for the maintenance and taxes to tax inspectorate
- using the normative standard forms for reporting, referrals, prescription and accounts
- signing contracts
- managing the staff

4.5.4 Trade unions and professional associations:

The Georgian Nursing Association focuses on nursing education and professional standards. An association of General Practitioners and Family Doctors was established on 8th of December 1995. The role of the professional groups in influencing policymaking is somewhat limited, but continues to develop. The project recommends that the physicians and nurses should work within the associations.

5 Purchasing of PHC

5.1 Public purchaser and its legal status

5.1.1 Public purchaser

A core definition of purchase is
"A health care body which assesses the needs of a defined population and buys services to meet those needs from providers"[23].
The public purchaser in the Georgian health care system should fulfil several tasks:

- Tender process or selecting the providers under State Procurement Law of Georgia
- Contract the providers (PHC FTs)
- Invoice verification
- Remunerate of the PHC providers4.5.1 (see 4.5.1 - recommended under option 2)
- Provide financial statement for budget control
- Prepare IT database for contracted provider and registered catchments population
- Report to the MoLHSA

The tender process should be suspended during the implementation phase up to 2 or 3 years in the future. The Human resources development plan should be defined between the MoLHSA and local authorities and this plan should be submitted to the public purchaser.

5.1.2 Legal status

According to the President's Decree 558, dated December 31, 2002, the main tasks of the SUSIF are:

- "The realization of health, social insurance, employment and other State programs, organization of social insurance of the population, granting of payments defined by the legislation";

- "The transfer of the cost of work, pensions, assistances and other social insurance payments according to health, social insurance, employment and other State programs in the limits of allocated financing";

- "The registration of the citizens of Georgia and their personification in order to involve physical and legal persons in the social security system".

The implementation of the new Tax Code and the direct (or semi-direct) payment of the health care services by the Treasury changed the role of the SUSIF for a large part (January 2005).

According to the introduction of the PHC and purchasing of the BBP the MoLHSA should declare in the Decree of Minister that the SUSIF will provide the necessary administration of the PHC program.

5.2 Contracting of PHC

5.2.1 Contracting system of PHC

Core definition of a contracts is:

[23] Witter, 1997

"**A contract is an agreement made between two or more parties with the intention of creating a legal relationship, enforceable by law.** If it contains the essential elements of a contract, neither party may escape from its effect other than by mutual consent. Any agreement to supply goods or services in return for payment that falls within this definition is a contract. As such, all contracting parties have legally binding obligations to fulfil its conditions. Therefore the parties must carefully consider whether to conclude a contract and each contract must be carefully prepared – otherwise the result might be undesired and costly."

According to Harding and Preker (2003), the potential benefits of contracting from a public sector perspective are:

- **Competitive forces**: Contracting can generate pressure on both public and private providers to improve their performance in terms of both service and price.
- **Planning and Policy Development**: Contracting requires and may promote better planning and policy development by improving the flow of information about volumes of goods, services, costs, quality, responsiveness, population served, health needs, and other issues.
- **Price Stability**: Contracting provides government with a mechanism for purchasing needed health services at an agreed-on, and therefore, predictable price.

In addition, contracting can also improve the level of equity in distribution of health services because the Georgian government can establish contracts that focus on delivering services to poorest and vulnerable population.

The MoLHSA can use contracting to guide private sector delivery of health services, and to achieve national health objectives.

The main characteristic of contracting-out is that the PHC providers are completely private (see 3.3 and 3.4). The State is not the owner of these companies but still is the owner of the facilities (important in terms of accreditation). Contracting-out could be defined as: the contractor have complete line responsibility for service delivery, including hiring, firing and setting wages, procuring and distributing essential drugs and supplies, organizing and staffing health facilities.

The general rationale for contracting-out relates to theories of why governments fail in their provision of services A central tenet of contracting-out is that the traditional organisational form of the public sector, hierarchical bureaucracy, is inherently inefficient and that the introduction of various market mechanism will substantially enhance the efficiency of public service delivery.

Due to the current situation in Georgia MoLHSA, the SUSIF and the providers cannot use the contracting-out system. The services delivery contract will be concluded between the PHC providers as a Health delivery Organization and the public purchaser (SUSIF).

5.2.2 Content of contracting

Contracts between purchasers (e.g. SUSIF) and PHC providers (e.g. self employed PHC teams or PHC group practises) will form a legal platform for executing PHC in Georgia. The contracts shall consider the following content:

- Preamble or subject of the contract and PHC definition
  The family medicine based PHC facilities are the first point of contact for the patient. Comprehensive PHC services will be delivered by the Family Medicine Teams (1 doctor + 1 nurse). That includes:

  - Curative PHC services
  - Preventive services: common immunizations mainly for children as well as immunization against tetanus for adults and basic preventive examinations for all age groups of population.

- Basic laboratory tests.
- Drugs: we propose to include a specified list of essential drugs in the BBP in the form of “a catastrophic cap”.
- Excluded services from BBP: Services in personal interest of a person (like different certificates), acupuncture and any “beauty” services
- Authorized persons and signatures

Identification of the individual from both the purchaser and the provider who signs the contract and who is responsible for ensuring the terms of the contract are fulfilled.

- The contract period should be a Fiscal year or two years.

The time period covered by the contract (and, possibly, the assumed arrangements for its renewal subject to satisfactory performance)

- *Terms of the contract*
  - Licenses physicians
  - Accredited facilities
  - Services provided
- *Stipulation of:*
  - Registration of the catchments population made by the provider and aggregated by the purchaser
  - Referral System: PHC with “Gate keeping” function to SHC and Tertiary Health Care + monitoring of patient coming back from SHC and THC
  - Prescription of drugs/medicines
  - Information about the patient rights
  - Accounting
  - Documentation of medical records and statistic
  - Indicator (Utilizations rate/ Amount of referrals/ Amount of prescriptions/ Reduction of specific illnesses/ Prevention/ Immunization) to deliver the selected indicators to the purchaser
- *Express warranty*
  - Hygiene
  - Quality of medical service/treatment
- *Rights and responsibilities of the physicians*
  - careful use of the equipment
  - treat patient up to clinical level
  - First Aid
  - Provide purchaser, “Supervisor” and Statistical Dept. with necessary information like medical statistics, cash and management information
  - Guaranteed wages
  - Retraining
- *Working schedule*
  - 8 hours a day and 5 days a week
  - Availability full time as a first aid point
- *Payment method/Reimbursement*
  - Capitation >for curative services
  - Fee for service >for preventive services
  - Co-payments >for drugs/medicines
- *Bank account*
- *Monitoring of the results (as a duty of the purchaser but should be legalized under the contract)*
  - Accounting
  - Indicators
- *Penalties*
  - Informal payments

- Referral system
- Falsification of documents

- *Replacements cost if physicians change their position or job*
- *Severability clause*

The defined contract should be introduced as a standard contract by the decree of Minister of Labor Health and Social Affairs . Neither the purchaser nor the provider could change this standard form. The contract should consist of three parts:

- Preconditions
- Negotiable and
- Legal.

5.3 Other (non-public) purchaser

Other (non-public) purchasers are NGOs, private insurances, private companies or single private household. There could be an interest of them to use or contract the new refurbished facilities and retrained physicians directly. It should be the State or governmental interest to serve the PHC services 100% under the contract of the public purchaser otherwise it will open the space for fraud and corruption. If it's in the State interest to maintain programs from NGOs for immunization or vaccination the contract should be concluded between the public purchaser and the NGO directly. The services will be subcontracted between the purchaser and the PHC facilities.

6 Basic Benefit Package and its provision

6.1 Definition of the Basic Benefit Package

Basic Benefit Package defines that the population is entitled to be provided by full or at least partial public coverage. Services that are not included in the BBP but still can be provided by PHC physicians have to be paid by the patient.

The BBP for the new PHC system has the following components:

- preventive
- curative
- laboratory
- drug
- administrative

Preventive component

The inhabitants are entitled to the following immunizations and preventive services free of any charge:

Immunization	Age group	Frequency
BCG - Immunization Against Tuberculosis	0-1	1x
OPV - Immunization Against Polio	0-5	5x
DPT-Immunization Against Diphtheria, Pertussis, Tetanus	0-4	4x
HB-Immunization Against Hepatitis „B"	0-1	3x
Immunization Against Measles	0-5	2x
Immunization Against Mumps	0-5	2x
Immunization Against Measles, Mumps, Rubella	1-14	3x
Immunisation Against Pertussis	0-6	3x
Immunization Against Mumps, Rubella	1-5	2x
DPT-Immunization Against Diphtheria, Tetanus	5	1x
DPT-Immunization Against Tetanus, Diphtheria	14	1x
Immunization Against Rabies-combined course with imunoglobulin antirabicum	any age	6x
Immunization Against Tetanus-reinforsing dose	15-19	1x
	20-55	1x in 10 years
	for risk groups	1x in 5 years
	after sustaining open wound for non-immune	3x
Immunization Against Polio-reinforcing dose for school leavers	15-19	1x
Immunization Against Polio-special risks for adults	20-55	1x

Table 19 Immunisations in the BBP

Preventive checks up	Age group	Frequency
Person Health Check	15-65	1x in 3 years
High Risk of CHD	40-64 men 50-64 women	1x in 3 years
High Risk of Diabetes	45+	1x in 3 years
Health Check of Older Adults	65-75	1x in 3 years
Health Check of Older Adults	75+	1x in 1 year
Children Checks	0-1	14x
Children Checks	1-2	2x
Children Checks	3-12	5x
Antenatal Care		9x

Table 20 Preventive checks up in the BBP

Curative component

The inhabitants are entitled to visits the PHC doctor that pursue curative objectives. However the following methods of treatment are exempted from public subsidy:

- acupuncture
- any services related to beauty medicine

A patient is provided free of charge curative visit if:

- the visit takes place within official working hours of the PHC doctor unless it is an urgent case
- the visit takes place in official working premises

A patient is entitled to a home visit of the PHC doctor in case he/she is not able to reach the working premises without remarkable worsening of his/her health status. A fixed co-payment is to be paid for such justified urgent visit.

Laboratory component

The patient is entitled to the following list of laboratory tests free of charge (covered by the co-payment for a visit) provided that tests are ordained by patient's PHC doctor:

Laboratory test
General analysis of blood
General analysis of urine
Ocult Blood Test
Glucose level in blood
Vaginal smear
Blood Rezus-group
Serological test for STD(Vasermen)
Test on Creatinine
Test on Cholesterol
Blood Clotting
Test on Prothombin

Table 21 Laboratory tests in the BBP

Drug component

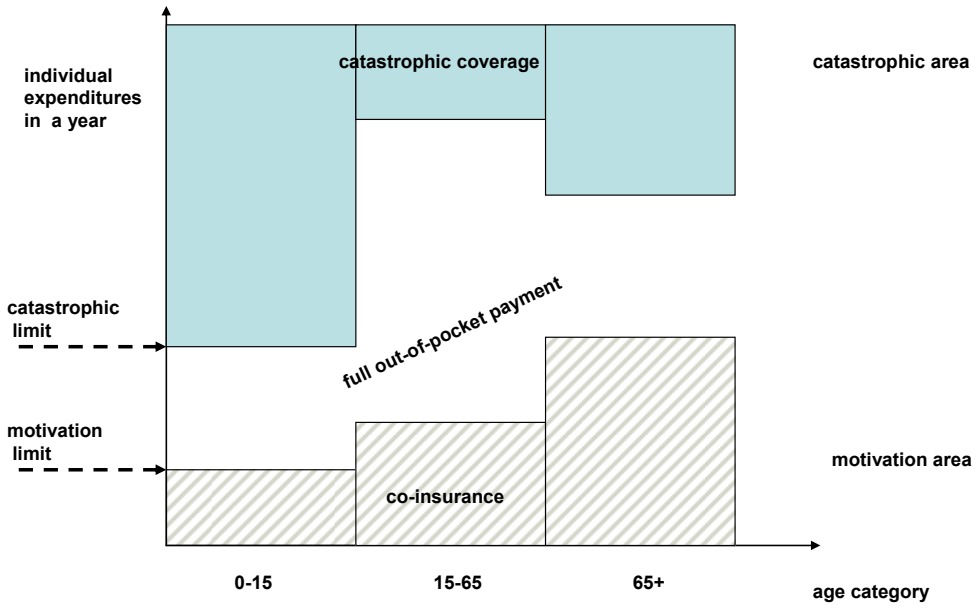
The drug component is most controversial part of the BBP. Currently very few drugs are provided to the patients with public subsidy. The patients have to pay majority of drugs at market prices and it results in restricted availability of drugs to the broad population on one hand and in low attraction of PHC for the population on the other hand.

Two lists of drugs (children list and adult list) were elaborated as the result of analysis of treatment protocols and drug schedules that can be treated in PHC[24]. Estimation of prevalence and incidence indexes for these diseases in Georgia has been used for evaluation of annual expenditures for the lists[25].

The resulting lists are given in annex 7 with average expenditure for given drug per case, estimation of total annual expenditures for Kakheti region and whole Georgia and corresponding annual number of patients requiring the drug.

As full public coverage of drug expenses (even for rather limited lists of drugs in the annex 7) is out of scope of current state budget in Georgia[26] a drug benefit scheme with extensive participation of patient's out-of-pocket payment has to be considered. Different drug benefit schemes were analyzed in the paper- co-insurance, co-payment per pack, deductible per episode of disease, deductible per annum.

A general drug benefit scheme is illustrated in the Picture 7 that combines major part of drug benefit schemes mentioned above and that is recommended as the drug component of the BBP.



Picture 7 General drug benefit scheme

The general drug benefit scheme distinguishes three age groups - children up to 15, adults up to 65 and elderly above 65. Each age group has set up its own limits. The first is "motivation" limit. The patient pays only co-insurance (fixed percentage) for his/her drugs until the total price for his/her drugs reaches the motivation limit since the beginning of a calendar

[24] See Nemec, Karosanidze Pharmaceuticals in PHC in Georgia, GVG 2005

[25] Specific figures for Kakheti region are not available, nationwide figures are projected to the Kakheti case

[26] Annually approximately 180 million Lari for adults and 10 million Lari for children

year. The patient has to pay the drugs fully after that until the total price of his/her drugs reaches the "catastrophic" limit since the beginning of the calendar year. The drug expenditures are covered fully by the public purchaser above this limit and the patient pays nothing for drugs until the end of the calendar year.

The first area below the motivation limit should attract citizens to use PHC and not to by-pass it. The area above the catastrophic limit should protect the patients from catastrophic expenditures that may impact their social status to a high degree.

Each variant of the general drug benefit schema may be characterized by six parameters-motivation and catastrophic limit and co-insurance for expenditures up to the motivation limit, each triple per age group.

Annex 8 contains results of modeling that cover nearly all reasonable combinations of such parameters and can be used for estimation of total public expenditures both for Kakheti region as well as whole Georgia. We propose as first choice the following options:

Option 1 (both motivation and catastrophic coverage):

Age group/parameter	Motivation limit	Co-insurance	Catastrophic limit
0-15	20	25%	100
15-65	0	N/A	200
65+	20	50%	100

Option 2 (only catastrophic coverage):

Age group/parameter	Motivation limit	Co-insurance	Catastrophic limit
0-15	0	N/A	100
15-65	0	N/A	200
65+	0	N/A	100

Table 22 Parameters of the general drug benefit scheme

The general drug benefit scheme lends itself to modifications in relation to social status of the patients. Vulnerable patients may have the motivation limits higher and the catastrophic limits lower so that scarce public funds may be better targeted to people really in need.

Administrative component

The following services provided on behalf of state and public authorities include:

- health check-ups of military draftees

All other health check-ups in personal interest of the person are not included and they have to be paid by the person.

6.2 Entitlement to the Basic Benefit Package

All inhabitants with permanent stay in Georgia are entitled to BBP described in 6.1.

6.3 Basic principles of provision of the Basic Benefit Package

Following basic principles applies to provision of PHC:

- **Free choice of a PHC provider -** the goal is to enhance patient's role in the health care system and to create incentives of providers to increase quality of health care and their performance. Inhabitants have to register themselves at the provider they choose. The registration entitles them to consume all services according to and under conditions of approved BBP. The registration can be changed once in three months unless there is respectable reason to change the provider in other terms (e.g. .a movement to another place). If a citizen is not registered he or she has to pay all PHC services (including prevention and immunization) according to tariffs of the provider without any public subsidy. The free choice may not be applied in the transitory period.

- **Gate keeping -** each patient will be entitled to public subsidy of elective care on secondary or tertiary level only on referral of his/her PHC provider he-she is registered to. In other case the patient has to pay all care according tariffs of a specialist or a hospital without any public subsidy. It doesn't relate to emergency cases and to STD cases.

7 Financing of PHC

7.1 Costs of PHC practices

A comprehensive cost model was elaborated by the Project team that spans different types of PHC facilities (nurse post, solo PHC practice, group PHC practice composed of 2 to 5 medical teams, biochemical laboratory) and with different range of equipment (with/without car, with/without computer equipment).

The model includes non-recurrent cost (depreciation and investment), recurrent costs (maintenance, utility costs, service, medical and office material, communication, fuel) and personal costs (salaries of medical and non-medical personal, training cost, professional literature).

The data for the cost model were acquired on normative basis and confronted with current reality. Several key assumptions were made:

- salaries of medical personal were increased compared to current status-to 250 Lari per month for a PHC doctor and 150 Lari per month for medical nurse[27]
- office space for PHC practices is valued to be worth 500 Lari per m^2 with depreciation period 20 years (according the Tax Code valid in Georgia). Office space 89 m^2 is considered sufficient for a solo PHC practice[28]
- depreciation period was adjusted to the life cycle length of equipment in some cases

Results from the costs model serves for computation of tariffs for remuneration of PHC and for estimation of total public funds needed for appropriate funding of PHC. If there is no possibility to adequately fund the practices which might be the Georgian case we have at least information what the funding gap really is. Now we can decide whether to ensure funding from other sources or whether the practices remain to be under funded. In the latter case the cost model gives information what will be compromised and impacts in the future may be deducted.

The complete model for all types of practices and laboratory is in the annex 3. The following summarizes key figures from the cost model for a single practice (that is with medical team) serving population of 2000 persons of the average age profile. This type of practice will serve as an etalon for derivation of remuneration tariffs.

The meaning of columns is as follows:

- unit costs for single practice means annual costs for specified item for single practice expressed in Lari
- cumulative unit costs sums up unit costs up to the specified item
- relative share of cost item specify share of given cost item on the total
- share of variable costs is an estimated percentage of the unit costs that depend on the catchments population or utilization of the practice
- unit variable costs is just multiplication of share of variable costs and unit costs

[27] Even this more than 100% higher salaries compared to the current ones will hardly ensure appropriate social status of medical personal

[28] A bit less compared to international standard (around 110 m^2)

Cost item	Unit costs for single practice	Cumulative unit costs	Relative share of cost item	Share of variable costs	Unit Variable costs
Medical personal costs	5,760	5,760	31.2%	0%	0
Non medical personal costs	504	6,264	2.7%	0%	0
Other personal costs	510	6,774	2.8%	0%	0
Laboratory personal costs	562	7,336	3.0%	0%	0
Medical supplies for practice (emergency drugs and material)	989	8,325	5.4%	80%	791
Medical supplies for laboratory	242	8,567	1.3%	80%	193
Medical supplies for immunizations	587	9,154	3.2%	100%	587
Medical suplies for preventive check ups[29]	314	9,469	1.7%	100%	314
Office supplies	435	9,904	2.4%	40%	174
Utilities costs	875	10,779	4.7%	5%	44
Communication costs	211	10,990	1.1%	30%	63
Fuel consumption (for generators)	263	11,253	1.4%	0%	0
Services	633	11,885	3.4%	20%	127
Maitenance	598	12,483	3.2%	5%	30
Laboratory operating costs	595	13,078	3.2%	10%	60
Non-recurrent costs of equipment(practice)	2,362	15,440	12.8%	0%	0
Non-recurrent costs of equipment(laboratory)	460	15,900	2.5%	0%	0
Depreciation for premises (practice)	2,225	18,125	12.0%	0%	0
Depreciation for premises (laboratory)	350	18,475	1.9%	0%	0
Total costs	18,475				2,384

Table 23 Summary of the cost model

The results of the previous table show that the total annual costs for the single practice serving catchments area of 2 000 persons and providing services according the BBP defined above (including preventive services) can be estimated to be 18 475[30] Lari and out of it 2 384 Lari (12.9 %) depend on the served population and utilization.

Coming out of the figures in the previous table it is now possible to explore impact of different catchments population on the total costs of a single practice and cost per capita-see the following table.

Catchments population	1000	1500	2000	2200	2500	3000
Total costs per practice	17,283	17,879	18,475	18,713	19,071	19,667
Per capita cost	17.3	11.9	9.2	8.5	7.6	6.6

Table 24 Relation of catchments population and per capita cost

[29] Direct material for tests done for preventive check ups.

[30] It should be emphasized that this amount includes depreciations and maintenance of premises, share of costs of laboratories and direct material (vaccines) for immunizations and preventive services. The costs of practice itself include also costs of computer equipment.

It can be seen that annual costs of the practice doesn't vary too much with number of served persons whereas annual per capita cost vary quite visible from 17.3 for 1000 citizens to 6.6. for 3000 served citizens in the catchments area. It only emphasizes importance of balancing and optimization of the network of PHC providers.

The previous table was calculated under assumption that salaries of medical personal don't depend on the size of catchments population. If we assume that only half of the salaries will be fixed and the rest will depend on the number of served population we get the following table[31]:

Catchments population	1000	1500	2000	2200	2500	3000
Total costs per practice	15,843	17,159	18,475	19,001	19,791	21,107
Per capita cost	15.8	11.4	9.2	8.6	7.9	7.0

Table 25 Relation of catchments population and per capita cost (variable medical salary)

At the same time the share of variable costs on the total costs for the single practice will increase from 12.9% to 28.5%. However, such assumption may be problematic especially in such countries like Georgia with higher share of rural and mountain areas. It is necessary to attract doctors to serve in such areas. The catchments population is in such areas generally remarkably lesser compared to urban areas.

The cost model also gives figures on relation of costs for one medical team to number of medical teams in a PHC facility (provided all medical teams share the same building):

Number of medical teams per facility	1	2	5
Total costs per practice	18,475	31,507	77,137
Costs per medical team	18,475	15,754	15,427

Table 26 Relation of per medical team costs and size of practice

The following paragraph use these results derived from the cost model for determination of base parameters of remuneration mechanisms.

7.2 Remuneration of PHC practices

Remuneration of the PHC practices should be consistent with health policy objectives and legal status of PHC providers; it has to provide right incentives for rendering of quality health care in an appropriate volume and structure and for efficient use of scarce resources. The remuneration mechanism has to be administratively simple and auditable as well.

Unfortunately there is no such mechanism in its pure form and it is often necessary to combine two or even more remuneration mechanisms and/or to complement them by other control procedures. We propose a combination of budgetary financing and remuneration per capita for this reason. The question is what part of costs should be financed by the budget based on input factors and what part by the capitation. Generally budget based on input factors is better adjustable to individual differences in actual costs, lends itself better to control over purpose of spending but bears no incentives for cost savings and better performance.

[31] It is assumed that the normative salary will be for practices with catchments population of 2000 people. Practices with catchments population more than 2000 citizens get higher salaries than the normative ones and vice versa.

Capitation on the other hand brings incentives for long-term quality of health care (but only in conjunction with free enrolment),it is not sensitive to differences in actual costs and brings motivation to higher referral rates to secondary and tertiary levels. Third mechanisms that can be considered especially for remuneration of preventive care[32] motivates to maximizing of the production that brings danger of oversupply and exhaustion of the public funds[33].

The following table shows five different options of blending of the budgetary and capitation financing that will be evaluated further. Concept behind the choice of options was that the cost items more varying with the size of served population should be covered by capitation whereas fixed costs should be covered by the input budget.

Cost item	1	2	3	4	5
Medical personal costs	b	c/b	c	c	b
Non medical personal costs	b	c	c	c	b
Other personal costs	b	c	c	c	b
Laboratory personal costs	b	c	c	c	b
Medical supplies for practice (emergency drugs and material)	c	c	c	c	b
Medical supplies for laboratory	c	c	c	c	b
Medical supplies for immunizations	k	k	k	k	k
Medical supplies for preventive checks up	c	c	c	c	b
Office supplies	c	c	c	c	b
Utilities costs	b	c	c	c	b
Communication costs	b	c`	c	c	b
Fuel consumption (for generators)	b	c	c	c	b
Services	b	c	c	c	b
Maitenance	b	c	c	c	b
Laboratory operating costs	b	c	c	c	b
Non-recurrent costs of equipment(practice)	b	b	b	c	b
Non-recurrent costs of equipment(laboratory)	b	b	b	c	b
Depreciation for premises (practice)	b	b	b	c	b
Depreciation for premises (laboratory)	b	b	b	c	b

Table 27 Options for blending budget and capitation (b-budget, c-capitation,k-provided in kind[34])

The options that cover medical personal costs with budget presume that medical salary will be the same irrespective to catchments population[35] . The option 2 presumes that only half of the salary is fixed and the rest depends on the number of registered citizens. The options that cover medical personal costs with capitation don't guarantee fixed income for medical personal, but, on the other hand do provide incentives for increasing productivity. The most market oriented variant is the variant 4 that had to be used in case of network of private health facilities with free enrolment of citizens. The variant 5 is on the opposite side and it presumes full public ownership of the PHC facilities.

[32] See Nemec, Karosanidze Proposals for the reform of PHC in Georgia, GVG,Tbilisi,2005

[33] This danger is eliminated for preventive health care as frequency of preventive services is usually well defined

[34] Medical supplies for immunizations are provided to PHC practices in kind and it is supposed that it will be case also in future. This item is not be considered in further reimbursement calculations.

[35] That is 250 Lari for doctors and 150 Lari for nurses monthly

The following table shows what should be budgetary part of each option for single practices serving different catchments populations (1000, 1500, 2000, 2200, 2500 and 3000) that fairly covers costs of specified items according the cost model.

Variant/catchments population	1000	1500	2000	2200	2500	3000
1	14,618	15,827	15,907	15,940	15,988	16,069
2	8,277	8,277	8,277	8,277	8,277	8,277
3	5,397	5,397	5,397	5,397	5,397	5,397
4	0	0	0	0	0	0
5	16,990	17,439	17,888	18,067	18,337	18,786

Table 28 Annual budget for a single practice

It is to be noted that not all the amount have to be given to the health facility as financial means. There are included depreciations for premises in all variants except variant 4. The health facilities that are not owners of their premises (the owner is the Georgian state) will not be given that part of budget and instead of it the state will account on depreciations.

The capitation payment is a complementary part to the budgetary part of financing (with exception of pure budgetary variant 5. The following table shows what should be capitation rate to cover fairly the costs not covered by the budget in all five options. Let's recall that normative income of the medical staff is guaranteed for variants 1 and 5 and for variant 3 only for catchments population 2000 citizens and more. The variant 2 guarantees only half of the normative medical salary for catchments populations less than 2000.

Variant/ catchments population	1000	1500	2000	2200	2500	3000
1	2.4	1.1	1.0	1.0	0.9	0.9
2	7.3	5.6	4.8	4.6	4.3	4.0
3	8.7	7.1	6.2	6.0	5.8	5.4
4	14.1	10.7	8.9	8.5	7.9	7.2
5	0.0	0.0	0.0	0.0	0.0	0.0

Table 29 Annual capitation rate (Lari) for a single practice

The capitation as well as the budgetary financing doesn't bring strong incentives to render services like preventive services that should be in focus of state health policy. To enforce the incentives two options are at hand. It is possible to remunerate named services by fee-for-service mechanism. Frequency of preventive services is usually accurately prescribed so that the main disadvantage of fee-for-service (oversupply of services) is eliminated. Each preventive services is remunerated based on cost of direct material spent (e.g. immunization vaccine), time of medical personal spent and corresponding overhead and personal cost index per one minute (see annexes 3 and 4 for detailed costing of immunization and other preventive services). Approximately 3 400 Lari annually was calculated to be average income for the single practice due to immunizations and preventive services. The capitation rate (or the budget) has to be decreased in case of fee-for-service remuneration of preventive services by approximately 1.7 Lari annually per capita. The decrease will be substituted by extra remuneration of preventive services.

We recommend second option for the transitional period. It is the monitoring of number of preventive services rendered by the PHC practice. If the number of such services doesn't reach a predefined threshold (for example 95% of the number that corresponds to the size and the age structure of the catchments population) then the public purchaser decreases remuneration for the practice.

The capitation payment is usually accompanied by some so called risk adjusters. Generally speaking, risk adjustments for capitation formula are used to prevent a negative choice of enrolled population (in case of free enrolment) that can be exercised by PHC providers. This is of a particular importance when the population has the freedom to choose PHC providers. The second objective of the risk adjustment is to remunerate the PHC providers fairly in accordance to the actual costs incurred as average utilization rate of different groups of citizens is different and can be predicted. If there is no free enrolment of citizens to PHC providers and there is no co-payment for PHC services within the BBP than single age adjuster is sufficient. If there were official co-payments then socially oriented adjustment of capitation remuneration could take place and in case of free enrolment also a global adjuster to the number of enrolled population would be necessary[36] .

Age adjusters are calculated according expected number of visits in each age category (see details in annex 6). If remuneration of preventive services will be done by the capitation we propose to use five age groups for age adjustments. Justification of splitting of children category into three groups is in remarkable different volume of preventive services that makes up remarkable share of utilization of PHC services

Proposed age adjusters are in the following table (for derails of calculation see annex 6).

Age category	0-1	1-3	3-15	15-65	65+
Index(age adjuster)	3.3	2.1	1.2	1.0	1.1

Table 30 Age adjuster for capitation[37]

Adjusters for mountainous areas and/or small villages would be recommended if it would be decided to rely mainly on capitation but not on the budget.

7.3 Remuneration of laboratories

The simplest way for remuneration laboratory services is to include the remuneration of such services into capitation rate for the PHC practice and it was actually done in 7.2. In case the laboratory is an internal organizational part of the PHC provider all referrals for the laboratory and corresponding informational and financial flows are settled internally. It is recommended to adhere to such organizational scheme in all cases where it is possible. In case the PHC provider has to order laboratory tests at an external laboratory the financial settlement can be done on fee-for-service basis with remuneration of laboratory services according to annex 5 or by capitation payment if catchments population can be delineated clearly..

7.4 Remuneration of pharmacies

The question is at what prices will be the pharmacies remunerated for publicly subsidized drugs. It depends also on the scope of subsidized drug. When only small number is subsidized then more administratively oriented approach can be adopted. There are several options:

- Determination of drug prices by the market

This is the simplest option. However, the state and the public purchaser loose any control over prices of the drugs that will be (at least partially) covered by the public funds. The American public program Medicaid may serve as an example[38].

[36] See Nemec, Karosanidze Proposals for PHC Reform in Georgia, GVG,Tbilisi,2005

[37] Index to elderly 65+ is too low,it should be around 2.5. The computation was based on the data from the SUSIF in 2003 that displayed too low utilization for elderly people.

[38] Martha Ann Holt International prescription drug cost containment strategies and suggestions for reform in the United States

- Determination of drug prices by the state

The state or an accredited agency determines fixed prices on the essential list for next period of time. Several approaches can be used:

- drug prices are determined as a fixed percentage (e.g. 85%) of the average price of an identical or similar product within a reference basket of several neighboring countries (Slovenia[39])
- drug prices are determined by a regular tendering process[40]. The public purchaser may purchase drugs directly (Macedonia) or may just get commitment of the wholesalers
- drug prices are determined by a special committee that obeys predefined rules (France)
- drug prices are settled by a voluntary collective agreement between a government and association of pharmaceutical vendors (e.g. Great Britain)

- Determination of drug prices through reference prices

The state doesn't set the price of drugs. However, it does establish a reference price for reimbursed drugs, thereby setting the maximum amount the public purchaser will pay for a selected group of drugs. Reference prices are set for certain generic categories, products that are pharmacologically similar-but not generically equivalent-and products that have a similar therapeutic action. The reference price is set slightly higher than the lowest priced drug in the group as to ensure innovation, to ensure sufficient supply of drugs, and to induce effective price competition. The reference price for a product may be divided into subgroups to reflect different dosages of a product as well as different means of delivering the product. Patients are required to pay difference if their prescribed drug is more expensive that the reference price. Examples of such a system can be found in Germany[41], Czech Republic[42] or The Netherlands[43].

7.5 Remuneration of services not included in the Basic Benefit Package

Such services will be remunerated by a visiting person out of his/her pocket. It may be services of administrative nature in interest of the visiting person-for example medical statement for driving license, weapon passport, life insurance etc. It is recommended that all such services will be priced according a unified price list posted up obligatorily in waiting rooms. The pricing will be based on the formula:

Price = average duration * personal and overhead index + direct costs

Average duration is average duration of rendering the service, overhead index is proportional share of average cost of a PHC practice per given time unit (minute, hour) and direct costs are average costs of medical supplies (material or drugs) spent for the service.

---

[39] Jurij Fuerst Slovenia-Pricing and reimbursement of Pharmaceuticals

[40] It is also the case for Georgia now. The SUSIF determines prices of the drugs delivered within special state programs by a regular tendering process.

[41] Martha Ann Holt International prescription drug cost containment strategies and suggestions for reform in the United States

[42] Michal Prokes Czech republic-Pharmaceutical Pricing and Reimbursement

[43] Tanisha Carino Striving for openness and transparency: The Netherlands's Drug Reimbursement System

The following table shows an example of tariffs that can be used for services of different duration. The tariffs are based on personal and overhead index and on average direct cost of medical supplies derived from the cost model in annex 2.

Average costs of a visit/service	duration of service	medical personal costs per minute	overhead costs per minute	average cost of medical supplies	total costs (Lari)
service (15 minutes)	15	0.117	0.111	0.989	4.4
service (30 minutes)	30	0.117	0.111	0.989	7.8

Table 31 Tariffs for services paid out-of-pocket

The tariffs for the services paid out-of-pocket have to be made easily visible for citizens/patients and approved by the management of the health facility at least. Open question is to what extent such tariffs should be approved by public authorities (MoLHSA or municipal authorities). It relates only to the public PHC facilities operating in the contractual network of the public purchaser.

8 Public budget for PHC

8.1 Budget for "reformed" PHC providers

The previous chapters of the plan provided all necessary prerequisites for planning public expenditures for reformed PHC in the region Kakheti.

The basic input for the planning is aggregate description of the network of reformed PHC facilities in the region Kakheti-see the next table:

	Catchments population 1000	Catchments population 1500	Catchments population 2000	Catchments population 2200
Number of teams	35	159	70	0
Covered population	33 828	242 803	135 712	0
Number of facilities	8	41	8	0

Table 32 Structure of reformed PHC facilities according to HPU proposal

Number of teams per facility	Number of facilities	Number of medical teams
1	11	7
2-3	10	26
4-5	15	64
>5	21	167

Table 33 Structure of reformed PHC facilities according size of the facility (according to HPU proposal)

If we apply the budgets and the capitation rates calculated in the paragraph 7.2 to the number of medical teams in the Table 32 Structure of reformed PHC facilities according to HPU proposal now we get the total amount for annual remuneration of the network of reformed PHC facilities according the remuneration options:

Variant	Type of remuneration	Amount for teams per 1000	Amount for teams per 1500	Amount for teams per 2000	Amount for teams per 2200	Total amount	Amount per served citizen
1	budgetary part	511,632	2,516,414	1,113,509	0	4,617,111	11.2
	capitation part	80,223	260,950	134,383	0		
2	budgetary part	289,691	1,316,023	579,381	0	4,449,719	10.8
	capitation part	246,020	1,366,453	652,151	0		
3	budgetary part	188,891	858,103	377,781	0	4,283,173	10.4
	capitation part	294,732	1,716,089	847,576	0		
4	budgetary part	0	0	0	0	4,280,759	10.4

	capitation part	477,298	2,589,674	1,213,787	0		
5	budgetary part	594,634	2,772,740	1,252,138	0	4,619,512	11.2
	capitation part	0	0	0	0		

Table 34 Total amount for funding the PHC network (according to HPU proposal) in Kakheti

We can see that different remuneration option result in slightly different total amounts (the span is about 8%). Naturally the option 4 (full capitation) that doesn't guarantee the normative medical salary results in the lowest amount as average catchments population in the reformed PHC network in the region Kakheti is below normative 2000 people. It is actually 1 562 person (412 000 inhabitants is served by 264 PHC teams).

If we apply the same procedure for fully optimized network (206.5 medical teams in 57 PHC facilities, catchments population is generally 2000 citizens) we get following results:

Variant	Type of remuneration	Amount for teams per 2000	Total amount	Amount per served citizen
1	budgetary part	3,284,852	3,693,156	9.0
	capitation part	408,305		
2	budgetary part	1,709,175	3,690,650	9.0
	capitation part	1,981,475		
3	budgetary part	1,114,455	3,689,704	8.9
	capitation part	2,575,249		
4	budgetary part	0	3,687,931	8.9
	capitation part	3,687,931		
5	budgetary part	3,693,807	3,693,807	9.0
	capitation part	0		

Table 35 Total amount for funding the PHC network (fully optimized) in Kakheti

We can see that in case of the fully optimized network the differences between remuneration options are much smaller compared to the network with categorized catchments areas and generally annually by 800 000 Lari less (or 2 Lari per capita less). It is exactly the amount that should be paid for only partial optimization of network.

The same procedure is applied now for extremely optimized network (146.5 medical teams in 57 PHC facilities, catchments population is generally 3000 citizens) with the following results:

Variant	Type of remuneration	Amount for teams per 3000	Total amount	Amount per served citizen
1	budgetary part	2,354,079	2,727,528	6.6
	capitation part	373,449		
2	budgetary part	1,212,562	2,854,918	6.9
	capitation part	1,642,356		
3	budgetary part	790,642	3,026,772	7.3
	capitation part	2,236,130		
4	budgetary part	0	2,977,918	7.2
	capitation part	2,977,918		
5	budgetary part	2,752,124	2,752,124	6.7
	capitation part	0		

Table 36 Total amount for funding the PHC network (extremely optimized) in Kakheti

We can see that the extreme optimization can bring another 800 000 – 1 000 000 Lari annually compared to the full optimization.

The newly refurbished facility will start operations in phases. 15 facilities should be ready by April 2006 (see annex 1) and 34 others should be refurbished by January 2007. The following table shows amount of public funds necessary for smooth start of the new system taking into account funding of the old system. These 15 new facilities will require on top of the current public funding following additional funding for three quarters of 2006:

	With depreciations	Without depreciations
HPU proposal	529 408	329 337
fully optimized	346 522	215 566
extremely optimized	269 517	167 662

Table 37 Additional funding for 15 newly refurbished facilities (in 2006)

In case additional 15 facilities would become operational since 1 July 2006 funding (withought depreciation) will increase respectively by another about 220 000, 140 000 and 110 000 Lari.

Drug component:

We defined two working options for drug benefits in the chapter 6.1-first option both with motivation and catastrophic components, the other only with catastrophic component. Looking in annex 8 following estimations can be found for the specified parameters of the general drug benefit model:

Option 1	Kaheti	Georgia
Children up to 15	540 000	5 458 000
Adults 15-65	945 000	10 275 000
Adults 65+	2 031 000	16 140 000
Total	3 516 000	31 873 000

Table 38 Costs of drug benefit scheme-option 1

Option 2	Kaheti	Georgia
Children up to 15	83 000	878 000
Adults 15-65	945 000	10 275 000
Adults 65+	1 144 000	11 234 000
Total	2 172 000	22 387 000

Table 39 Costs of drug benefit scheme-option 2

Recap:

The following tables recapitulate total costs of reformed PHC care for three options of network optimization both for Kakheti region as well as for the whole Georgia[44] provided that profile of the network of PHC facilities will be in the whole country the same. Both costs with and without depreciations are calculated[45] and total per capita costs are given as well.

	Total costs of PHC practices incl.labs			Total costs of PHC practices incl.labs			Drug expenditures	
	HPU proposal	full optimization	extreme optimization	HPU proposal	full optimization	extreme optimization	option 1	option 2
Kakheti	4,093,741	3,392,896	2,739,684	2,782,948	2,367,598	2,012,293	3,516,000	2,172,000
Georgia	37,696,491	35,381,842	28,570,006	25,512,219	24,706,820	21,453,325	31,873,000	22,387,000

Table 40 Recapitulation of annual total costs

	Total costs of PHC practices incl.labs			Total costs of PHC practices incl.labs			Drug expenditures	
	HPU proposal	full optimization	extreme optimization	HPU proposal	full optimization	extreme optimization	option 1	option 2
Kakheti	9.9	8.2	6.6	6.7	5.7	4.9	8.5	5.3
Georgia	8.8	8.2	6.6	5.9	5.7	5.0	7.4	5.2

Table 41 Recapitulation of per capita costs

The total expenditures for the out-patient care (PHC and specialists) were 932 749 Lari[46]. for Kakheti in 2003 and around 17 000 000 Lari for Georgia in 2004. The expenditures for immunization vaccines (around 70 000 Lari for Kakheti nad 1 000 000 for Georgia) were excluded from the calculations of the tarrifs and they shouldn't be considered here as well.l. The difference between current funding and pilot funding is rather big and it has to be commented as follows:

[44] Cost per capita for Kakheti region is a bit higher than for the whole Georgia because of older population in Kakheti region

[45] Costs of PHC practices are already adjusted with factor 0.92 to actual share of single and group practices

[46] The corresponding amount for 2004 is not available yet, according to projections can be around 1,200,000 Lari

- depreciations are included in the total amount whereas the current funding doesn't include depreciations. The depreciations of premises and equipment makes up approximately 1,420,000 Lari. This amount most probably will not be transferred to the health facilities as they are not owners of the premises and ownership of the equipment should be defined yet. However this amount has to be collected in state treasury to allow for renewal of facilities in the future.
- the total amount was calculated with tariffs derived from the cost model for the single medical practice. As majority of medical teams will be in group practices the resulting amount will be by 16% less[47] . However economy of scale expresses itself mainly in depreciations that probably will not be included in the remuneration tariffs.
- some cost items included in the cost model can be discussed (PC computer) nevertheless; in long-term perspective they will be used. The increase of salaries of the medical personal could be also questioned but the salary level proposed in cost model can be considered to be at bottom edge what would be desirable.
- the Kakheti region was under funded compared to the nationwide average in the past so that the gap between the old and the reformed system that is to be covered is substantially higher.

There is quite obvious gap between current level of funding of PHC facilities and the level of sustainable funding of the reformed network of PHC facilities. This gap will not show itself in 2006 as only a limited number of the reformed PHC facility will start operation and also in a few subsequent years as the reformed PHC network will cover only limited share of the Georgian population. The question is whether the PHC finacial scheme initiated now will be financially sustainable in long term perspective.There are many factors that have impact on it as growth rate of the Georgian GDP, growth rate of public budgets and also inflation rate that will affect costs. It is difficult to quantify these factors in the future and it depends not only on objective factors but also on fiscal decisions of executive authorities.

Therefore another approach is used in the recapitulation. It is assumed that the growth rate of public PHC funding will follow inflation rate in future. The following paragraphs give answers to the question what executive decisions must be taken on top of this neutral growth of the public funding to achieve desirable funding of the reformed PHC in nationwide context in future[48].

There are principally three levers that can be used to ensure long term financial sustainability of the reformed PHC:

- level of optimization of number of health facilities and especially PHC medical teams
- level of acknowledged costs of PHC practices
- level of out-of -pocket payments of patients through different forms as
  - single co-payment for curative visits or for some services
  - full payment for some services that are or will be excluded from the defined BBP
  - full payment for services rendered to groups of population excluded from public funding of PHC services

A decision on all of these three factors must be taken to meet percentage of increase of overall public funding that is affordable and that meets priorities of the Georgian state.

[47] Weighted average annual costs for portfolio of practices in Table 33 Structure of reformed PHC facilities according size of the facilityare 17334 Lari compared to 18475 Lari for the single practices (it is 8 % less)

[48] The time horizont depends on speed of building up of the reformed PHC network

The following two tables summarizes different scenarios that may be taken to achieve long-term sustainable funding of the new PHC system.

The first tables show impact of the full and the extreme optimization of the network of PHC providers on the gap to be bridged. The depreciations and drugs are excluded in the following computations.

Current funding	1,100,000
Funding new network (according HPU) without depreciation	2,782,948
Gap	1,682,948
Full optimization of network	412,849
Gap after full optimization	1,270,099
Extreme optimization of network	470,966
Gap after extreme optimization	799,134

Table 42 Funding gap in Kakheti region and impact of optimization of PHC network

Current funding	17,000,000
Funding new network (according HPU) without non-recurent costs	25,512,219
Gap	8,512,219
Full optimization of network	805,399
Gap after full optimization	7,706,820
Extreme optimization of network	5,152,375
Gap after extreme optimization	2,554,445

Table 43 Funding gap in whole Georgia and impact of optimization of PHC network

The following tables show percentage of necessary increase of public funding in Kakheti and overall in Georgia provided a co-payment per visit[49] (columns) will be introduced and costs of PHC practices will be decreased and/or will be compensated by other out-of-pocket income by a specified percentage (rows) to cover the gaps identified in the previous tables for different:

Kakheti region:

a) network according to the HPU proposal

Co-payment/ decreased costs	0	0.5	1	1.5	2
0%	153%	134%	116%	97%	78%
5%	140%	122%	103%	84%	65%
10%	128%	109%	90%	71%	53%
15%	115%	96%	78%	59%	40%
20%	102%	84%	65%	46%	27%
25%	90%	71%	52%	34%	15%

[49] Current utilization 1 visit per citizens annually was assumed

b) fully optimized network

Co-payment/ decreased costs	0	0.5	1	1.5	2
0%	115%	97%	78%	59%	40%
5%	105%	86%	67%	48%	30%
10%	94%	75%	56%	38%	19%
15%	83%	64%	46%	27%	8%
20%	72%	54%	35%	16%	-3%
25%	62%	43%	24%	5%	-13%

c) extremely optimized network

Co-payment/ decreased costs	0	0.5	1	1.5	2
0%	73%	54%	35%	16%	-2%
5%	64%	45%	27%	8%	-11%
10%	55%	37%	18%	-1%	-20%
15%	47%	28%	9%	-9%	-28%
20%	38%	19%	1%	-18%	-37%
25%	29%	11%	-8%	-27%	-45%

Table 44 Needed increase of public funding under different scenarios for Kakheti

Georgia

a) network according to the HPU proposal

Co-payment/ decreased costs	0	0.5	1	1.5	2
0%	50%	37%	25%	12%	-1%
5%	48%	35%	22%	10%	-3%
10%	45%	32%	20%	7%	-6%
15%	43%	30%	17%	5%	-8%
20%	40%	27%	15%	2%	-11%
25%	38%	25%	12%	0%	-13%

b) fully optimized network

Co-payment/ decreased costs	0	0.5	1	1.5	2
0%	45%	33%	20%	7%	-5%
5%	43%	30%	18%	5%	-8%
10%	41%	28%	16%	3%	-10%
15%	39%	26%	13%	1%	-12%
20%	36%	24%	11%	-2%	-14%
25%	34%	21%	9%	-4%	-17%

c) extremely optimized network

Co-payment/ decreased costs	0	0.5	1	1.5	2
0%	15%	2%	-10%	-23%	-36%
5%	14%	2%	-11%	-24%	-36%
10%	14%	1%	-12%	-24%	-37%
15%	13%	0%	-13%	-25%	-38%
20%	12%	-1%	-13%	-26%	-39%
25%	11%	-1%	-14%	-27%	-39%

Table 45 Needed increase of public funding under different scenarios for whole Georgia

It is now turn for fiscal consideration what increase of public funding might be in near future affordable to enable long-term sustainability of the new PHC system. It can be derived from the tables above that the whole Georgia context looks much more favorable in comparison to just Kakheti. The reason is quite obvious. It is current underfinancing of the PHC in Kakheti in comparison to nationwide average[50]. The optimization of the network according to the HPU proposal is closer to simple optimization in 2000 catchments model in nationwide case than in Kakheti case[51].

Assuming that about 15% increase of public funding of PHC can be affordable during 5 years time horizont and no flat co-payments are appreciated than it is necessary to extremely optimize the network. (see Table 45 c,).Some 40-45% have to be added to the current budget for PHC provided that there is full optimization of PHC network (on average 2000 population per one practice).

It should be noted again that tables above don't include drugs that have to be probably covered by another net increase of public funding and depreciations.

8.2 Budget for other PHC providers

Reimbursement of PHC practices, laboratories and pharmacies was covered in the previous paragraphs. To the PHC are counted also home care organization and emergency care institutions. The standalone home care organizations are not developed in Georgia yet and it is supposed that home care will be rendered by PHC practices for the time being.

Provision of home care for all residents of Georgia by the solo or group PHC practices may be considered as an option in the long term development of the system. Taking in to account that at least one nurse has to be added to the currently defined team (1 physician and 1 nurse) and activities of a social worker have at least to be considered, the development of a National wide services of home nursing are not yet financially sustainable. Budget, about 20 percent bigger, in comparison to estimates provided in the Master Plan would be needed to run the expanded scheme. Cooperation with NGO's, education and some training of family members taking care of beloved ones are the opportunities should not to be missed by the PHC in the nearest and midterm future.

[50] The nationwide average is heavily influenced by Tbilisi with more than one third of Georgian population.

[51] Again due to Tbilisi where the HPU proposes catchments population 2200

Emergency care will be provided by PHC practices and by hospitals. First aid as well as minor surgeries had to be provided by these practices and financed through the general schema of remuneration (capitation). It is matter of further discussion and analysis how to define and remunerate emergency care provided by hospitals or specialized emergency units.

There are more then 60 gynecologists, 20 TB doctors, 15 surgeons working in PHC in Kakheti region. These physicians are mainly providing services to be included in to the standard job descriptions of newly retrained family doctors. The retraining of doctors in Kakheti will take time at least until the end of 2006. The refurbishment of all 57 selected facilities has to be completed at the end of 2007. During the transitional period (the transition has to be reflected in the implementation plan) 2 systems of health care delivery (traditional and the one based on newly established GP practices) will be operational in the region. Gradual shifting of responsibilities from specialized to general practice will be reflected by structural changes of SUSIF expenditures.

Under the assumption that at the end of the reform PHC services will be financed by the state only if provided by family doctors, for the whole Georgia annual Labour costs may be reduced by up to 4.3 million Lari. The assumption means that number of medical doctors paid by the state (SUSIF) will decrease 3 times and salaries of those under the scheme will become 250 Lari per month. On the other hand, if the Government will act in less radical manner (e.g. shift of responsibilities from specialists to GP's will be reflected by stable salaries for the former group and increases for the later one) for the whole Georgia annual labour costs may increase by approximately 4.5 million Lari.

It should be noted that even the radical reform will bring no real savings on heating, electricity, maintenance of buildings and equipment. Definitely PHC may have less facilities, but remaining facilities should have decent heating, permanent supply of water and electricity. Spare parts for the equipment will be needed.

Development of remuneration of outpatient services provided by specialist as well as of hospital services (even being beyond objectives of the current project) are of the crucial importance for the smooth implementation of the Master Plan. It would be difficult to assure the gate keeping role for general practitioners in case most of secondary health care services would (as is the fact for today) be financed out of patient's pockets. Even if PHC services are free the patient has to spend money and time for travel. This spendig may restrict patient from visiting the PHC cetre first in case he/she is convinced by experience that wisiting the specialist and paying him is unaivoidable.

Probable exclusion of medicines from the BBB should also be considered as a factor undermining PHC's role in the health care system. No reimbursement of drugs may encourage patients to go for the advice to the pharmacy bypassing the PHC.

9 Operational procedures

A couple of operational procedures have to be elaborated or re-elaborated and implemented for the reformed PHC. These procedures concerns on one hand the relation of PHC facilities and patients-procedure for registration, referral procedure, prescription procedure, billing procedure; on the other hand the relation of PHC facilities and the public purchaser and/or state administration-reporting procedure, invoicing and remuneration procedure, accounting procedure and quality assurance procedure.

Complete definition of each procedure will comprise of specification of individual roles and responsibilities in the procedure, timing, design of paper forms and/or data formats if an electronic data exchange is applicable, archive rules for documents and audit rules. Following paragraphs comprise just outline of the procedures in order to open discussion on them and initiate further elaboration in a form of an "Operational guidebook for PHC".

9.1 Registration procedure

The purpose of the procedure is registration of citizens at PHC practices. This procedure makes sense in case of free choice of PHC providers. The registration has impact both on citizens and PHC providers.

The registration entitles the citizens to consume all services according to and under the conditions of the approved BBP. If a citizen is not registered he/she has to pay all PHC services without public subsidy. Alternatively a single co-payment for each visit of a non-registered citizen may be considered.

Providers will be remunerated predominantly by capitation according number (and age profile) of registered population. A transition period of about two years may be adopted. During this period will be PHC providers paid according current catchments population, after two years real number of registered citizens will be remunerated by the public purchaser.

The procedure of initial registration is as follows:

1. The citizen visits the selected PHC doctor and fills in a registration form. The registration form has three copies; one for the PHC provider, one for the public purchaser and on for the citizen. The registration form contains name, birth date and address of the citizen, identification of the PHC doctor, date of registration and sign of the citizen. The registration is valid since first day of next month.
2. The PHC doctor gives one copy to the citizen, one copy inserts into documentation and one copy in a batch delivers to the public purchaser.
3. The public purchaser checks for doubled registrations in its database. If a doubled registration is found the resolution of it is done according the date of registration in favor of the registration with the later date.
4. The public purchaser sends regularly (monthly) to all contracted PHC provider's lists of approved changes – new approved enrollments and canceled enrollments due to later registration somewhere else.

Citizens may change their registration once in a three calendar months under normal circumstances. It is possible to change the registration at shorter notice in case of movement or temporal work stay in some other place.

The procedure of change of registration is as follows:

1. The citizen visits the newly selected PHC doctor and fills in the registration form. He/she marks a reason in case of a premature change and the PHC doctor he/she was previously registered to. The change is valid since first day of next month.

2. The newly selected PHC doctor gives one copy to the citizen, one copy inserts into documentation and one copy in a batch delivers to the public purchaser.
3. The public purchaser checks for doubled registrations and for legitimacy of the change of registration in its database. If legitimacy of the change of registration is in doubt, the public purchaser rejects the change and informs the citizen.
4. The public purchaser sends regularly (monthly) to all contracted PHC providers a list of approved changes – new approved enrollments and canceled enrollments due to later registration somewhere else.
5. In case of approved change of registration the newly selected PHC doctor ask the previous one for an excerpt from citizen's medical documentation.

9.2 Referral procedure

Purpose of the procedure is to refer patients for treatment at secondary or tertiary level. It is supposed that PHC doctors make referrals to specialists based on approved medical guidelines and good clinical judgment.

The patients are entitled to any public subsidy for treatment in secondary and tertiary level (for elective care) only on a referral issued by their PHC doctor.

The referral procedure for secondary care[52] is as follows:

1. The PHC doctor decides that a referral is needed
2. The PHC doctor fills in first part of the referral form and gives to the patient to take to the specialist
3. The PHC doctor enters note on the referral into the statistical form (the electronic form of PHC information system)
4. The PHC informs the patient about availability of relevant specialists
5. The patient arranges the specialist visit and gives the referral form to the specialist
6. After seeing the patient, the specialist
   a) completes the second part of the referral form
   b) enters notification on drugs that should be prescribed to the patient
   c) keeps (turns off) the first part of the referral form
   d) returns second part of the referral form to the patient
7. The patient returns the completed form to the PHC doctor, who puts the form in the patient's medical record and prescribes the recommended drugs.
8. The PHC doctor communicates directly with the specialist for clarification of the treatment plan as needed.

The referral procedure for tertiary care is as follows:

1. The PHC doctor decides that a referral is needed
2. The PHC doctor fills in first part of the referral form and gives to the patient to take to the hospital
3. The PHC doctor enters note on the referral into the statistical form (the electronic form of PHC information system)
4. The PHC informs the patient about availability of relevant hospitals
5. The patient arranges the admission with the hospital and gives the referral form to the admission doctor
6. After treatment the discharging doctor
   a) completes the second part of the referral form
   b) adds the discharge summary
   c) enters notification on drugs that should be prescribed to the patient
   d) keeps (turns off) the first part of the referral form
   e) returns second part of the referral form to the patient

[52] Slightly adapted from Toolkits for strengthening Primary Health Care, USAID/PHRplus , January 2005

7. The patient returns the completed form and the discharge summary to the PHC doctor, who puts the form in the patient's medical record and prescribes the recommended drugs.
8. The PHC doctor communicates directly with the discharge doctor for clarification of the treatment plan as needed.

9.3 Drug prescription and reimbursement procedure

In case there is partial public subsidy of broader list of drugs there is a necessity to set up a formalized procedure for prescription of drugs and their reimbursement. Urgent requirement is to re-introduced or reinforce obligation to use drug prescription for much broader list of drugs than currently is in place. It is not only for the sake of reimbursement procedure but mainly for the sake of safe and effective ingestion of drugs in Georgia. Eradication of the dissemination of antibiotics with ought prescriptions has to become one of main concerns of national health authorities.

Prescription forms should be official documents, their printing should be done under supervision of the MoLHSA. The prescription form contains identification of the patient, identification of the prescribing doctor, diagnose, identification of the drug, the dosage and date of the prescription and information on patient's share on price coverage. Time validity of prescriptions is limited.

The following procedure presumes a drug benefit scheme with co-insurance and individual limits for public subsidies. Achieving of the limits by individual patient is checked by the PHC doctor.

The drug prescription and reimbursement procedure is as follows (see picture[53] Picture 8):

1. The PHC doctor fills in the prescription form, checks the limits for the patients and adjusts accordingly patient's share on the price of the drug. He/She gives the prescription to the patient.
2. The prescription is made out in three copies. One copy is retained by the prescribing doctor; two other copies are given in the hands of the patients.
3. The patient goes to a pharmacy (a network of pharmacies contracted by the public purchaser is presumed) and picks up the drug. The patient pays either full price of the drug or only co-insurance designated by the prescribing doctor.
4. The pharmacy retains one copy of the prescription and in case there is only partial coverage of the price by the patient adds the uncovered part of price to the invoice for the public purchaser.
5. The pharmacy affirms provision and payment of the drug on the last copy that is retained by the patient. Alternatively two copies may be retained by the pharmacy, one of them will be sent to the public purchaser-see next step. In that case the patients gets just a normal bill for the drug)
6. The pharmacy elaborates the invoice for the public purchaser for specific time interval (defined by the contract with the public purchaser-once in fortnight, once in month), it attaches all prescriptions and it sends the invoice with attachments to the public purchaser.
7. The public purchaser verifies the invoice and reimburses the pharmacy.

[53] Following color conventions are adopted in the diagrams:

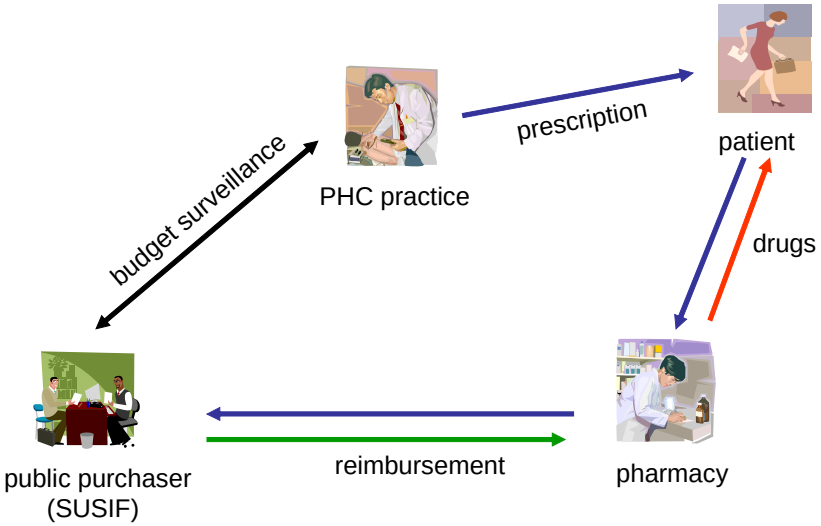
blue lines-flow of prescriptions

red lines – flow of drugs

black lines –flow of reports

green lines – flow of money

8. The public purchaser regularly (for each year) audits prescription pattern of each PHC doctor and it checks correctness of doctor's surveillance of patients individual limits.

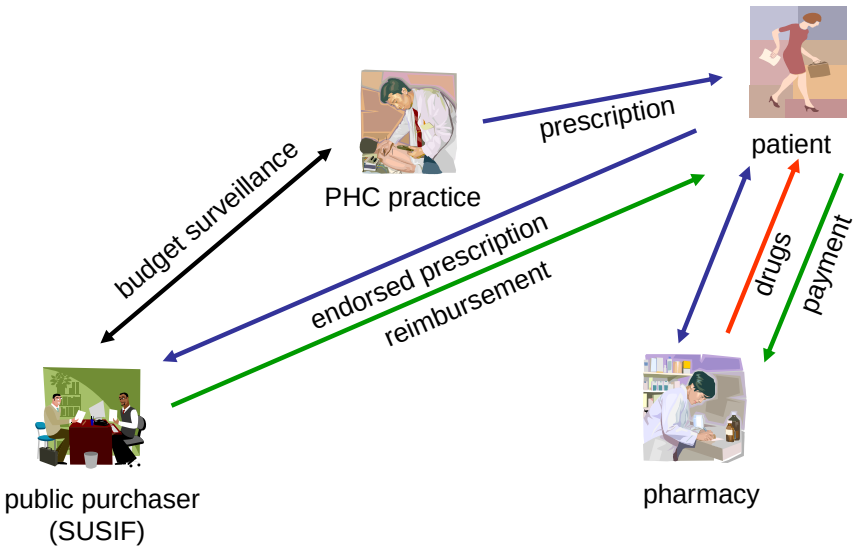


Picture 8 Drug delivery scheme-option 1

In case there is a drug benefit scheme with only a catastrophic limit in place a modified procedure can be used that takes off burden of limit surveillance from doctor's shoulders-see picture Picture 9.

The alternative procedure is as follows:

1. The PHC doctor fills in the prescription form. He/She gives the prescription to the patient.
2. The prescription is made out in three copies. One copy is retained by the prescribing doctor; two other copies are given in the hands of the patients.
3. The patient goes to a pharmacy (a network of pharmacies contracted by the public purchaser is presumed) and picks up the drug. The patient pays full price.
4. The pharmacy retains one copy of the prescription and it confirms drug delivery and price paid on the last copy retained by the patient.
5. The patient counts the sum paid for drugs by him since beginning of year. If the sum exceeds annual catastrophic limit the patient brings all endorsed prescription to the branch office of public purchaser.
6. The public purchaser verifies the collection of submitted prescriptions and reimburses the patient for expenditures above the catastrophic limit.



Picture 9 Drug delivery scheme-option 2

9.4 Billing procedure

The purpose of the procedure is to collect patient's charges. The patients are billed under several circumstances:

- for services not included in the BBP
- for services included in the BBP but loaded with patient's co-payment or co-insurance
- for services rendered to non-registered patients

Following principles are proposed for billing of the patients:

- tariffs for services are hanged up in waiting rooms or can be easily accessible by another way
- tariffs for most common services are unified and proclaimed by a notice of MoLHSA

The billing procedure is as follows:

1. The PHC doctor makes the patient familiar that the service is associated with a user charge
2. After the service is rendered the patient pays the charge to cashier of the PHC facilities (or the doctor/nurse in smaller health facilities)
3. The patient gets a receipt for the payment
4. The patient's payment is entered into accounting book

9.5 Quality improvement procedure

Continuous quality improvement should be one of objectives of the PHC reform. It is proposed a formalized quality improvement procedure organized by the public purchaser or the regional department of the MoLHSA.

The procedure is based on regular evaluation of activity of PHC providers. The evaluation consists in assessment of treatment patterns of randomly or purposely (with focus on specific diagnosis) selected patients based on expert analysis of medical documentation. Quality and completeness of documentation is evaluated as well.

The other source of quality evaluation is statistical data on activity of the PHC provider. It is assessed number of visits, number of referrals, prescription patterns, number of preventive services rendered etc.

The third source for quality assessment may be regular patient's satisfaction surveys. The purpose of such complex evaluation procedure is to help the PHC providers to improve steadily quality of their work.

The evaluation procedure can be done by a regional committee composed of representatives of the public purchaser, regional department of the MoLHSA and also of representatives of regional medical professional associations acting in PHC field.

9.6 Reporting procedure

The PHC providers are obliged to report to national medical statistics and they have also to report selected data to the public purchaser within framework of invoicing procedure.
There are principally several options that have to be evaluated in the context of the national HMIS.
The PHC provider (more accurately PHC practice in this context) may provide:

a) only aggregate numbers for specific indicators on its activities- number of visits according to age of patients, sex and the purpose, number of referrals, number of specific services like immunizations etc. These figures are entered into a form (paper or electronic) and sent to statistical node or a branch of the public purchaser. These figures can be produced automatically as a by-product of an operational IT system for PHC practices if it is available.

b) single form (again paper or electronic) for each individual patient is filled in and handed over to statistical node or to the branch of the public purchaser. The form contains basic demographic data on the patient, main and all other diagnosis, main procedures rendered, immunizations etc. Such forms are then processed in the statistical office (or at public purchaser and then handed over to the statistical office).

The advantage of second approach is much better quality of statistical data and much higher flexibility in producing statistical indicators on activity of the PHC providers and health status of population.

9.7 Invoicing procedure

The details of invoicing procedure depend on the remuneration mechanism used.
Generally the invoicing procedure will have following steps:

1. The public purchaser sends at he beginning of time period specific sum in advance that corresponds to proportional part of annual input budget and may also include advance for capitation payment.
2. The PHC provider prepares after the end of a calendar month the invoice. The invoice is based on contractual provisions. If remuneration is based on the actual number of registered citizens the PHC provider multiplies number of registered citizens in each (age) category by an agreed capitation tariff. The number of registered citizens is based on the list of approved changes in registration sent by the public purchaser during the last month. All additional reports are added to the invoice and the invoice is handed over to branch of the public purchaser.
3. The public purchaser verifies the invoice. If there are considerable drawbacks it sends the invoice back to the PHC provider to fix it.
4. If there is some variable part in remuneration based on actual activity of the PHC provider (e.g. number of immunization or other preventive services) the public purchase calculates bonuses or deductions and sends to the PHC provider credit or debit notes to the invoice.
5. The public purchaser (or Treasury) remits the reimbursement on the bank account of the PHC provider

10 Implementation of the Financial Master Plan

10.1 Basic implementation activities

The process of pilot implementation of the PHC system in Kakheti region will have several components:

1) Decision making at the top level
2) Adjustment of legislation
3) Human resources component
4) Training component
5) Rehabilitation and refurbishment
6) Finalization of remuneration mechanisms
7) Elaboration and set up of operational procedures
8) Information component

Ad 1) decision making is still ahead. Political decision and commitment must be taken regarding total amount of public funding for the PHC at least in the three years period. Long-term sustainability of the chosen model in respect to capacities of the public funding must be assessed. Basing on it the political decision on the content of the BBP (especially regarding the drug benefit scheme) must be met as well as the decision regarding legal status of the PHC facilities now and in the future, decision on the level of remuneration of the medical personnel and the decision regarding political acceptability of formal out-of–pocket payments (co-payments, co-insurance and deductibles).

Ad 2) Some decisions may require adjustment of the current legislative network. Needed adjustments have to be prepared and the legislative process has to be initiated.

Ad 3) Human resources that will operate within the reformed PHC have to be selected and also those that will be freed has to be tackled.

Ad 4) The training component will have two sub-components: medical re-training[54] and financial and organizational training for personnel. Within the training component the relevant staff will be prepared in content and conditions of delivery services within the BBP package, all aspects of remuneration of PHC and invoicing the public purchaser, the operational procedures and accounting within the reformed PHC system.

Ad5) Rehabilitation and refurbishment of the facilities is accomplished again within the adjacent projects (EU,WB).

Ad6) Remuneration mechanisms has to be finalized including binding tariff calculation; accountant and financial rules that will govern internal use of financial means must be set up.

Ad7) All relevant operational procedures must be designed and described. The needed forms have to be designed, printed and distributed. It is recommended to elaboration an instructive “Operational manual” that will contain description of operational procedures relating to the activity of PHC practices and description of all forms and their usage. This manual can serve as an educational material for training as well.

Ad 8) Public Information campaign aimed at stakeholders and population have to be commenced at right time.

[54] Organized by the adjacent EU Tacis project

10.2 Responsibility and organization

The current structure with the PHC Board headed by the Minister as a top level decision body and the Health Policy Unit as analytic and research body have to be complemented with a PHC Implementation Unit that will be responsible for fulfillment and coordination of all implementation activities. Such unit should act directly under the Minister or a Deputy Minister and report to the PHC Board.

11 Conclusion

The presented Master Plan harness available information on the reform process and preliminary decisions met by the PHC Board and the Minister. The Master Plan harnesses maximum available information of costing, remuneration and health care provision and builds upon previous analytic work within the project as well as on the mutual information exchange with the domestic analytic staff and the staff of other projects.

The Master Plan aims to support the necessary political decisions that are still ahead with relevant and appropriate data. Political decision and commitment must be taken regarding total amount of public funding for the PHC at least in the three years period. Long-term sustainability of the chosen model in respect to capacities of the public funding must be assessed. Base on it the political decision on the content of the BBP (especially regarding the drug benefit scheme) must be met as well as the decision regarding legal status of the PHC facilities now and in the future, decision on the level of remuneration of the medical personnel and also the decision regarding political acceptability of formal out-of–pocket payments (co-payments, co-insurance and deductibles). Also the question of acceptability of different benefits for population based on residence in pilot regions has to be resolved.

The Master Plan advocates for a comprehensive BBP within the PHC. It puts on the agenda the question on the drug component within the BBP as public drug subsidy appears to be one of the key factors of attraction the population to the reformed PHC. It brings comprehensive results of the modeling study based on analysis of the standard protocols of treatments. Unfortunately the results of the modeling study can be hardly confronted with real data on drug consumption due to absence of such data in Georgia nowadays.

The different modifications of the remuneration mechanism for PHC practices were developed and the corresponding tariffs were calculated. The calculations are based on the comprehensive cost model fed with normative cost data. Total public expenditures were estimated for the reformed PHC in Kakheti region and projected to whole Georgia case.

The principal result of the calculations is per capita expenditures for PHC. The BBP and the planned network in Kakheti requires around 10 Lari annually including all depreciations. If we add the drug component some 5-7 Lari per capita would be needed on top of it to ensure both protection and attraction of the reformed PHC for population. Huge task is however how to bridge the gap between current 4 Lari per capita (in Kakheti region even less) and desirable 10-15 Lari in the long-perspective.

Annex 1 Proposed PHC network for Kakheti

Option 1

The network according to the proposal of the Health Policy Unit that categorizes PHC facilities into four categories:

- mountain area PHC facilities with catchments area 1000 people
- rural area PHC facilities with catchments area 1500 people
- district centers PHC facilities with catchments area 2000 people
- urban areas PHC facilities with catchments area 2200 people

Average catchments area for option 1 is 1567 persons

District	Settlement Name	Current Catchments	Catchments[55] population	Catchments per Team by category	Teams for Categorized Catchments
Akhmeta	Jokolo	2454	3998	1000	4
Akhmeta	Kistauri	3984	4408	1000	5
Akhmeta	Kvemo Alvani	3866	10867	1000	11
Akhmeta	Duisi	4099	4559	1000	5
Akhmeta	Matani	5718	6822	1000	7
Akhmeta	Akhmeta	9447	7630	1500	5
Akhmeta	Omalo	105	93	1000	0.5
Akhmeta	Zemo Khodasheni	1990	2741	1000	3
Akhmeta	Kasristskali	500	384	1500	0.5
Dedoplistskaro	Zemo Kedi	2826	6266	1500	4
Dedoplistskaro	Zemo Machkhaani	3368	6473	1500	4.5
Dedoplistskaro	Dedoplistskaro	11722	15643	2000	8
Dedoplistskaro	Sabatlo	536	483	1500	0.5
Dedoplistskaro	Pirosmani	750	605	1500	0.5
Dedoplistskaro	Samtatskaro	1900	1341	1500	1
Gurjaani	Katchreti	4230	3044	1500	2
Gurjaani	Vazisubani	4248	12024	1500	8
Gurjaani	Kardanakhi	5800	10488	1500	7
Gurjaani	Velistsikhe	7849	11363	1500	8
Gurjaani	Gurjaani	10804	28290	2000	14
Gurjaani	Chalaubani	1031	2462	1500	2
Gurjaani	Arashenda	1520	4857	1500	3
Kvareli	Eniseli	2006	3370	1500	2
Kvareli	Gavazi	3444	7053	1500	5
Kvareli	Shilda	5812	5697	1500	4
Kvareli	Akhalsopeli	6650	7571	1500	5
Kvareli	Kvareli	10457	9841	2000	5
Kvareli	Balghojiani	946	891	1500	0.5
Kvareli	Mtisdziri	1028	993	1500	0.5
Kvareli	Sabue	1591	2242	1500	1.5
Lagodekhi	Leliani	3229	4464	1500	3

[55] *Catchment population given in the table represents number of population to be served by the facility after network optimization. The next column provides categorized (see table below) catchment population by facility. The needed teams are calculated for categorized catchments.*

Lagodekhi	Ulianovka	2977	1182	1500	1
Lagodekhi	Tsodniskari	4409	3336	1500	2
Lagodekhi	Vardisubani	4135	9144	1500	6
Lagodekhi	Apeni	6181	5564	1500	3.5
Lagodekhi	Kabali	12019	13901	1500	9.5
Lagodekhi	Lagodekhi	14884	13096	2000	6.5
Sagarejo	Badiauri	2002	8227	1500	5.5
Sagarejo	Iormughanlo	2000	18495	1500	12.5
Sagarejo	Patardzeuli	3029	4559	1500	3
Sagarejo	Manavi	5583	6422	1500	4
Sagarejo	Sagarejo	12007	19931	2000	10
Sagarejo	Gombori	1610	1484	1500	1
Sighnaghi	Tibaani	3838	9193	1500	6
Sighnaghi	Nukriani	2500	3796	1500	2.5
Sighnaghi	Anaga	3700	6088	1500	4
Sighnaghi	Kvemo Bodbe	4000	6823	1500	4.5
Sighnaghi	Tsnori	7000	10766	2000	7
Sighnaghi	Sighnaghi	8770	12611	1500	6.5
Sighnaghi	Erisimedi	822	340	1000	0.5
Telavi	Ikalto	2915	5235	1500	3.5
Telavi	Tsinandali	3733	9817	1500	6.5
Telavi	Karajala	8647	8263	1500	5.5
Telavi	Telavi	7955	12335	2000	6
Telavi	Telavi	24601	25810	2000	13
Telavi	Lapankuri	1063	827	1500	0.5
Telavi	Saniore	1799	8135	1500	5.5
		276,089	**412,343**		**266**

Option 2

Fully optimized network with only one catchments area 2000 people

#	District	Settlement Name	Current Catch.	Optimized Catchment	Catchment per Team	Teams/Categorized Catchment	Teams /per 2000 Catchment	Difference
1	Akhmeta	Jokolo	2454	3998	1000	4	2	2
2	Akhmeta	Kistauri	3984	4408	1000	5	2	3
3	Akhmeta	Kvemo Alvani	3866	10867	1000	11	5	6
4	Akhmeta	Duisi	4099	4559	1000	5	2	3
5	Akhmeta	Matani	5718	6822	1000	7	3	4
6	Akhmeta	Akhmeta	9447	7630	1500	5	4	1
7	Akhmeta	Omalo	105	93	1000	0.5	0.5	0
8	Akhmeta	Zemo Khodasheni	1990	2741	1000	3	2	1
9	Akhmeta	Kasristskali	500	384	1500	0.5	0.5	0
10	Dedoplistskaro	Zemo Kedi	2826	6266	1500	4	3	1
11	Dedoplistskaro	Zemo Machkhaani	3368	6473	1500	4.5	3	1.5
12	Dedoplistskaro	Dedoplistskaro	11722	15643	2000	8	8	0
13	Dedoplistskaro	Sabatlo	536	483	1500	0.5	0.5	0
14	Dedoplistskaro	Pirosmani	750	605	1500	0.5	0.5	0
15	Dedoplistskaro	Samtatskaro	1900	1341	1500	1	1	0
16	Gurjaani	Katchreti	4230	3044	1500	2	2	0
17	Gurjaani	Vazisubani	4248	12024	1500	8	6	2
18	Gurjaani	Kardanakhi	5800	10488	1500	7	5	2
19	Gurjaani	Velistsikhe	7849	11363	1500	8	6	2
20	Gurjaani	Gurjaani	10804	28290	2000	14	14	0
21	Gurjaani	Chalaubani	1031	2462	1500	2	1	1
22	Gurjaani	Arashenda	1520	4857	1500	3	2	1
23	Kvareli	Eniseli	2006	3370	1500	2	2	0
24	Kvareli	Gavazi	3444	7053	1500	5	3	2
25	Kvareli	Shilda	5812	5697	1500	4	3	1
26	Kvareli	Akhalsopeli	6650	7571	1500	5	4	1
27	Kvareli	Kvareli	10457	9841	2000	5	5	0
28	Kvareli	Balghojiani	946	891	1500	0.5	0.5	0
29	Kvareli	Mtisdziri	1028	993	1500	0.5	0.5	0
30	Kvareli	Sabue	1591	2242	1500	1.5	1	0.5
31	Lagodekhi	Leliani	3229	4464	1500	3	2	1
32	Lagodekhi	Ulianovka	2977	1182	1500	1	0.5	0.5
33	Lagodekhi	Tsodniskari	4409	3336	1500	2	2	0
34	Lagodekhi	Vardisubani	4135	9144	1500	6	5	1
35	Lagodekhi	Apeni	6181	5564	1500	3.5	3	0.5
36	Lagodekhi	Kabali	12019	13901	1500	9.5	7	2.5
37	Lagodekhi	Lagodekhi	14884	13096	2000	6.5	6	0.5
38	Sagarejo	Badiauri	2002	8227	1500	5.5	4	1.5
39	Sagarejo	Iormughanlo	2000	18495	1500	12.5	9	3.5
40	Sagarejo	Patardzeuli	3029	4559	1500	3	2	1
41	Sagarejo	Manavi	5583	6422	1500	4	3	1
42	Sagarejo	Sagarejo	12007	19931	2000	10	10	0
43	Sagarejo	Gombori	1610	1484	1500	1	1	0
44	Sighnaghi	Tibaani	3838	9193	1500	6	5	1
45	Sighnaghi	Nukriani	2500	3796	1500	2.5	2	0.5
46	Sighnaghi	Anaga	3700	6088	1500	4	3	1
47	Sighnaghi	Kvemo Bodbe	4000	6823	1500	4.5	3	1.5

48	Sighnaghi	Tsnori	7000	10766	2000	7	5	2
49	Sighnaghi	Sighnaghi	8770	12611	1500	6.5	6	0.5
50	Sighnaghi	Erisimedi	822	340	1000	0.5	0.5	0
51	Telavi	Ikalto	2915	5235	1500	3.5	3	0.5
52	Telavi	Tsinandali	3733	9817	1500	6.5	5	1.5
53	Telavi	Karajala	8647	8263	1500	5.5	4	1.5
54	Telavi	Telavi	7955	12335	2000	6	6	0
55	Telavi	Telavi	24601	25810	2000	13	13	0
56	Telavi	Lapankuri	1063	827	1500	0.5	0.5	0
57	Telavi	Saniore	1799	8135	1500	5.5	4	1.5
			276,089	**412,343**		**266**	**206.5**	**59.5**

Option 3

Extremely optimized network with only one catchments area for around 3000 people

#	District	Settlement Name	Current Catch.	Optimized Catchment	Catchment per Team	Teams/Categorized Catchment	Teams /per 3000 Catchment	Difference
1	Akhmeta	Jokolo	2454	3998	1000	4	2	2
2	Akhmeta	Kistauri	3984	4408	1000	5	2	3
3	Akhmeta	Kvemo Alvani	3866	10867	1000	11	4	7
4	Akhmeta	Duisi	4099	4559	1000	5	2	2
5	Akhmeta	Matani	5718	6822	1000	7	3	4
6	Akhmeta	Akhmeta	9447	7630	1500	5	3	2
7	Akhmeta	Omalo	105	93	1000	0.5	0.5	0
8	Akhmeta	Zemo Khodasheni	1990	2741	1000	3	1	2
9	Akhmeta	Kasristskali	500	384	1500	0.5	0.5	0
10	Dedoplistskaro	Zemo Kedi	2826	6266	1500	4	2	2
11	Dedoplistskaro	Zemo Machkhaani	3368	6473	1500	4.5	3	1.5
12	Dedoplistskaro	Dedoplistskaro	11722	15643	2000	8	5	3
13	Dedoplistskaro	Sabatlo	536	483	1500	0.5	0.5	0.0
14	Dedoplistskaro	Pirosmani	750	605	1500	0.5	0.5	0
15	Dedoplistskaro	Samtatskaro	1900	1341	1500	1	0.5	0.5
16	Gurjaani	Katchreti	4230	3044	1500	2	1	1
17	Gurjaani	Vazisubani	4248	12024	1500	8	4	3
18	Gurjaani	Kardanakhi	5800	10488	1500	7	4	3
19	Gurjaani	Velistsikhe	7849	11363	1500	8	4	4
20	Gurjaani	Gurjaani	10804	28290	2000	14	7	7
21	Gurjaani	Chalaubani	1031	2462	1500	2	1	1
22	Gurjaani	Arashenda	1520	4857	1500	3	2	1
23	Kvareli	Eniseli	2006	3370	1500	2	1	1
24	Kvareli	Gavazi	3444	7053	1500	5	3	2
25	Kvareli	Shilda	5812	5697	1500	4	2	2
26	Kvareli	Akhalsopeli	6650	7571	1500	5	3	2
27	Kvareli	Kvareli	10457	9841	2000	5	4	1
28	Kvareli	Balghojiani	946	891	1500	0.5	0.5	0
29	Kvareli	Mtisdziri	1028	993	1500	0.5	0.5	0
30	Kvareli	Sabue	1591	2242	1500	1.5	1	0.5
31	Lagodekhi	Leliani	3229	4464	1500	3	2	1
32	Lagodekhi	Ulianovka	2977	1182	1500	1	0.5	0.5
33	Lagodekhi	Tsodniskari	4409	3336	1500	2	1	1
34	Lagodekhi	Vardisubani	4135	9144	1500	6	3	3
35	Lagodekhi	Apeni	6181	5564	1500	3.5	2	1.5
36	Lagodekhi	Kabali	12019	13901	1500	9.5	5	4.5
37	Lagodekhi	Lagodekhi	14884	13096	2000	6.5	5	1.5
38	Sagarejo	Badiauri	2002	8227	1500	5.5	3	2.5
39	Sagarejo	Iormughanlo	2000	18495	1500	12.5	6	6.5
40	Sagarejo	Patardzeuli	3029	4559	1500	3	2	1
41	Sagarejo	Manavi	5583	6422	1500	4	2	2
42	Sagarejo	Sagarejo	12007	19931	2000	10	7	3
43	Sagarejo	Gombori	1610	1484	1500	1	0.5	0.5
44	Sighnaghi	Tibaani	3838	9193	1500	6	3	3
45	Sighnaghi	Nukriani	2500	3796	1500	2.5	2	0.5
46	Sighnaghi	Anaga	3700	6088	1500	4	2	2

47	Sighnaghi	Kvemo Bodbe	4000	6823	1500	4.5	2	2.5
48	Sighnaghi	Tsnori	7000	10766	2000	7	3	4
49	Sighnaghi	Sighnaghi	8770	12611	1500	6.5	4	2.5
50	Sighnaghi	Erisimedi	822	340	1000	0.5	0.5	0
51	Telavi	Ikalto	2915	5235	1500	3.5	2	1.5
52	Telavi	Tsinandali	3733	9817	1500	6.5	3	3.5
53	Telavi	Karajala	8647	8263	1500	5.5	3	2.5
54	Telavi	Telavi	7955	12335	2000	6	4	2
55	Telavi	Telavi	24601	25810	2000	13	8	5
56	Telavi	Lapankuri	1063	827	1500	0.5	0.5	0
57	Telavi	Saniore	1799	8135	1500	5.5	3	1.5
			276,089	**412,343**		**266**	**146,5**	**119,5**

List of facilities that will start activity in the reformed PHC system since April 2006

#	District	Settlement	Current Catchment Population	Optimized Catchm. Popul.	Categorized Catchment per Team	Current Team No	Needed Team/per 2000 catchment pop.	Needed Team/Categorized Catchment	Needed Team/per 3000 catchment pop.
1	**Akhmeta**	**Kistauri**	3984	4408	1000	1	2	5	2
2	**Akhmeta**	**Duisi**	4099	4559	1000	2	2	5	2
3	**Dedoplistskaro**	**Zemo Kedi**	2826	6266	1500	1	3	4	2
4	**Dedoplistskaro**	**Zem Machkh.**	3368	6473	1500	3	3	4.5	2
5	**Gurjani**	**Katchreti**	4230	3044	1500	5	1.5	2	1
6	**Kvareli**	**Eniseli**	2006	3370	1500	1	1.5	2	1
7	**Kvareli**	**Gavazi**	3444	7053	1500	1	3.5	5.0	2
8	**Lakodeghi**	**Tsodniskari**	4409	3336	1500	3	1.5	2.0	1
9	**Lakodeghi**	**Leliani**	3229	4464	1500	1	2	3.0	2
10	**Sagaredjo**	**Patardzeuli**	3029	4559	1500	1	2	3.0	2
11	**Sagaredjo**	**Badiauri**	2002	8227	1500	1.5	4	5.5	3
12	**Sagaredjo**	**Manavi**	5583	6422	1500	0.5	3	4.0	2
13	**Signagi**	**Nukiriani**	2500	3796	1500	2	2	2.5	2
14	**Signagi**	**Anaga**	3700	6088	1500	3	3	4.0	2
15	**Telavi**	**Ikalto**	2915	5235	1500	2	2.5	3.5	2
	Total		**51324**	**77300**		**28**	**36.5**	**55.0**	**28**

Annex 2 Cost model for the PHC practices

The cost model estimates annual costs (in Lari) for following types of PHC practices:

- nursing post
- mobile practices serving population less then 1000
- single practices (1 medical team) serving population around 2000
- small group practices (2 medical teams) serving population around 4000
- group practices (5 medical teams) serving population around 10000
- simple laboratory serving 5 practices

The model is composed of three parts:

1. non-recurring costs (depreciation a smaller investments)
2. recurring costs
3. personal costs

Medical practices

Non-recurring costs

Premises				Nursing post		Mobile practice		Single practice		Group practice small		Group practice	
Item	Price/m2	Depreciation period	Depreciation	Number/ m2	Annual depreciation	Number/ m2	Annual depreciation	Number/ m2	Annual depreciation	Number/ m2	Annual depreciation	Number/ m2	Annual depreciation
Office space	500	20	25	60	1500	20	500	89	2225	127	3175	336	8400
Total					**1500**		**500**		**2225**		**3175**		**8400**

Office equipment				Nursing post		Mobile practice		Single practice		Group practice small		Group practice	
Item	Price	Depreciation period	Depreciation	Number	Annual depreciation	Number	Annual depreciation	Number	Annual depreciation	Number	Annual depreciation	Number	Annual depreciation
Tables/benches	500	15	33	1	33	1	33	2	67	4	133	5	167
Furniture	500	15	33	1	33	1	33	2	67	4	133	5	167
Chairs	100	5	20	5	100	4	80	10	200	20	400	30	600
Shelves and storage	70	15	5	2	9	4	0	8	37	16	75	20	93
Air conditioning	1000	10	100	0	0	0	0	0	0	0	0	0	0
Examination coach	200	15	13	1	13	0	0	1	13	2	27	5	67
Total					**189**		**147**		**384**		**768**		**1093**

Vehicles,generators,refrigerators				Nursing post		Mobile practice		Single practice		Group practice small		Group practice	
Item	Price	Depreciation period	Depreciation	Number	Annual depreciation	Number	Annual depreciation	Number	Annual depreciation	Number	Annual depreciation	Number	Annual depreciation
Personal car	20000	5	4000	0	0	1	4000	0	0	0	0	0	0
Generator 2kW	600	10	60	0	0	0	0	1	60	1	60	0	0
Generator 5kW	1300	10	130	0	0	0	0	0	0	0	0	1	130
Generator 7,5kW	2000	10	200	0	0	0	0	0	0	0	0	0	0
Refrigerator	800	5	160	1	160	1	160	1	160	1	160	1	160
Total					**160**		**4160**		**220**		**220**		**290**

Communication,computing				Nursing post		Mobile practice		Single practice		Group practice small		Group practice	
Item	Price	Depreciation period	Depreciation	Number	Annual depreciation	Number	Annual depreciation	Number	Annual depreciation	Number	Annual depreciation	Number	Annual depreciation
PC computer	2000	5	400	0	0	0	0	1	400	1	400	1	400
UPS 0,8kVA	150	5	30	0	0	0	0	1	30	1	30	1	30
Printer	300	5	60	0	0	0	0	1	60	1	60	1	60
Telephone-fixed line	100	20	5	0	0	0	0	1	5	1	5	2	10
Telephone-mobile	300	5	60	0	0	1	60	0	0	0	0	0	0
Total					**0**		**60**		**495**		**495**		**500**

Medical equipment				Nursing post		Mobile practice		Single practice		Group practice small		Group practice	
Item	Price	Depreciation period	Depreciation	Number	Annual depreciation	Number	Annual depreciation	Number	Annual depreciation	Number	Annual depreciation	Number	Annual depreciation
Stretcher	751	15	50	0	0	1	50	1	50	1	50	1	50
Instrument table	388	15	26	0	0	0	0	1	26	1	26	2	52
Steriliser	574	10	57	1	57	0	0	1	57	1	57	1	57
Kidney basin	4	4	1	2	2	2	2	2	2	5	5	6	6
Steriliser drum	44	4	11	0	0	0	0	1	11	1	11	1	11
Refridgerator	1000	10	100	0	0	0	0	0	0	0	0	0	0
Physician bag	65	4	16	0	0	1	16	0	0	2	33	5	81
Adult scale	267	10	27	1	27	1	27	1	27	2	53	5	134
Infant scale	242	10	24	1	24	1	24	1	24	2	48	5	121
Height Measuring	47	4	12	1	12	1	12	1	12	2	24	5	59
Infant Measuring	104	4	26	1	26	1	26	1	26	2	52	5	130
Tape measure	5	1	5	1	5	1	5	1	5	2	10	5	25
Stethoscope (A)	20	4	5	1	5	1	5	1	5	5	25	8	40
Stethoscope (F)	30	4	8	1	8	1	8	1	8	2	15	5	38
Thermometer	2	1	2	2	4	2	4	2	4	5	10	14	28
Examination Light	226	10	23	1	23	0	0	1	23	2	45	2	45
Opthalmoscope	111	4	28	0	0	1	28	1	28	2	56	5	139
Vision Chart	5	10	1	0	0	0	0	1	1	2	1	2	1
Flashlight	12	10	1	1	1	1	1	1	1	2	2	5	6
Reflex hammer	3	5	1	0	0	1	1	1	1	2	1	5	3
Otoscope	69	4	17	0	0	1	17	1	17	2	35	5	86
Public Health Nurse Kit	184	6	31	1	31	1	31	1	31	2	61	1	31
Surgical Instrument Kit	295	6	49	0	0	1	49	1	49	2	98	2	98
Rack blood sed unit	72	4	18	0	0	0	0	0	0	0	0	0	0
Microscope	1266	10	127	0	0	0	0	0	0	0	0	0	0
Slide Microscope	23	4	6	0	0	0	0	0	0	0	0	5	29
Cover glass	1	2	1	0	0	0	0	0	0	20	10	100	50
Count Chamber	430	10	43	0	0	0	0	0	0	0	0	0	0
Urine test	21	2	11	5	53	5	53	5	53	5	53	15	158
Pipette	1	2	1	5	3	5	3	5	3	5	3	5	3
Test tube centrifuge	1596	10	160	0	0	0	0	0	0	0	0	0	0
Test tube, centr,grad	1	1	1	0	0	0	0	0	0	50	50	100	100
Diagnostic strips	6	1	6	10	60	10	60	10	60	20	120	50	300
Sphygmomanometer, aneroid	45	4	11	1	11	1	11	1	11	3	34	8	90
Cuff, spare, for sphygmom.,child siz	9	1	9	1	9	1	9	1	9	1	9	3	27
Electrocardiograph	2000	5	400	0	0	0	0	1	400	1	400	1	400
Table,examination,dismant,w/access	383	10	38	0	0	0	0	1	38	2	77	2	77
Defibrillator,mini	9888	10	989	0	0	0	0	0	0	0	0	0	0
Resuscitator,hand-oper.,adult,set	172	6	29	1	29	1	29	1	29	1	29	1	29
Resuscitator,hand-oper.,infant/child,	161	6	27	1	27	1	27	1	27	1	27	1	27
Airway,Guedel,rubber,adult,82mm	6	2	3	0	0	1	3	0	0	5	15	5	15
Airway,Guedel,rubber,infant,54mm	7	2	4	0	0	1	4	0	0	5	18	5	18
Airway,Guedel,rubber,infant,67mm	7	2	4	0	0	1	4	0	0	5	18	5	18
Negatoscope	619	10	62	0	0	0	0	0	0	0	0	0	0
Miscellaneous items (forceps, need	400	6	67	1	67	1	67	1	67	2	133	2	133
Tuning folk	60	10	6	0	0	0	0	1	6	1	6	2	12
Vaginal speculae	40	6	7	0	0	0	0	1	7	2	13	5	33
Ear syringing equipment	320	6	53	0	0	0	0	1	53	1	53	1	53
Nebuliser	400	6	67	0	0	0	0	1	67	1	67	1	67
Peakflow meters	28	2	14	0	0	0	0	2	28	4	56	15	210
Total					**481**		**573**		**1263**		**1907**		**3087**

Summary of non-recurrent costs

Non-recurring costs				Nursing post		Mobile practice		Single practice		Group practice small		Group practice	
Premises					1500		500		2225		3175		8400
Office equipment					189		147		384		768		1093
Medical equipment					481		573		1263		1907		3087
Vehicles,generators,refrigerators					160		4160		220		220		290
Communication,computing					0		60		495		495		500
Total					**2331**		**5439**		**4587**		**6565**		**13370**

Recurrent costs

Maintenance		Nursing post		Mobile practice		Single practice		Group practice small		Group practice	
Item	% of annual depreciation	Annual depreciation	Annual costs	Annual depreciation	Annual costs	Annual depreciation	Annual costs	Annual depreciation	Annual costs	Annual depreciation	Annual costs
Premises	20.0%	1500	300	500	100	2225	445	3175	635	8400	1680
Office equipment	0.0%	189	0	147	0	384	0	768	0	1093	0
Medical equipment	5.0%	481	24	573	29	1263	63	1907	95	3087	154
Vehicles,generators	12.5%	160	20	4160	520	220	28	220	28	290	36
Communication & computing	12.5%	60	8	60	8	495	62	495	62	500	63
Total			**352**		**656**		**598**		**820**		**1933**

Office supplies		Nursing post		Mobile practice		Single practice		Group practice small		Group practice	
Item	Price	Number	Annual costs	Number	Annual costs	Number	Annual costs	Number	Annual costs	Number	Annual costs
Journals	3	22	66	22	66	22	66	44	132	110	330
Exercise book	0.5	15	7.5	15	7.5	14	7	28	14	70	35
Pen	0.5	20	10	20	10	40	20	80	40	200	100
Towel	3	4	12	4	12	6	18	12	36	30	90
Toilet paper	0.5	4	2	4	2	24	12	48	24	120	60
Soap	0.5	10	5	10	5	24	12	48	24	120	60
Calculator	14	1	14	1	14	1	14	2	28	5	70
Folder	3	5	15	10	30	10	30	20	60	50	150
File	0.1	300	30	300	30	300	30	600	60	1500	150
Steaples	1	0	0	0	0	3	3	6	6	15	15
Cleansing means			18		23		60		75		150
Accounting forms in package	50	0	0	0	0	1	50	2	100	5	250
Steapler	5	0	0	0	0	2	10	4	20	10	50
Pencil	0.5	0	0	0	0	20	10	40	20	100	50
Papers in pack.	8	5	40	5	40	8	64	16	128	40	320
Discs for computer in pack.	10	0	0	0	0	1	10	1	10	1	10
CD-ROM	2	0	0	0	0	2	4	2	4	2	4
Paper case	0.5	10	5	10	5	20	10	40	20	100	50
Paper glue	1	5	5	5	5	5	5	10	10	25	25
Total			**230**		**250**		**435**		**811**		**1969**

Vehicles,generators fuel consumption			Nursing post		Mobile practice		Single practice		Group practice small		Group practice	
Item	Price / liter	Consumption l/km,l/hour	Number	Annual costs	Number	Annual costs	Number	Annual costs	Number	Annual costs	Number	Annual costs
Personal car fue	1.2	0.1	0	0	45000	5400	0	0	0	0	0	0
Generator fuel 2	1.5	0.7	0	0	0	0	250	263	250	263	0	0
Generator fuel 5	1.5	1.1	0	0	0	0	0	0	0	0	250	413
Generator fuel 7	1.5	2.0	0	0	0	0	0	0	0	0	0	0
				0		0		0		0		0
Total				**0**		**5400**		**263**		**263**		**413**

Communication recurrent costs		Nursing post		Mobile practice		Single practice		Group practice small		Group practice	
Item	Price / per unit	Number	Annual costs	Number	Annual costs	Number	Annual costs	Number	Annual costs	Number	Annual costs
Voice communication-fixed line (fixed m	8.00	12	96	0	0	12	96	12	96	12	96
Voice communication-fixed line(per minu	0.28		0	0	0	240	67	480	134	1200	336
Voice communication-mobile (fixed mon	7.00	12	84	12	84	0	0	0	0	0	0
Voice communication-mobile (per minu	0.34	0	0	540	184	0	0	0	0	0	0
Internet Communication via Voice comn	0.20	0	0	0	0	240	48	360	72	480	96
Data communication per month (DSL)	70.00	0	0	0	0	0	0	0	0	0	0
Total			**180**		**268**		**211**		**302**		**528**

Utilities costs		Nursing post		Mobile practice		Single practice		Group practice small		Group practice	
Item	Price / per unit	Number	Annual costs	Number	Annual costs	Number	Annual costs	Number	Annual costs	Number	Annual costs
Electricity-fixed instalments	10	12	120	0	0	12	120	12	120	12	120
Electricity-consumption	0.09	600	54	0	0	1250	113	1500	135	2500	225
Water & sewerage	1.35	150	203	0	0	150	203	200	270	350	473
Waste removal-staff numberX0.40X9.80	0.159	1200	191	0	0	1200	191	2400	382	12000	1908
Heating per sq.metres	2.8	60	168	0	0	89	249	127	356	336	941
Total			**735**		**0**		**875**		**1262**		**3666**

Services		Nursing post		Mobile practice		Single practice		Group practice small		Group practice	
Item	Price / per unit	Number	Annual costs	Number	Annual costs	Number	Annual costs	Number	Annual costs	Number	Annual costs
Cleaning											
Contract with Laundry per medical team	60	1	60	0	0	1	60	2	120	5	300
Accounting											
Audit/accounting	160	0	0	0	0	1	160	2	320	5	800
Security,metrology											
Compulsory contract with insurance com	0	5325	21	5775	23	18183	73	26327	105	47856	191
Contracts with med service company	50	1	50	1	50	1	50	2	100	5	250
State Standard control (Metrological ser	50	1	50	1	50	1	50	2	100	5	250
Contracts with police	240		0		0	1	240	1	240	1	240
Total			**181**		**123**		**633**		**985**		**2031**

Medical supplies		Nursing post		Mobile practice		Single practice		Group practice small		Group practice	
Item	Price	Number	Annual costs	Number	Annual costs	Number	Annual costs	Number	Annual costs	Number	Annual costs
Drugs											
Locally acting, oral and rectal drugs											
etamol (tablet, 500mg)	0.14	100	14	100	14	100	14	200	28	200	28
Dihydrocodeine tartrate (tablet, 30 mg)	0.1	10	1	10	1	10	1	20	2	30	3
Temgesic (buprenorphine; 0.2 mg; subl	0.03	10	0.3	10	0.3	10	0.3	20	1	30	0.9
Penicillin V (sachets, 125 mg; tablet, 25(	0.06	100	6	100	6	100	6	200	12	300	18
Erythromicin ethyl succinate (sachets, 1	0.34	50	17	50	17	50	17	100	34	150	51
Amoxil (amoxycillin sodium; capsule, 25	0.72	50	36	50	36	50	36	100	72	150	108
Trimethoprim (tablet, 100 mg)	0.07	50	3.5	50	3.5	50	3.5	100	7	150	10.5
Nitrolingual (GTN) sprayX1	10	1	10	1	10	1	10	2	20	5	50
propranolol (tablet, 40mg)	0.1	10	1	10	1	10	1	20	2	30	3
Frusemide (tablet, 40mg)	0.9	50	45	50	45	50	45	100	90	150	135
Digoxin (tablet, 0.25 mg)	0.02	10	0.2	10	0.2	10	0.2	20	0	30	0.6
Soluable aspirin (tablet, 300 mg)	0.017	100	1.7	100	1.7	100	1.7	200	3	300	5.1
Ventolin (salbutamol) inhaler X 2	6.76	1	6.76	1	6.76	1	6.76	2	14	5	33.8
Prednizolone (tablet, 5 mg)	0.22	0	0	5	1.1	5	1.1	10	2	25	5.5
Phenergan (promethazine hydrochloride	0.07	10	0.7	10	0.7	10	0.7	20	1	50	3.5
Haloperidol (Haldol; tablet, 5 mg)	0.54	0	0	10	5.4	10	5.4	20	11	30	16.2
Diazepam (tablet, 5 mg)	0.01	10	0.1	10	0.1	10	0.1	20	0	50	0.5
Stesolid rectal tube (diazepam;tube, 5 m	4	1	4	1	4	1	4	2	8	10	40
prochlorperazine maleate; (suppositories	2	1	2	1	2	1	2	2	4	10	20
Minims amethocaine 1%	15	1	15	1	15	1	15	2	30	5	75
Minims cyclopentolate 0.5%	16	1	16	1	16	1	16	2	32	5	80
Choromycetin ointment 1% (chloramphe	3	1	3	1	3	1	3	2	6	5	15
Total			**183.26**		**189.76**		**189.76**		**380**		**702.6**
Parenteral drugs											
X2 Temgesic (buprenorphine; 0.6 mg in	4.18	2	8.36	2	8.36	2	8.36	4	17	10	41.8
X2 Cyclimorf 15 (morphine tartrate 15 m	3.66	2	7.32	2	7.32	2	7.32	4	15	10	36.6
X1 Amoxil (amoxycillin sodium; 500mg	2.5	1	2.5	1	2.5	1	2.5	2	5	5	12.5
X2 Benzylpenicillin (600 mg, correspond	1.67	2	3.34	2	3.34	2	3.34	4	7	10	16.7
X1 Chloramphenicol (IG requiring 2 ml v	3	1	3	1	3	1	3	2	6	5	15
X2 Atropine sulphate (0.6 mg in 1 ml am	1.3	2	2.6	2	2.6	2	2.6	4	5	10	13
X1 Lignocaine 1% (20 ml vial)	2.3	1	2.3	1	2.3	1	2.3	2	5	5	11.5
X2 Frusemide (50 mg in 5 ml ampoule)	1.5	2	3	2	3	2	3	4	6	10	15
X2 Bricanyl (terbutaline sulphate; 0.5 mg	1	2	2	2	2	2	2	4	4	10	10
X3 Hydrocortisone sodium succinate (10	12	3	36	3	36	3	36	6	72	15	180
X3 Haloperidol (Haldol; 10 mg in 2 ml ar	15	0	0	3	45	3	45	6	90	15	225
X2 Diasemals (Diazepam; 10 mg in 2m	3	2	6	2	6	2	6	4	12	10	30
X2 Stemetil (prochlorperazine maleate;	2.5	2	5	2	5	2	5	4	10	10	25
X1 Maxolon (metoclopramide hydrochlo	1	1	1	1	1	1	1	2	2	5	5
X1 Adrenaline (1 in 1000 strength 0.5 m	1.5	1	1.5	1	1.5	1	1.5	2	3	5	7.5
X1 Piriton (chlorpheniramine maleate; 1(	0.46	1	0.46	1	0.46	1	0.46	2	1	5	2.3
X1 Glucagon (1 unit in 1 ml vial to be so	25	1	25	1	25	1	25	2	50	5	125
X1 Syntometrine (0.5 mg ergometrine a	0.7	1	0.7	1	0.7	1	0.7	2	1	5	3.5
X 1 Deltastab (prednisolone acetate; 25	5	1	5	1	5	1	5	2	10	5	25
X5 Water for injection (2 ml ampoule)	0.54	5	2.7	5	2.7	5	2.7	10	5	25	13.5
Total			**117.78**		**162.78**		**162.78**		**326**		**813.9**

note: in the following tables we have adopted a pragmatic approach to the naming of drugs.Where the generic name is in common usage and is easily recognised and where

Disposable gloves	0.4	10	4	10	4	10	4	20	8	50	20
Assorted syringes and needles	0.2	100	20	100	20	100	20	200	40	500	100
Bandages											
retention Bandages	3	1	3	1	3	1	3	2	6	5	15
support and compression bandages	3	1	3	1	3	1	3	2	6	5	15
Wound dressing pads	1.5	5	7.5	5	7.5	5	7.5	10	15	25	37.5
Sterile Dressings	2	5	10	5	10	5	10	10	20	25	50

Summary of recurrent costs

Recurring costs	Nursing post	Mobile practice	Single practice	Group practice small	Group practice
Maintenance	**352**	**656**	**598**	**820**	**1933**
Office supplies	**230**	**250**	**435**	**811**	**1969**
Medical supplies	**425**	**643**	**989**	**1933**	**4666**
Vehicles, generators fuel consumption	**0**	**5400**	**263**	**263**	**413**
Communication costs	**180**	**268**	**211**	**302**	**528**
Utilities costs	**735**	**0**	**875**	**1262**	**3666**
Services	**181**	**123**	**633**	**985**	**2031**
Total	**2103**	**7339**	**4003**	**6376**	**15206**

Personal costs

Medical personnel			Nursing post		Mobile practice		Single practice		Group practice small		Group practice	
Position	Annual salary	Unit annual personal costs	Number	Annual personnal costs	Number	Annual personal costs	Number	Annual personal costs	Number	Annual personnal costs	Number	Annual personal costs
Doctor of medicine	3000	3600	0	0	1	3600	1	3600	2	7200	5	18000
Nurse	1800	2160	1	2160	1	2160	1	2160	2	4320	5	10800
Laboratory technician	1800	2160	0	0	0	0	0	0	0	0	0	0
Total				**2160**		**5760**		**5760**		**11520**		**28800**

Non-medical personnel			Nursing post		Mobile practice		Single practice		Group practice small		Group practice	
Position	Annual salary	Unit annual personal costs	Number	Annual personnal costs	Number	Annual personal costs	Number	Annual personal costs	Number	Annual personnal costs	Number	Annual personal costs
General Manager	3000	3600	0	0	0	0	0	0	0	0	0	0
Practice Manager	3000	3600	0	0	0	0	0.1	360	0.1	360	0.5	1800
Computer Manager	1500	1800	0	0	0	0	0	0	0	0	0	0
Statistician	1500	1800	0	0	0	0	0	0	0	0	0	0
Computer staff	1500	1800	0	0	0	0	0	0	0	0	0	0
Secretarial Staff	1500	1800	0	0	0	0	0	0	0	0	0	0
Reception Staff	1320	1584	0	0	0	0	0	0	0	0	0	0
Driver	1320	1584	0	0	0	0	0	0	0	0	0	0
Fundholding staff	1500	1800	0	0	0	0	0	0	0	0	0	0
Cleaner	1200	1440	0	0	0	0	0.1	144	0.2	288	0.5	720
Guard	1200	1440	0	0	0	0	0	0	0	0	0	0
Total			0	**0**	0	**0**	0.2	**504**	0.3	**648**	1	**2520**

Other personal costs		Nursing post		Mobile practice		Single practice		Group practice small		Group practice	
Item	Unit costs	Number	Annual personnal costs	Number	Annual personal costs	Number	Annual personal costs	Number	Annual personnal costs	Number	Annual personal costs
Training (days)	50	5	250	5	250	5	250	10	500	25	1250
Liability insurance	0	0	0		0		0		0		0
Contribution to professional organization	0	0	0		0		0		0		0
Literature											
The Nature of General Practice	50	0	0	0	0	0	0	0	0	1	50
The Consultation	50	0	0	0	0	0	0	0	0	1	50
General Practice	200	0	0	1	200	1	200	1	200	1	200
Bread and Butter Medicine	50	0	0	1	50	1	50	1	50	1	50
Ear Nose and Throat Problems	50	0	0	0	0	0	0	0	0	1	50
General Medical Problems	200	0	0	1	200	1	200	1	200	1	200
Rheumatology and Orthopaedics	50	0	0	0	0	0	0	0	0	1	50
he Management of Chronic Disease	100	0	0	1	100	1	100	1	100	1	100
Emergences in General Practice	100	1	100	1	100	1	100	1	100	1	100
Prescribing	40	0	0	0	0	0	0	1	40	1	40
Eye Problems in General Practice	50	0	0	0	0	0	0	0	0	1	50
Gynecology and Family Planning	50	0	0	0	0	0	0	0	0	1	50
e Care of Babies and Young Children	50	0	0	0	0	0	0	0	0	1	50
Terminal Care and Bereavement	50	0	0	0	0	0	0	1	50	1	50
eventive Medicine and Immunization	50	0	0	1	50	1	50	1	50	1	50
Care of the Elderly	100	1	100	1	100	1	100	1	100	1	100
nsmitted Diseases and Psychosexual problems	50	0	0	0	0	0	0	0	0	1	50
Skin Problems In General Practice	200	0	0	0	0	0	0	0	0	1	200
gement and Finance in General Practice	50	0	0	0	0	0	0	1	50	1	50
Audit	50	0	0	0	0	0	0	0	0	1	50
Ethics and The Law	30	1	30	1	30	0	0	1	30	1	30
Journals	50	1	50	1	50	0	0	1	50	1	50
Total			280		880		800		1020		1670
Upgrade within 5 years			**56**		**176**		**160**		**204**		**334**
Periodic Publications:											
National Formulary	50	1	50	1	50	1	50	1	50	1	50
Clinical Guidelines	50	1	50	1	50	1	50	1	50	1	50
Total			**406**		**526**		**510**		**804**		**1684**

Summary of personal costs

Personal costs	Nursing post	Mobile practice	Single practice	Group practice small	Group practice
Medical personal costs	**2160**	**5760**	**5760**	**11520**	**28800**
Non/medical personal costs	**0**	**0**	**504**	**648**	**2520**
Other personal costs	**406**	**526**	**510**	**804**	**1684**
Total	**2566**	**6286**	**6774**	**12972**	**33004**

Medical practices-summary of costs

Costs overview		Nursing post		Mobile practice		Single practice		Group practice small		Group practice	
Item	Share of variable costs	Variable costs	Total costs	Variable costs	Total costs	Variable costs	Total costs	Variable costs	Total costs	Variable costs	Total costs
Premises	*0%*	0	**1500**	0	**500**	0	**2225**	0	**3175**	0	**8400**
Office equipment	*0%*	0	**189**	0	**147**	0	**384**	0	**768**	0	**1093**
Medical equipment	*0%*	0	**481**	0	**573**	0	**1263**	0	**1907**	0	**3087**
Vehicles,generators,refrigerators	*0%*	0	**160**	0	**4160**	0	**220**	0	**220**	0	**290**
Communication,computing	*0%*	0	**0**	0	**60**	0	**495**	0	**495**	0	**500**
Non-recurrent costs		**0**	**2331**	**0**	**5439**	**0**	**4587**	**0**	**6565**	**0**	**13370**
Maintenance	5%	18	**352**	33	**656**	30	**598**	41	**820**	97	**1933**
Office supplies	40%	92	**230**	100	**250**	174	**435**	324	**811**	788	**1969**
Medical supplies	80%	340	**425**	514	**643**	791	**989**	1547	**1933**	3732	**4666**
Vehicles,generators fuel consumption	0%	0	**0**	0	**5400**	0	**263**	0	**263**	0	**413**
Communication costs	30%	54	**180**	80	**268**	63	**211**	91	**302**	158	**528**
Utilities costs	5%	37	**735**	0	**0**	44	**875**	63	**1262**	183	**3666**
Services	20%	36	**181**	25	**123**	127	**633**	197	**985**	406	**2031**
Recurrent costs		**576**	**2103**	**752**	**7339**	**1229**	**4003**	**2263**	**6376**	**5365**	**15206**
Medical personal costs	0%	0	**2160**	0	**5760**	0	**5760**	0	**11520**	0	**28800**
Non/medical personal costs	0%	0	**0**	0	**0**	0	**504**	0	**648**	0	**2520**
Other personal costs	0%	0	**406**	0	**526**	0	**510**	0	**804**	0	**1684**
Personal costs		**0**	**2566**	**0**	**6286**	**0**	**6774**	**0**	**12972**	0	**33004**
Total		576	**6999**	752	**19064**	1229	**15364**	2263	**25913**	5365	**61580**

Laboratory

Non-recurrent costs

Premises				Laboratory	
Item	Price/m2	Depreciation period	Depreciation	Number/ m2	Annual depreciation
Office space	500	20	25	70	1750
Total					**1750**

Office equipment				Laboratory	
Item	Price	Depreciation period	Depreciation	Number	Annual depreciation
Tables/benches	500	15	33	2	67
Furniture	500	15	33	1	33
Chairs	100	5	20	5	100
Shelves and storage	70	15	5	8	37
Air conditioning	1000	10	100	1	100
Examination coach	200	15	13	0	0
Total					**337**

Vehicles,generators,refrigerators				Laboratory	
Item	Price	Depreciation period	Depreciation	Number	Annual depreciation
Personal car	20000	7	2857	0	0
Generator 2kW	600	10	60	1	60
Generator 5kW	1300	10	130	0	0
Generator 7,5kW	2000	10	200	0	0
Refrigerator	800	10	80	0	0
Total					**60**

Communication,computing				Laboratory	
Item	Price	Depreciation period	Depreciation	Number	Annual depreciation
PC computer	2000	6	333	1	333
UPS 0,8kVA	150	6	25	1	25
Printer	300	5	60	1	60
Telephone-fixed line	100	20	5	1	5
Telephone-mobile	300	5	60	0	0
Total					**423**

Medical equipment				Laboratory	
Item	Price	Depreciation period	Depreciation	Number	Annual depreciation
Stretcher	751	15	50	0	0
Instrument table	388	15	26	0	0
Steriliser	574	10	57	1	57
Kidney basin	4	4	1	0	0
Steriliser drum	44	4	11	1	11
Refridgerator	1000	10	100	1	100
Physician bag	65	4	16	0	0
Adult scale	267	10	27	0	0
Infant scale	242	10	24	0	0
Height Measuring	47	4	12	0	0
Infant Measuring	104	4	26	0	0
Tape measure	5	1	5	0	0
Stethoscope (A)	20	4	5	0	0
Stethoscope (F)	30	4	8	0	0
Thermometer	2	1	2	0	0
Examination Light	226	10	23	0	0
Opthalmoscope	111	4	28	0	0
Vision Chart	5	10	1	0	0
Flashlight	12	10	1	0	0
Reflex hammer	3	5	1	0	0
Otoscope	69	4	17	0	0
Public Health Nurse Kit	184	6	31	0	0
Surgical Instrument Kit	295	6	49	0	0
Rack blood sed unit	72	4	18	1	18
Microscope	1266	10	127	1	127
Slide Microscope	23	4	6	1	6
Cover glass	1	2	1	50	25
Count Chamber	430	10	43	1	43
Urine test	21	2	11	15	158
Pipette	1	2	1	5	3
Test tube centrifuge	1596	10	160	1	160
Test tube, centr,grad	1	1	1	100	100
Diagnostic strips	6	1	6	50	300
Photometer, haemoglobin or	634	15	42	1	42
Timer	51	5	10	1	10
Pure water supply - still/wate	500	15	33	1	33
Glassware	2000	15	133	1	133
Buckets, hoses etc	400	15	27	1	27
Sphygmomanometer, aneroi	45	4	11	0	0
Cuff, spare, for sphygmom.,c	9	1	9	0	0
Electrocardiograph	2000	10	200	0	0
Table,examination,dismant,w	383	10	38	0	0
Defibrillator,mini	9888	10	989	0	0
Resuscitator,hand-oper.,adul	172	6	29	0	0
Resuscitator,hand-oper.,infa	161	6	27	0	0
Airway,Guedel,rubber,adult,8	6	2	3	0	0
Airway,Guedel,rubber,infant,5	7	2	4	0	0
Airway,Guedel,rubber,infant,(	7	2	4	0	0
Negatoscope	619	10	62	1	62
Miscellaneous items (forcep	400	6	67	1	67
Tuning folk	60	10	6	0	0
Vaginal speculae	40	6	7	0	0
Ear syringing equipment	320	6	53	0	0
Nebuliser	400	6	67	0	0
Peakflow meters	28	2	14	0	0
Total					**1481**

Summary of non-recurrent costs

Non-recurrent costs	Laboratory
Premises	1750
Office equipment	337
Medical equipment	1481
Vehicles,generators,refrigerators	60
Communication,computing	423
Total	**4051**

Recurrent costs

Maintenance			Laboratory	
Item		% of annual depreciation	Annual depreciation	Annual costs
Premises		40.0%	1750	700
Office equipment		0.0%	337	0
Medical equipment		10.0%	1481	148
Vehicles,generators		12.5%	60	8
Communication & computing		12.5%	423	53
Total				**908**

Office supplies			Laboratory	
Item		Price	Number	Annual costs
Journals		3	0	0
Exercise book		0.5	8	4
Pen		0.5	20	10
Towel		3	6	18
Toilet paper		0.5	3	1.5
Soap		0.7	6	4.2
Calculator		14	1	14
Folder		5	10	50
File		0.1	300	30
Cartridge		135	1	135
Cleansing means			25	140
Accounting forms in package		50	0	0
Acetates		0.5	10	5
Pencils for white board		2	10	20
Papers in pack.		9	20	180
Discs for computer in pack.		10	2	20
CD-ROM		2	0	0
Paper case		0.5	10	5
Paper glue		1	5	5
Total				**642**

Vehicles,generators fuel consumption			Laboratory	
Item	Price / liter	Consumption l/km,l/hour	Number	Annual costs
Personal car fue	1.2	0.1	0	0
Generator fuel 2	1.5	0.7	250	263
Generator fuel 5	1.5	1.1	0	0
Generator fuel 7	1.5	2.0	0	0
				0
Total				**263**

Communication recurrent costs			
Item	Price / per unit	Number	Annual costs
Voice communication-fixed line (fix	8	12	96
Voice communication-fixed line(pe	0	50	14
Voice communication-mobile (fixed	7	0	0
Voice communication-mobile (per	0	0	0
Internet Communication via Voice	0	0	0
Data communication per month (D	70	0	0
Total			**110**

Utilities costs			
Item	Price / per unit	Number	Annual costs
Electricity-fixed instalments	10	12	120
Electricity-consumption	0.1	800	80
Water & sewerage	1.35	100	135
Waste removal-staff numberX0.40	0.159	1200	191
Heating per sq.metres	2.8	70	196
Total			**722**

Services			
Item	Price / per unit	Number	Annual costs
Cleaning			
Contract with Laundry per medica	50	1	50
Accounting			
Audit/accounting	160	1	160
Security			
Compulsory contract with insuranc	0	18000	72
Contracts with med service compa	50	0	0
State Standard control (Metrologic	50	1	50
			0
Total			**332**

Medical supplies			Laboratory
Item	Price	Number	Annual costs
Disinfectants			
Nargosept in litres	8	6	48
Spirituoza spiritus vini 96gr. -1 litre	7.5	2	15
tests for the sterilization			
Fenolphtalein fl.vial preparation 10	10	0	0
Azopiram fl.vial preparation 100g p	10	0	0
Sol. Hydrogen Peroxide 33% one l	15	0	0
Total			**63**

Basic Lab Tests			
Quality control sera in amp.	10	1	10
Total	**10**		**10**
General analysis of blood			
HCl (fixonal) 2 ml	0.006	900	5.4
Sodium Citrate 5% $C_6H_5O_7N$	0.001	900	0.9
Sol.Sodium Chloride 0.9% 4 ml	0.0005	900	0.45
Ac.Acetate 3% CH3 COOH 0.4m	0.0001	900	0.09
Azur-eozin by Romanovski 1ml	0.017	900	15.3
Spiritus Vini 96 2ml	0.012	900	10.8
Sterile bloodlancets 1	0.3	900	270
Coton 1g	0.08	900	72
Total	**0.4166**	**900**	**374.94**
General analysis of urine			
Ac Nitrici 50% 2 ml HNO3	0.015	600	9
Sodium bicarbonati 10% 1ml	0.0016	600	0.96
PH reagent Paper 1	0.05	600	30
Iodine Crystal 1% 0.003g	0.0005	600	0.3
Kali Iodati 0.006	0.001	600	0.6
Total	**0.0681**	**600**	**40.86**
Ocult Blood Test			
Azopyram 1ml	0.1	30	3
Sp.Vini 96 1 ml	0.06	30	1.8
Sol. Hydrogen Peroxide 3% 0.1 ml	0.0015	30	0.045
Total	**0.1615**	**30**	**4.845**
glucose level in blood			
Sodium Chloride 1.33g NaCl	0.019	600	11.4
Kali Iodati 0.1 g	0.015	600	9
Zinci Sulfate 0.254g	0.0049	600	2.94
Starch 0.02 g	0.0044	600	2.64
Fixonal NaOH 2 ml	0.01	600	6
Sodium bicarbonati 0.02	0.0004	600	0.24
Sodium Thiosulfati Fixonal 0.25 n	0.0005	600	0.3
Red blood salt fixonal 0.4 ml	0.0012	600	0.72
Ac.Acetate 3% CH3 COOH 6 ml	0.002	600	1.2
Coton 1g	0.08	600	48
Sp.Vini 96 1 ml	0.06	600	36
Sterile bloodlancets 1	0.3	600	180
Total	**0.4974**	**600**	**298.44**
Vaginal smear			
Iodine Crystal 1% 0.003g	0.0005	100	0.05
Kali Iodati 0.006	0.001	100	0.1
Neutral Red 1% 1 ml	0.01	100	1
Crystal violet 1% 1 ml	0.01	100	1
Sp.Vini 96 1 ml	0.06	100	6
Total	**0.0815**	**100**	**8.15**
Blood Rezus-group			
Blood Typing Sera (anti A,B, AB,	0.73	100	73
Sterile bloodlancets 1	0.3	100	30
Sp.Vini 96 1 ml	0.06	100	6
Coton 1g	0.08	100	8
Total	**1.17**	**100**	**117**
Serological test for STD (Vaserman)			
Sodium Citrate 5% C6 H5 O7 N	0.001	100	0.1
Cardiolipin antigen 1 ml Reaction	0.4	100	40
Coton 1g	0.08	100	8
Sp.Vini 96 1 ml	0.06	100	6
Sterile bloodlancets 1	0.3	100	30
Total	**0.841**	**100**	**84.1**
Creatinine			
Creatinine 2 ml	0.57	50	28.5
Assorted syringes and needles	0.2	1	0.2
Coton 1g	0.08	100	8

Basic Lab Tests			
Quality control sera in amp.	10	1	10
Total	**10**		**10**
General analysis of blood			
HCl (fixonal) 2 ml	0,006	900	5,4
Sodium Citrate 5% $C_6 H_5 O_7 N$	0,001	900	0,9
Sol.Sodium Chloride 0.9% 4 ml	0,0005	900	0,45
Ac.Acetate 3% CH3 COOH 0.4m	0,0001	900	0,09
Azur-eozin by Romanovski 1ml	0,017	900	15,3
Spiritus Vini 96 2ml	0,012	900	10,8
Sterile bloodlancets 1	0,3	900	270
Coton 1g	0,08	900	72
Total	**0,4166**	**900**	**374,94**
General analysis of urine			
Ac Nitrici 50% 2 ml HNO3	0,015	600	9
Sodium bicarbonati 10% 1ml	0,0016	600	0,96
PH reagent Paper 1	0,05	600	30
Iodine Crystal 1% 0.003g	0,0005	600	0,3
Kali Iodati 0.006	0,001	600	0,6
Total	**0,0681**	**600**	**40,86**
Ocult Blood Test			
Azopyram 1ml	0,1	30	3
Sp.Vini 96 1 ml	0,06	30	1,8
Sol. Hydrogen Peroxide 3% 0.1 ml	0,0015	30	0,045
Total	**0,1615**	**30**	**4,845**
glucose level in blood			
Sodium Chloride 1.33g NaCl	0,019	600	11,4
Kali Iodati 0.1 g	0,015	600	9
Zinci Sulfate 0.254g	0,0049	600	2,94
Starch 0.02 g	0,0044	600	2,64
Fixonal NaOH 2 ml	0,01	600	6
Sodium bicarbonati 0.02	0,0004	600	0,24
Sodium Thiosulfati Fixonal 0.25 n	0,0005	600	0,3
Red blood salt fixonal 0.4 ml	0,0012	600	0,72
Ac.Acetate 3% CH3 COOH 6 ml	0,002	600	1,2
Coton 1g	0,08	600	48
Sp.Vini 96 1 ml	0,06	600	36
Sterile bloodlancets 1	0,3	600	180
Total	**0,4974**	**600**	**298,44**
Vaginal smear			
Iodine Crystal 1% 0.003g	0,0005	100	0,05
Kali Iodati 0.006	0,001	100	0,1
Neutral Red 1% 1 ml	0,01	100	1
Crystal violet 1% 1 ml	0,01	100	1
Sp.Vini 96 1 ml	0,06	100	6
Total	**0,0815**	**100**	**8,15**
Blood Rezus-group			
Blood Typing Sera (anti A,B, AB,	0,73	100	73
Sterile bloodlancets 1	0,3	100	30
Sp.Vini 96 1 ml	0,06	100	6
Coton 1g	0,08	100	8
Total	**1,17**	**100**	**117**
Serological test for STD (Vaserman)			
Sodium Citrate 5% C6 H5 O7 N	0,001	100	0,1
Cardiolipin antigen 1 ml Reaction	0,4	100	40
Coton 1g	0,08	100	8
Sp.Vini 96 1 ml	0,06	100	6
Sterile bloodlancets 1	0,3	100	30
Total	**0,841**	**100**	**84,1**
Creatinine			
Creatinine 2 ml	0,57	50	28,5
Assorted syringes and needles	0,2	1	0,2
Coton 1g	0,08	100	8
Sp.Vini 96 1 ml	0,06	100	6
Total	**0,91**	**50**	**45,5**
Cholesterol			
Cholesterol 2 ml	0,58	50	29
Assorted syringes and needles	0,2	1	0,2
Coton 1g	0,08	100	8
Sp.Vini 96 1 ml	0,06	100	6
Total	**0,92**	**50**	**46**
Prothrombin			
Sodium Na2C2O4 0.013	0,0002	200	0,04
Tromboplasthin 0.01 ml	0,12	200	24
Calci Chlorati 0.01 ml	0,002	200	0,4
Coton 1g	0,08	200	16
Sp.Vini 96 1 ml	0,06	200	12
Sterile bloodlancets 1	0,3	200	60
Total	**0,5622**	**200**	**112,44**
Grand Total			**1209,28**

Summary of recurrent costs

Recurrent costs			Laboratory	
Maintenance				**908**
Office supplies				**642**
Medical supplies				**1209**
Vehicles, generators fuel consumption				**263**
Communication costs				**110**
Utilities costs				**722**
Services				**332**
Total				**4186**

Personal costs

Other personal costs			Laboratory	
Item		Unit costs	Number	Annual personal costs
Training (days)		50	3	150
Liability insurance		0		0
Contribution to professional organization		0		0
Literature				
The Nature of General Practice		50	0	0
The Consultation		50	0	0
General Practice		200	0	0
Bread and Butter Medicine		50	0	0
Ear Nose and Throat Problems		50	0	0
General Medical Problems		200	0	0
Rheumatology and Orthopaedics		50	0	0
he Management of Chronic Disease		100	0	0
Emergences in General Practice		100	0	0
Prescribing		40	0	0
Eye Problems in General Practice		50	0	0
Gynecology and Family Planning		50	0	0
e Care of Babies and Young Children		50	0	0
Terminal Care and Bereavement		50	0	0
eventive Medicine and Immunization		50	0	0
Care of the Elderly		100	0	0
nsmitted Diseases and Psychosexual problems		50	0	0
Skin Problems In General Practice		200	0	0
gement and Finance in General Practice		50	0	0
Audit		50	0	0
Ethics and The Law		30	0	0
Journals		50	0	0
Laboratory Diagnostic		100	1	100
Hematological Atlas		100	1	100
Total				200
Upgrade within 5 years				**40**
Periodic Publications:				
National Formulary		50	0	0
Clinical Guidelines		50	0	0
Total				**190**

Summary of personal costs

Personal costs			Laboratory
Medical personal costs			**2333**
Non/medical personal costs			**288**
Other personal costs			**190**
Total			**2811**

Laboratory-summary of costs

Costs overview		Laboratory	
	Share of variable costs	Variable costs	Total costs
Premises	*0%*	0	**1750**
Office equipment	*0%*	0	**337**
Medical equipment	*0%*	0	**1481**
Vehicles,generators,refrigerators	*0%*	0	**60**
Communication,computing	*0%*	0	**423**
Non-recurrent costs		**0**	**4051**
Maintenance	5%	45	**908**
Office supplies	40%	257	**642**
Medical supplies	80%	967	**1209**
Vehicles,generators fuel consumption	30%	79	**263**
Communication costs	0%	0	**110**
Utilities costs	5%	36	**722**
Services	20%	66	**332**
Recurrent costs		**1451**	**4186**
Medical personal costs	0%	0	**2333**
Non/medical personal costs	0%	0	**288**
Other personal costs	0%	0	**190**
Personal costs		0	**2811**
Total		1451	**11048**

Annex 3 BBP-Immunizations and their costing

The annex contains list of immunizations that are proposed to become part of the BBP for primary health care.

The list supplemented by evaluation of each immunization composed of evaluation of direct costs and evaluation of personnel and overhead costs of a practice.

Direct cost evaluation relies on expert judgment, overhead and personnel costs come out of an expert judgment on duration of each procedure and minute costs of a PHC practice.Minute costs of practice were derived from the cost model and they are based on assumption of 70% utilization.

Following table shows list of immunizations, age and frequency of application and costs per immunization:

Immunization against	Age,frequency	Personal and overhead costs	Direct costs	Total costs per immunization
BCG -t Tuberculosis	0-1,1x	0,65	4,30	4,95
polio	0-5,5x	0,65	1,04	1,69
DPT- Diphtheria, Pertussis, Tetanus	0-2,4x	0,65	0,50	1,15
hepatitis ,,B" (HB)	0-1,3x	0,65	10,30	10,95
measles	0-5,2x	0,65	0,54	1,19
mumps	0-2,2x	0,65	7,30	7,95
measles,mumps	1-14,3x	0,65	0,84	1,49
pertussis	0-6,3x	0,65	2,30	2,95
mumps, rubella	1-5,2x	0,65	25,30	25,95
DPT-Diphtheria, Tetanus	5,1x	0,65	1,20	1,85
DPT-Diphtheria, Tetanus	14,1x	0,65	1,27	1,92
tetanus-reinforcing	15-19,1x	0,65	1,80	2,45
polio-reinforcing	15-19,1x	0,65	1,04	1,69
tetanus-reinforcing	each 10,1x	0,65	1,80	2,45

The following table shows costs of immunizations per inhabitant in a running year and nationwide costs provided they will be used by population to full extent:

		Costs per person			Annual country wide costs		
Total costs of immunization by age groups	**Percent of population**	**Personal and overhead costs**	**Direct costs**	**Total costs**	**Personal and overhead costs**	**Direct costs**	**Total costs**
0-9	9,80%	16	8	25	687 803	356 083	1 043 886
10-19	15,40%	3	5	8	172 933	327 789	500 722
20-29	15,40%	1	2	2	43 233	119 196	162 429
30-39	13,30%	1	2	2	37 338	102 942	140 280
40-49	14,80%	1	2	2	41 549	114 552	156 101
50-59	10,50%	1	2	2	29 477	81 270	110 747
60-69	10,60%	1	2	2	29 758	82 044	111 802
70-79	7,90%	1	2	2	22 178	61 146	83 324
80-89	2,00%	1	2	2	5 615	15 480	21 095
90 and more	0,30%	1	2	2	842	2 322	3 164
Totals		**24**	**28**	**53**	**1 070 727**	**1 262 824**	**2 333 551**

The same figures are re-calculated for one practice:

Error! Not a valid link.

Annex 4 BBP-Preventive examinations and their costing

The annex contains list of preventive examinations that are proposed to become part of the BBP for primary health care.

The list supplemented by evaluation of each examination composed of evaluation of direct costs and evaluation of personnel and overhead costs of a practice.

Direct cost evaluation relies on expert judgment, overhead and personnel costs come out of an expert judgment on duration of each procedure and minute costs of a PHC practice. Minute costs of practice were derived from the cost model and they are based on assumption of 70% utilization.

Following table shows list of proposed preventive examinations, their frequencies per person in a running year and costs per examination:

Examination	Prevelance	Number per year	Adjusted number per year	Overhead costs	Direct costs	Total costs
Person Health Check (15-65)	100%	0,33	0,33	2,03	0,70	2,73
High Risk of CHD(40,50-64)	4%	1	0,04	5,36	0,70	6,06
High Risk of Diabetes (45+)	4%	1	0,04	3,86	0,95	4,81
Health Check of Older Adults (65-75)	100%	0,33	0,33	4,31	0,70	5,01
Health Check of Older Adults (75+)	100%	1	1,00	5,63	0,70	6,33
Children Checks (0-1)	100%	1	1,00	31,39	0,20	31,59
Children Checks (1-2)	100%	1	1,00	3,15	0,00	3,15
Child Checks (3-12)	100%	0,56	0,56	1,58	0,00	1,58
Antenatal Care	0,9%	1	0,01	29,31	10,40	39,71

The following table shows list of preventive examinations and their costs per inhabitant in a running year and nationwide costs provided they would be used by population to full extent:

	Costs per person			Annual country wide costs		
Examination	Personal and overhead costs	Direct costs	Total costs	Personal and overhead costs	Direct costs	Total costs
Person Health Check (15-65)	0,45	0,15	0,60	1 928 141	665 511	2 593 652
High Risk of CHD(40,50-64)	0,05	0,01	0,06	213 701	27 933	241 633
High Risk of Diabetes (45+)	0,06	0,01	0,07	241 967	59 478	301 444
Health Check of Older Adults (65-75)	0,13	0,02	0,15	565 275	91 880	657 156
Health Check of Older Adults (75+)	0,35	0,04	0,40	1 513 621	188 125	1 701 746
Children Checks (0-1)	0,31	0,002	0,31	1 322 707	8 428	1 331 135
Children Checks (1-2)	0,06	0,000	0,06	265 642	0	265 642
Child Checks (3-12)	0,09	0,000	0,09	374 218	0	374 218
Antenatal Care	0,26	0,094	0,36	1 134 355	402 480	1 536 835
Totals				7 559 628	1 443 835	9 003 463

The same figures are re-calculated for one practice:

Examination	Annual practise costs: Personal and overhead costs	Direct costs	Total costs
Person Health Check (15-65)	897	310	1206
High Risk of CHD(40,50-64)	99	13	112
High Risk of Diabetes (45+)	113	28	140
Health Check of Older Adults (65-75)	263	43	306
Health Check of Older Adults (75+)	704	88	792
Children Checks (0-1)	615	4	619
Children Checks (1-2)	124	0	124
Child Checks (3-12)	174	0	174
Antenatal Care	528	187	715
Totals	3516	672	4188

As it is not probable that the inhabitants will use preventive examinations to the full extent, a bit more realistic assumption was made in the following table. These figures are used for the BBP evaluation.

Examination	Reduced frequencies: Correction for participation	Reduced personal and overhead costs	Reduced direct costs	Reduced country wide direct costs
Person Health Check (15-65)	20%	179	62	133 102
High Risk of CHD(40,50-64)	70%	70	9	19 553
High Risk of Diabetes (45+)	70%	79	19	41 634
Health Check of Older Adults (65-75)	40%	105	17	36 752
Health Check of Older Adults (75+)	40%	282	35	75 250
Children Checks (0-1)	90%	554	4	7 585
Children Checks (1-2)	90%	111	0	0
Child Checks (3-12)	90%	157	0	0
Antenatal Care	90%	475	168	362 232
Totals		2 011	314	676 109

Annex 5 BBP Laboratory procedures

The annex contains list of base laboratory tests that are presumed to be part of the BBP. The list supplemented by evaluation of each procedure composed of evaluation of direct costs and evaluation of personnel and overhead costs of a laboratory. Sources of data on number of procedures are twofold: the SISUF. Data for January-November 2004 for Georgia except for Tbilisi and data from NTCFM were used.

Direct cost evaluation relies on expert judgment, overhead and personnel costs come out an expert judgment on duration of each procedure and minute costs of a laboratory. Minute costs of laboratory were derived from the cost model and they are based on assumption of 50% utilization.

The following table shows list of base laboratory procedures and their evaluation:

Description of test	Duration in minutes	Overhead and personal costs	Direct material costs	Total cost per test
General analysis of blood	15	3,15	0,42	3,56
General analysis of urine	10	2,10	0,07	2,17
Ocult Blood Test	5	1,05	0,16	1,21
Glucose level in blood	15	3,15	0,50	3,64
Vaginal smear	15	3,15	0,08	3,23
Blood Rezus-group	8	1,68	1,17	2,85
Serological test for STD(Vasermen)	8	1,68	0,84	2,52
Creatinine	15	3,15	0,91	4,06
Cholesterol	15	3,15	0,92	4,07
Blood Clotting	7	1,47	0,48	1,95
Prothombin	6	1,26	0,56	1,82

Frequencies and weights in provision profile of base laboratory tests according different sources are as follows:

Frequencies according NTCFM	Frequencies according SISUF	Weights according NTCFM	Weights according SISUF
900	120192	0,307	0,455
600	92020	0,205	0,348
30		0,010	0,000
600	32528	0,205	0,123
100		0,034	0,000
100		0,034	0,000
100		0,034	0,000
50		0,017	0,000
50		0,017	0,000
200	19495	0,068	0,074
200		0,068	0,000

Weighted average costs for one laboratory test are as follows (it could be seen that they don't differ too much):

Weighted average costs	Weighted average material costs (Lari)	Weighted average total costs (Lari)
NTCFM	0,42	2,99
SISUF	0,31	2,97

Annex 6 Calculation of capitation adjusters

Source of data on number of visits according age category was the SISUF. Data for January-November 2004 for Georgia except for Tbilisi were used.

Option 1

Option1 presumes that preventive services will be paid separately by fee-for-service and they will not be included in capitation payment. It means that prevention visits has to be excluded in calculation of intensity of utilization by age group.
Following reduction were done in the SISUF data according to number of visits in federal prevention programs:

- number of visit in age category 0-1 was reduced by 6 per person
- number of visit in age category 1-3 was reduced by 2 per person

Following table shows the calculation and results:
Error! Not a valid link.
Intensity of utilization is number of visits per person annually (col.3/col.2)
Index on total costs is intensity of utilization in the age category divided by average intensity of utilization in population (total reduced number of visits divided by total population which is 0.9 in this case)
Index on variable costs takes into account that number of visits influences only variable costs of a practice. It was calculated from the cost model that variable costs including costs of laboratory test account for 21% of total costs of the practice.
So that
Index on variable costs=0.79 + 0.21 Index on total costs*

Normalisation means that index for the most numerous category (15-65) is taken as 1.00 by definition and indexes for other groups are recalculated.

Now we can decide how many categories to use for real capitation payments. As age categories (younger ones) are differentiated also by remuneration of preventive service smaller number categories may do well in this case:

Error! Not a valid link.

Option 2

Option 2 presumes that preventive services are covered by capitation payments. Numbers of visits are not reduced a differences are greater now. See next table:
Error! Not a valid link.
Error! Not a valid link.

For this option 5 age categories may be used to reflect appropriately different workload of a practice:
Error! Not a valid link.

Annex 7 Drug list for PHC

The following lists of drugs were elaborated by processing of standard treatment protocols and drug schedules for diseases treated by PHC. Wholesale prices[56] on the Georgian market plus 20% pharmacy margin were used for estimation of costs. Two tables are presented for adults: a broad list that comprises all drugs in standard treatment protocols for diseases treated by PHC and a narrow list that is an excerpt from first one and contains the drugs that should get a public subsidy according to opinion of experts of the project. The shadowed items (by light green colour) contain drugs that are already subsidized publicly.

It is supposed that usage of drugs in the lists below is related to specific diagnosis only. See for example Aspirin that is bound to diagnosis I25-previous myocardial infarction [57]

The tables comprises of name of drug, estimated annual costs for the whole Georgian population, estimation of annual number of cases that need treatment by drug and average cost of the drug per case. The tables are sorted according to costs for total population.

Specific tables for Kakheti region are not given as no specific prevalence and incidence data for Kakheti region are at disposal. Costs for total population and annual number of cases can be divided by 10 to get rough estimations for Kakheti region.

1) List of drugs for children

Name of drug	Costs for total population	Annual number of cases	Average cost per case
Paracetamol	2,041,812	537,500	3.8
Amoxicillin+Clavulanic acid	1,223,539	83,850	14.6
Ferrous Fumarate	1,114,560	12,900	86.4
Sodium Cromoglicate	1,011,360	6,880	147.0
Ceftriaxone	577,920	8,600	67.2
Azithromycin	505,680	25,800	19.6
Ceftibuten	361,200	8,600	42.0
Amoxicillin	329,925	48,375	6.8
Phenoxymethyl-penicillin	319,920	25,800	12.4
Salbutamol	288,341	21,500	13.4
Beklometazone or Budezonide	206,400	860	240.0
Multivitamin	165,120	43,000	3.8
Sulfamethozazole+trimetoprim (co-trimoxazol)	115,068	21,500	5.4
Carbamazepine	113,004	430	262.8
Pseudoephedrine Hydrochloride (sudafed)	99,072	12,900	7.7
Ketokonazole	82,560	8,600	9.6
Oral Rehydration Salts (ORS)	82,560	86,000	1.0
Valproic acid	75,336	215	350.4
Nistatin	68,112	12,900	5.3
Prometazine	61,920	4,300	14.4
Pirantel	51,600	21,500	2.4
Loratadine (Claritin)	41,280	4,300	9.6
Hydrocortizone	41,280	34,400	1.2
Mebendazole	41,280	21,500	1.9

[56] Rate 1 USD = 2 Lari was used

[57] See for detailed information Nemec,Karosanidze Pharmaceuticals in PHC in Georgia, GVG,20005

„D3" Cholecalciferol dilution	38,700	10,750	3.6
Chloramphenicol	30,960	21,500	1.4
Mikonazole or Thiokonazole	30,960	8,600	3.6
Ketotifen	28,896	8,600	3.4
Folic acid	27,864	4,300	6.5
Prednisolone	24,851	4,730	5.3
Clotrimazole	24,768	12,900	1.9
Levamizole	20,640	8,600	2.4
Tetracycline	15,480	21,500	0.7
Hydrocortisone	10,320	8,600	1.2

2) Broad drug list for adults

Name of drug	Costs for total population	Annual number of cases	Average cost per case
Aspirin	25,312,896	206,400	122.6
Enalapril	15,481,548	167,700	92.3
Hydroclorothiazide	14,464,512	330,240	43.8
Thianeptine (Coaxil)	13,523,328	12,900	1,048.3
Amoxicyllin+Clavulanic Acid	9,492,336	223,600	42.5
Calcium D3	9,040,320	86,000	105.1
Ibuprofen	8,730,720	718,100	12.2
Atenolol	7,232,256	182,320	39.7
Gliclazide	6,780,240	43,000	157.7
Condoms	6,687,360	258,000	25.9
Desmopressin	6,439,680	2,150	2,995.2
Metoprolol	5,356,390	72,240	74.1
Ethinylestradiol , Levonorgestrel	4,458,240	51,600	86.4
Amlodipine	4,452,358	73,960	60.2
Human Insulatard	4,316,897	13,760	313.7
Aciclovir	4,030,992	25,800	156.2
Trinitroglycerin	3,013,440	86,000	35.0
Ranitidine	2,972,160	258,000	11.5
Ergotamin tartrate	2,972,160	43,000	69.1
Vinpocetin	2,972,160	172,000	17.3
Fluoxetine	2,629,536	8,600	305.8
Beclomethasone	2,291,040	23,650	96.9
Levonorgestrel	2,265,446	17,200	131.7
Verapamil	2,237,479	14,190	157.7
Codeine Phosphate	2,229,120	129,000	17.3
Human Actrapid, soluable insulin	2,172,649	13,760	157.9
Salbutamol	2,043,360	64,500	31.7
Aluminium Hydroxide	1,950,480	387,000	5.0
Estraderm	1,931,904	12,900	149.8
Phenoxymethil-Penicillin	1,902,182	41,280	46.1
Spironolactone	1,808,064	8,600	210.2
Ciprofloxacin	1,548,000	159,100	9.7
Prednisolone	1,537,783	92,450	16.6
Propylthiouracil	1,506,720	8,600	175.2
Conjugated oestrogen	1,506,720	8,600	175.2

Metformin	1,446,451	6,880	210.2
Azithromicin	1,387,008	24,080	57.6
Levonorgestrel+Ethinylestradiol	1,362,240	21,500	63.4
Levodopa+Carbidopa	1,310,846	1,720	762.1
Bisakodyl	1,253,880	21,500	58.3
Isosorbide dinitrate	1,205,376	34,400	35.0
Ceftriaxone (rocepin)	1,083,600	9,030	120.0
Amitriptyline	1,014,250	12,900	78.6
Warfarin	1,001,040	12,900	77.6
Cinnarizin	835,920	129,000	6.5
Fluconazole	774,000	21,500	36.0
Metronidazole	619,200	227,900	2.7
Conjug.oestrogen + Medroxyprogesterone Acetate	619,200	43,000	14.4
Diclofenac	603,720	129,000	4.7
Propranolol	569,664	43,000	13.2
Glibenclamide	565,020	21,500	26.3
Hydrocortisone	516,000	430,000	1.2
Estradiol	509,808	8,600	59.3
Digoxin	492,264	25,800	19.1
Paracetamol	482,976	980,400	0.5
Loratidine	412,800	43,000	9.6
Carbamazepin	376,680	1,075	350.4
Senna	371,520	387,000	1.0
Ferrograd	371,520	8,600	43.2
Morphine hydrochloride	347,743	1,118	311.0
Frusemide	338,083	25,800	13.1
Amoxicillin	325,080	43,000	7.6
Mikonazole	309,600	86,000	3.6
The intrauterine contraceptive device	309,600	86,000	3.6
Levothyroxin	301,344	17,200	17.5
Allopurinol	297,216	8,600	34.6
Morphine sulphate	249,538	4,472	55.8
Mebendazole (Vermox)	247,680	43,000	5.8
Erythromycin	222,912	12,040	18.5
Anusol suppositories	216,720	43,000	5.0
Clotrimazole	201,343	124,700	1.6
Theophylline	185,760	43,000	4.3
Folic acid	173,376	43,000	4.0
Doxycicline	160,373	12,900	12.4
Amiodarone	144,893	2,580	56.2
Omeprazole	115,584	43,000	2.7
Dexametazone	103,200	86,000	1.2
Tetracycline	77,400	107,500	0.7
Cloramphenicol	61,920	86,000	0.7
Levamisole (Decaris)	51,600	43,000	1.2

3) Narrow drug list for adults

Name of drug	Costs for total population	Annual number of cases	Average cost per case
Aspirin	25,312,896	206,400	122.6
Enalapril	15,481,548	167,700	92.3
Hydroclorothiazide	14,464,512	330,240	43.8
Thianeptine (Coaxil)	13,523,328	12,900	1048.3
Atenolol	7,232,256	182,320	39.7
Gliclazide	6,780,240	43,000	157.7
Desmopressin	6,439,680	2,150	2995.2
Metoprolol	5,356,390	72,240	74.1
Ethinylestradiol , Levonorgestrel	4,458,240	51,600	86.4
Amlodipine	4,452,358	73,960	60.2
Human Insulatard	4,316,897	13,760	313.7
Trinitroglycerin	3,013,440	86,000	35.0
Fluoxetine	2,629,536	8,600	305.8
Beclomethasone	2,291,040	23,650	96.9
Verapamil	2,237,479	14,190	157.7
Codeine Phosphate	2,229,120	129,000	17.3
Human Actrapid, soluable insulin	2,172,649	13,760	157.9
Salbutamol	2,043,360	64,500	31.7
Estraderm	1,931,904	12,900	149.8
Spironolactone	1,808,064	8,600	210.2
Metformin	1,446,451	6,880	210.2
Levonorgestrel+Ethinylestradiol	1,362,240	21,500	63.4
Levodopa+Carbidopa	1,310,846	1,720	762.1
Isosorbide dinitrate	1,205,376	34,400	35.0
Amitriptyline	1,014,250	12,900	78.6
Warfarin	1,001,040	12,900	77.6
Conjug.oestrogen + Medroxyprogesterone Acetate	619,200	43,000	14.4
Glibenclamide	565,020	21,500	26.3
Digoxin	492,264	25,800	19.1
Carbamazepin	376,680	1,075	350.4
Morphine hydrochloride	347,743	1,118	311.0
Frusemide	338,083	25,800	13.1
Morphine sulphate	249,538	4,472	55.8
Amiodarone	144,893	2,580	56.2

Annex 8 Estimation of public expenditures for general drug benefit scheme

The following tables allow estimating Kakheti specific and Georgian nationwide public expenditures for general drug benefit scheme described in the main text. The enables enable estimation for different set up of basic parameters: motivation limit, catastrophic limit and co-insurance for each age group -children up to 15, adults 15-65 and elderly above 65. The values refer exclusively to expenditures for drugs in lists specified in annex 7.

Following model was used for calculation of expenditures: It was estimated (based on survey in one of the polyclinics in Tbilisi) that 17.5% of patients have 3 and more episodes per year, 53% of patients have 2 episodes per year and the rest has only one episode per year. Episodes were associated randomly based on percentages above and total annual expenditures were calculated and compared with the annual limit. No account was taken to affinity of different illnesses; the association was done quite randomly. Ten independent modelling trials were done and the average was calculated and shown in the tables below. Due to probabilistic type of modelling some figures in the following tables that should match quite accurately match only approximately[58]. This due to the probabilistic nature of modelling described above and limited number of trials[59].Nevertheless the differences are definitely within estimation error of input data to the model-prevalence and incidence figures.

The model for Kakheti region used the same input data as model for the whole Georgia only adjustment to the size of population and age structure was made.

How to use the tables:

1. for each region (Kakheti, Georgia) there are nine tables in tree triples
2. for each age group there is a triple of tables
3. each table in the triple differs according co-insurance (50%,25%,0%)
4. in selected table find the motivation limit in left column and catastrophic limit in first row. The cell at intersection holds estimation of annual public expenditures in Lari
5. sum up the founded values for all three age groups[60]

[58] For example-first rows in tables for one age group (and one region) should match

[59] Higher number of trials would require greater computational capacity

[60] The parameters for each age group may be set quite differently

Region: Kakheti

Age group: children up to 15

Co-insurance: 0% (the patient gets drugs up to the motivation limit free of charge)

Limit L/Limit H (Lari)	10	20	30	50	100	150
0	391 298	262 247	226 270	154 995	83 175	59 194
5	697 051	568 000	532 023	460 748	388 928	364 947
10	864 141	735 089	699 112	627 837	556 017	532 037
15		833 765	797 788	726 513	654 692	630 712
20		852 319	816 342	745 067	673 247	649 266
25			854 825	783 549	711 729	687 749
30			870 447	799 172	727 352	703 372
35				807 175	735 355	711 374
40				838 043	766 223	742 242
45				855 267	783 447	759 466
50				864 949	793 129	769 148

Co-insurance: 25% (the patient pays 25% of the price of drugs up to the motivation limit)

Limit L/Limit H (Lari)	10	20	30	50	100	150
0	377 148	249 284	209 258	157 458	83 175	59 194
5	604 153	476 289	436 263	384 463	310 179	286 199
10	758 005	630 141	590 115	538 315	464 032	440 051
15		665 271	625 244	573 445	499 161	475 180
20		705 394	665 368	613 568	539 285	515 304
25			672 541	620 741	546 457	522 477
30			691 740	639 941	565 657	541 676
35				665 914	591 630	567 650
40				664 102	589 818	565 838
45				676 926	602 642	578 662
50				688 824	614 541	590 560

Co-insurance: 50% (the patient pays 50% of the price of drugs up to the motivation limit)

Limit L/Limit H (Lari)	10	20	30	50	100	150
0	372 340	267 741	214 853	150 310	83 175	59 194
5	528 678	424 078	371 191	306 648	239 512	215 532
10	622 290	517 691	464 803	400 260	333 124	309 144
15		538 246	485 358	420 815	353 679	329 699
20		550 470	497 582	433 039	365 903	341 923
25			534 049	469 506	402 371	378 390
30			544 746	480 203	413 068	389 088
35				480 868	413 732	389 752
40				489 491	422 355	398 375
45				497 772	430 636	406 656
50				502 268	435 133	411 152

Region: Kakheti
Age group: adults 15-65
Co-insurance: 0%

Limit L/Limit H (Lari)	30	50	80	100	150	200	250	300	350
0	4 051 217	3 018 143	2 150 576	1 663 659	1 267 459	944 822	885 509	823 267	845 373
5	4 186 326	3 153 252	2 285 685	1 798 768	1 402 568	1 079 931	1 020 618	958 376	980 482
10	4 831 848	3 798 774	2 931 207	2 444 290	2 048 090	1 725 453	1 666 140	1 603 898	1 626 004
15	5 030 775	3 997 701	3 130 134	2 643 217	2 247 017	1 924 380	1 865 067	1 802 825	1 824 931
20	5 521 666	4 488 592	3 621 025	3 134 108	2 737 908	2 415 271	2 355 958	2 293 716	2 315 822
25	5 762 710	4 729 636	3 862 069	3 375 152	2 978 952	2 656 315	2 597 002	2 534 760	2 556 866
30	6 329 996	5 296 922	4 429 355	3 942 438	3 546 238	3 223 601	3 164 288	3 102 046	3 124 152
35	0	5 346 882	4 479 315	3 992 398	3 596 198	3 273 561	3 214 248	3 152 006	3 174 112
40	0	5 538 231	4 670 664	4 183 747	3 787 547	3 464 910	3 405 597	3 343 355	3 365 461
45	0	5 757 028	4 889 461	4 402 544	4 006 344	3 683 707	3 624 394	3 562 152	3 584 258
50	0	6 039 632	5 172 066	4 685 148	4 288 948	3 966 311	3 906 998	3 844 756	3 866 863

Co-insurance: 25%

Limit L/Limit H (Lari)	30	50	80	100	150	200	250	300	350
0	4 147 432	3 095 778	2 183 137	1 592 614	1 193 213	1 033 132	844 033	869 472	810 419
5	4 283 315	3 231 660	2 319 020	1 728 497	1 329 096	1 169 015	979 916	1 005 355	946 302
10	4 606 171	3 554 516	2 641 876	2 051 352	1 651 952	1 491 871	1 302 772	1 328 211	1 269 158
15	4 934 771	3 883 116	2 970 475	2 379 952	1 980 551	1 820 471	1 631 372	1 656 810	1 597 758
20	5 137 846	4 086 191	3 173 551	2 583 028	2 183 627	2 023 546	1 834 447	1 859 886	1 800 833
25	5 542 769	4 491 114	3 578 474	2 987 951	2 588 550	2 428 469	2 239 370	2 264 809	2 205 756
30	5 667 657	4 616 002	3 703 361	3 112 838	2 713 437	2 553 357	2 364 258	2 389 696	2 330 644
35	0	4 839 628	3 926 987	3 336 464	2 937 063	2 776 983	2 587 884	2 613 322	2 554 270
40	0	5 048 249	4 135 609	3 545 085	3 145 685	2 985 604	2 796 505	2 821 944	2 762 891
45	0	5 128 176	4 215 535	3 625 012	3 225 611	3 065 530	2 876 431	2 901 870	2 842 817
50	0	5 152 782	4 240 141	3 649 618	3 250 217	3 090 136	2 901 037	2 926 476	2 867 423

Co-insurance: 50%

Limit L/Limit H (Lari)	30	50	80	100	150	200	250	300	350
0	3 930 476	2 900 751	2 072 370	1 640 116	1 233 513	1 110 825	850 259	794 340	723 959
5	3 953 205	2 923 480	2 095 099	1 662 845	1 256 242	1 133 554	872 988	817 069	746 688
10	4 263 656	3 233 931	2 405 550	1 973 296	1 566 693	1 444 005	1 183 439	1 127 520	1 057 139
15	4 316 891	3 287 165	2 458 785	2 026 531	1 619 927	1 497 239	1 236 673	1 180 755	1 110 373
20	4 581 645	3 551 919	2 723 539	2 291 285	1 884 681	1 761 993	1 501 428	1 445 509	1 375 127
25	4 801 042	3 771 316	2 942 935	2 510 682	2 104 078	1 981 390	1 720 824	1 664 906	1 594 524
30	4 956 736	3 927 011	3 098 630	2 666 376	2 259 773	2 137 085	1 876 519	1 820 600	1 750 219
35	0	4 127 318	3 298 937	2 866 683	2 460 080	2 337 392	2 076 826	2 020 907	1 950 526
40	0	4 248 905	3 420 525	2 988 271	2 581 667	2 458 979	2 198 413	2 142 495	2 072 113
45	0	4 204 972	3 376 591	2 944 337	2 537 734	2 415 046	2 154 480	2 098 561	2 028 180
50	0	4 381 854	3 553 473	3 121 220	2 714 616	2 591 928	2 331 362	2 275 443	2 205 062

Region: Kakheti
Age group: adults 65+
Co-insurance: 0%

Limit L/Limit H (Lari)	30	50	80	100	150	200	250	300	350
0	3 728 380	2 569 238	1 742 840	1 389 077	1 041 542	821 460	731 516	739 632	690 445
5	4 103 806	2 944 663	2 118 265	1 764 503	1 416 967	1 196 885	1 106 941	1 115 058	1 065 870
10	4 194 702	3 035 559	2 209 161	1 855 399	1 507 863	1 287 781	1 197 838	1 205 954	1 156 767
15	4 579 447	3 420 305	2 593 907	2 240 144	1 892 609	1 672 527	1 582 583	1 590 699	1 541 512
20	4 939 045	3 779 903	2 953 505	2 599 742	2 252 207	2 032 125	1 942 181	1 950 297	1 901 110
25	5 118 170	3 959 027	3 132 629	2 778 867	2 431 331	2 211 249	2 121 305	2 129 422	2 080 234
30	5 475 109	4 315 967	3 489 569	3 135 806	2 788 271	2 568 189	2 478 245	2 486 361	2 437 174
35	0	4 719 425	3 893 027	3 539 264	3 191 729	2 971 647	2 881 703	2 889 819	2 840 632
40	0	4 794 368	3 967 970	3 614 208	3 266 672	3 046 590	2 956 647	2 964 763	2 915 576
45	0	5 000 670	4 174 272	3 820 510	3 472 974	3 252 892	3 162 948	3 171 064	3 121 877
50	0	5 142 167	4 315 769	3 962 007	3 614 471	3 394 389	3 304 445	3 312 561	3 263 374

Co-insurance: 25%

Limit L/Limit H (Lari)	30	50	80	100	150	200	250	300	350
0	3 418 398	2 560 641	1 861 256	1 384 752	1 015 926	813 624	678 707	716 005	641 436
5	3 535 786	2 678 029	1 978 644	1 502 140	1 133 314	931 012	796 095	833 393	758 824
10	3 858 093	3 000 336	2 300 951	1 824 447	1 455 621	1 253 319	1 118 402	1 155 700	1 081 131
15	4 129 001	3 271 244	2 571 859	2 095 355	1 726 529	1 524 227	1 389 310	1 426 608	1 352 039
20	4 299 321	3 441 563	2 742 179	2 265 674	1 896 848	1 694 546	1 559 629	1 596 927	1 522 358
25	4 527 472	3 669 715	2 970 330	2 493 825	2 124 999	1 922 698	1 787 781	1 825 079	1 750 510
30	4 744 194	3 886 436	3 187 052	2 710 547	2 341 721	2 139 419	2 004 502	2 041 801	1 967 231
35	0	4 134 180	3 434 796	2 958 291	2 589 465	2 387 163	2 252 246	2 289 545	2 214 975
40	0	4 364 476	3 665 091	3 188 587	2 819 761	2 617 459	2 482 542	2 519 840	2 445 271
45	0	4 402 960	3 703 575	3 227 070	2 858 244	2 655 943	2 521 026	2 558 324	2 483 755
50	0	4 517 545	3 818 160	3 341 656	2 972 830	2 770 528	2 635 611	2 672 909	2 598 340

Co-insurance: 50%

Limit L/Limit H (Lari)	30	50	80	100	150	200	250	300	350
0	3 638 884	2 598 707	1 918 834	1 443 796	1 030 691	922 320	791 692	633 939	716 755
5	3 689 708	2 649 531	1 969 658	1 494 620	1 081 515	973 144	842 516	684 763	767 579
10	3 870 667	2 830 489	2 150 616	1 675 578	1 262 473	1 154 102	1 023 474	865 721	948 537
15	4 025 711	2 985 533	2 305 660	1 830 622	1 417 517	1 309 146	1 178 518	1 020 765	1 103 581
20	4 226 379	3 186 202	2 506 329	2 031 291	1 618 186	1 509 815	1 379 187	1 221 434	1 304 250
25	4 448 242	3 408 064	2 728 191	2 253 153	1 840 048	1 731 677	1 601 049	1 443 296	1 526 112
30	4 584 591	3 544 413	2 864 541	2 389 503	1 976 398	1 868 026	1 737 398	1 579 645	1 662 461
35	0	3 704 987	3 025 114	2 550 076	2 136 971	2 028 600	1 897 972	1 740 219	1 823 035
40	0	3 691 959	3 012 086	2 537 048	2 123 943	2 015 572	1 884 944	1 727 191	1 810 007
45	0	3 797 941	3 118 069	2 643 031	2 229 926	2 121 554	1 990 926	1 833 173	1 915 989
50	0	3 981 739	3 301 866	2 826 828	2 413 723	2 305 352	2 174 724	2 016 971	2 099 787

Region: Georgia
Age group: children up to 15
Co-insurance: 0%

Limit L/Limit H (Lari)	10	20	30	50	100	150
0	3,751,753	2,919,930	2,035,930	1,672,459	878,748	625,392
5	6,994,210	6,162,387	5,278,386	4,914,915	4,121,204	3,867,848
10	8,488,979	7,657,156	6,773,155	6,409,685	5,615,974	5,362,618
15		8,779,467	7,895,466	7,531,995	6,738,284	6,484,928
20		8,986,919	8,102,918	7,739,448	6,945,737	6,692,381
25			8,767,702	8,404,231	7,610,520	7,357,164
30			8,962,110	8,598,639	7,804,928	7,551,572
35				8,771,613	7,977,902	7,724,546
40				8,818,435	8,024,724	7,771,368
45				9,146,745	8,353,034	8,099,678
50				9,252,308	8,458,597	8,205,241

Co-insurance: 25%

Limit L/Limit H (Lari)	10	20	30	50	100	150
0	4,177,969	2,572,177	2,282,340	1,506,307	878,748	625,392
5	6,344,283	5,029,910	4,740,073	3,964,040	3,336,481	3,083,125
10	7,953,576	6,451,276	6,161,439	5,385,406	4,757,846	4,504,490
15		6,839,274	6,549,437	5,773,404	5,145,845	4,892,489
20		7,152,326	6,862,489	6,086,456	5,458,897	5,205,541
25			7,230,720	6,454,687	5,827,127	5,573,771
30			7,415,334	6,639,301	6,011,742	5,758,386
35				6,783,768	6,156,209	5,902,853
40				6,879,473	6,251,914	5,998,558
45				6,979,946	6,352,387	6,099,031
50				7,165,621	6,538,062	6,284,706

Co-insurance: 50%

Limit L/Limit H (Lari)	10	20	30	50	100	150
0	3,773,126	3,001,510	2,267,221	1,585,276	878,748	625,392
5	5,323,580	4,551,964	3,817,675	3,135,729	2,429,202	2,175,846
10	6,297,174	5,525,558	4,791,269	4,109,323	3,402,796	3,149,440
15		5,810,555	5,076,266	4,394,321	3,687,793	3,434,437
20		6,166,404	5,432,115	4,750,170	4,043,642	3,790,286
25			5,642,705	4,960,760	4,254,232	4,000,876
30			5,670,022	4,988,077	4,281,549	4,028,193
35				5,127,066	4,420,538	4,167,182
40				5,212,934	4,506,406	4,253,050
45				5,275,876	4,569,348	4,315,992
50				5,308,616	4,602,088	4,348,732

Region: Georgia
Age group: adults 15-65
Co-insurance: 0%

Limit L/Limit H (Lari)	30	50	80	100	150	200	250	300	350
0	48,733,574	37,586,679	27,157,087	20,551,077	14,432,367	10,275,030	9,797,496	10,441,628	7,966,977
5	48,150,402	37,003,507	26,573,916	19,967,905	13,849,196	9,691,858	9,214,325	9,858,456	7,383,806
10	58,463,766	47,316,871	36,887,279	30,281,269	24,162,559	20,005,222	19,527,688	20,171,820	17,697,169
15	62,748,390	51,601,494	41,171,903	34,565,892	28,447,183	24,289,845	23,812,312	24,456,444	21,981,793
20	64,679,018	53,532,122	43,102,531	36,496,520	30,377,811	26,220,473	25,742,940	26,387,072	23,912,421
25	69,064,037	57,917,142	47,487,550	40,881,540	34,762,830	30,605,493	30,127,959	30,772,091	28,297,440
30	76,008,578	64,861,682	54,432,091	47,826,081	41,707,371	37,550,034	37,072,500	37,716,632	35,241,981
35	0	65,988,499	55,558,908	48,952,897	42,834,187	38,676,850	38,199,316	38,843,448	36,368,797
40	0	70,691,730	60,262,139	53,656,129	47,537,419	43,380,082	42,902,548	43,546,680	41,072,029
45	0	71,469,127	61,039,536	54,433,526	48,314,816	44,157,479	43,679,945	44,324,077	41,849,426
50	0	76,176,897	65,747,306	59,141,296	53,022,586	48,865,249	48,387,715	49,031,847	46,557,196

Co-insurance: 25%

Limit L/Limit H (Lari)	30	50	80	100	150	200	250	300	350
0	48,783,691	38,315,016	25,539,997	16,968,102	13,818,217	13,198,002	10,099,212	8,205,235	10,382,852
5	47,936,079	37,467,404	24,692,385	16,120,491	12,970,606	12,350,391	9,251,600	7,357,624	9,535,241
10	55,855,674	45,386,999	32,611,980	24,040,085	20,890,200	20,269,986	17,171,195	15,277,219	17,454,836
15	57,965,418	47,496,743	34,721,724	26,149,829	22,999,944	22,379,729	19,280,939	17,386,962	19,564,579
20	61,101,510	50,632,835	37,857,816	29,285,921	26,136,036	25,515,822	22,417,031	20,523,055	22,700,672
25	66,028,710	55,560,036	42,785,016	34,213,122	31,063,237	30,443,022	27,344,232	25,450,255	27,627,872
30	68,807,215	58,338,540	45,563,521	36,991,627	33,841,742	33,221,527	30,122,736	28,228,760	30,406,377
35	0	59,541,216	46,766,197	38,194,302	35,044,417	34,424,203	31,325,412	29,431,436	31,609,053
40	0	62,241,358	49,466,339	40,894,444	37,744,559	37,124,344	34,025,554	32,131,577	34,309,194
45	0	65,204,004	52,428,985	43,857,090	40,707,205	40,086,991	36,988,200	35,094,224	37,271,841
50	0	66,799,688	54,024,669	45,452,774	42,302,889	41,682,675	38,583,884	36,689,908	38,867,525

Co-insurance: 50%

Limit L/Limit H (Lari)	30	50	80	100	150	200	250	300	350
0	48 804 269	35 240 077	28 213 991	20 165 612	16 411 697	12 210 111	10 669 297	8 936 050	8 678 165
5	49 956 551	36 392 359	29 366 273	21 317 894	17 563 979	13 362 393	11 821 579	10 088 332	9 830 448
10	49 935 233	36 371 040	29 344 955	21 296 576	17 542 660	13 341 075	11 800 260	10 067 014	9 809 129
15	57 308 954	43 744 762	36 718 676	28 670 297	24 916 382	20 714 796	19 173 982	17 440 735	17 182 850
20	58 596 719	45 032 526	38 006 441	29 958 062	26 204 146	22 002 561	20 461 746	18 728 500	18 470 615
25	60 234 192	46 670 000	39 643 915	31 595 536	27 841 620	23 640 034	22 099 220	20 365 974	20 108 089
30	60 971 717	47 407 525	40 381 439	32 333 060	28 579 144	24 377 559	22 836 745	21 103 498	20 845 613
35	0	50 628 255	43 602 169	35 553 790	31 799 874	27 598 289	26 057 475	24 324 228	24 066 343
40	0	50 827 383	43 801 298	35 752 919	31 999 003	27 797 418	26 256 603	24 523 357	24 265 472
45	0	50 541 891	43 515 805	35 467 426	31 713 511	27 511 925	25 971 111	24 237 864	23 979 979
50	0	53 833 336	46 807 250	38 758 871	35 004 955	30 803 370	29 262 555	27 529 309	27 271 424

Region: Georgia
Age group: adults 65+
Co-insurance: 0%

Limit L/Limit H (Lari)	30	50	80	100	150	200	250	300	350
0	28,426,587	22,326,419	14,882,329	9,887,428	8,051,968	7,690,565	5,884,879	4,781,246	6,050,158
5	27,768,042	21,667,874	14,223,784	9,228,883	7,393,423	7,032,020	5,226,334	4,122,701	5,391,613
10	33,921,110	27,820,942	20,376,852	15,381,951	13,546,492	13,185,089	11,379,402	10,275,770	11,544,682
15	35,560,259	29,460,092	22,016,002	17,021,100	15,185,641	14,824,238	13,018,552	11,914,919	13,183,831
20	37,996,822	31,896,655	24,452,565	19,457,664	17,622,204	17,260,801	15,455,115	14,351,482	15,620,394
25	41,824,973	35,724,805	28,280,715	23,285,814	21,450,355	21,088,952	19,283,265	18,179,633	19,448,545
30	43,983,711	37,883,543	30,439,453	25,444,552	23,609,093	23,247,690	21,442,003	20,338,371	21,607,283
35	0	38,817,953	31,373,863	26,378,962	24,543,502	24,182,099	22,376,413	21,272,780	22,541,692
40	0	40,915,807	33,471,717	28,476,816	26,641,357	26,279,954	24,474,268	23,370,635	24,639,547
45	0	43,217,613	35,773,523	30,778,622	28,943,162	28,581,759	26,776,073	25,672,440	26,941,352
50	0	44,457,367	37,013,277	32,018,376	30,182,917	29,821,514	28,015,828	26,912,195	28,181,107

Co-insurance: 25%

Limit L/Limit H (Lari)	30	50	80	100	150	200	250	300	350
0	29,109,042	21,720,083	16,147,958	11,858,006	8,850,796	7,570,242	8,074,986	5,642,902	4,443,468
5	29,213,553	21,824,594	16,252,469	11,962,516	8,955,306	7,674,753	8,179,497	5,747,413	4,547,979
10	32,285,694	24,896,735	19,324,610	15,034,657	12,027,447	10,746,894	11,251,638	8,819,554	7,620,120
15	34,116,889	26,727,930	21,155,805	16,865,853	13,858,643	12,578,089	13,082,833	10,650,749	9,451,315
20	36,714,291	29,325,332	23,753,207	19,463,255	16,456,045	15,175,491	15,680,235	13,248,151	12,048,717
25	39,332,088	31,943,129	26,371,004	22,081,051	19,073,841	17,793,287	18,298,031	15,865,948	14,666,514
30	41,765,068	34,376,109	28,803,984	24,514,031	21,506,821	20,226,268	20,731,012	18,298,928	17,099,494
35	0	34,696,631	29,124,506	24,834,554	21,827,344	20,546,790	21,051,534	18,619,450	17,420,016
40	0	35,731,479	30,159,354	25,869,402	22,862,192	21,581,638	22,086,382	19,654,298	18,454,864
45	0	36,791,877	31,219,752	26,929,800	23,922,590	22,642,036	23,146,780	20,714,697	19,515,262
50	0	38,389,006	32,816,881	28,526,928	25,519,718	24,239,164	24,743,908	22,311,825	21,112,391

Co-insurance: 50%

Limit L/Limit H (Lari)	30	50	80	100	150	200	250	300	350
0	29,721,837	22,786,450	15,495,253	11,234,717	9,026,638	7,609,673	6,920,356	6,495,326	5,079,129
5	29,882,977	22,947,590	15,656,393	11,395,856	9,187,778	7,770,813	7,081,496	6,656,466	5,240,269
10	31,712,104	24,776,717	17,485,520	13,224,984	11,016,905	9,599,941	8,910,623	8,485,593	7,069,396
15	33,707,484	26,772,097	19,480,900	15,220,363	13,012,284	11,595,320	10,906,003	10,480,972	9,064,776
20	34,628,000	27,692,613	20,401,416	16,140,880	13,932,801	12,515,837	11,826,519	11,401,489	9,985,292
25	36,590,903	29,655,516	22,364,319	18,103,783	15,895,704	14,478,740	13,789,422	13,364,392	11,948,195
30	36,320,533	29,385,146	22,093,949	17,833,412	15,625,334	14,208,369	13,519,052	13,094,022	11,677,825
35	0	31,827,842	24,536,644	20,276,108	18,068,029	16,651,065	15,961,747	15,536,717	14,120,520
40	0	32,739,993	25,448,796	21,188,260	18,980,181	17,563,217	16,873,899	16,448,869	15,032,672
45	0	33,405,514	26,114,317	21,853,781	19,645,702	18,228,738	17,539,420	17,114,390	15,698,193
50	0	33,893,951	26,602,754	22,342,217	20,134,139	18,717,174	18,027,857	17,602,827	16,186,630