

**GVG**

A project implemented by  
GVG/EPOS

**Reform of the Health Care  
Financing System in Georgia**



This project is funded by  
the European Union

---

**Working paper:**

**Pharmaceuticals in the Primary Health Care in Georgia**

**by Jiří Němec and Irina Karosanidze**

**Tbilisi, 6th of May, 2005**

---

GVG – [www.gvg.ge](http://www.gvg.ge)

30 Gamsakhurdia Ave. 5<sup>th</sup> Floor, Room 500. 0160 Tbilisi, Georgia Tel: (995 32) 38 41 16; Fax: (995 32) 38 95 51

## Table of contents

1	Introduction .....	4
2	Current status of drug provision in Georgia .....	4
2.1	Current volume of pharmaceutical spending.....	4
2.2	Free drug provision.....	<b>Error! Bookmark not defined.</b>
2.3	Legal status of drug provision in Georgia .....	6
2.4	Delivery of drugs .....	7
3	Data foundation .....	7
4	Options for choice of publicly covered drugs .....	8
5	Options for pricing of drugs eligible for public coverage .....	9
6	Options for drug benefit schemes.....	10
6.1	Publicly supervised delivery of drugs at discounted prices.....	10
6.2	Public coverage of fixed percentage of price .....	11
6.3	Coverage of price per pack above a specified limit.....	13
6.4	Public coverage above a specified limit per disease episode .....	15
6.5	Public coverage by a fixed percentage above a fixed limit for an episode .....	17
6.6	Public coverage above a specified limit per year .....	19
7	Options for drug delivery schemes.....	22
7.1	Pharmacy delivers and public purchaser reimburses the pharmacy .....	23
7.2	Pharmacy delivers and the doctor reimburses the pharmacy .....	24
7.3	Pharmacy delivers and the public purchaser reimburses the patient .....	26
7.4	A doctor delivers and the public purchaser reimburses the doctor.....	27
8	Options for public or publicly assisted funding.....	29
8.1	Increase of public funding .....	29
8.2	Shift of public funding from PHC providers to drug expenses .....	30
8.3	Voluntary insurance schemes .....	31
9	Conclusions and recommendations .....	32
	Annexes (in a separate paper).....	34

## **Abbreviations**

BBP – Basic Benefits Package

PHC – Primary Health Care

SUSIF - State United Social Insurance Fund

MoLHSA –Ministry of Labour, Health and Social Affairs

FM – Family Medicine

Project – EU funded project Reform of the Health Care Financing System in Georgia

# 1 Introduction

An accessible Primary Health Care is of great importance for the whole population and the most effective way of providing health care. Affordable drug treatment is one of the most important preconditions for patients' access to PHC and also a necessary precondition for the effectiveness of PHC care. Without adequate drugs all PHC activities like consultations, diagnostic procedures and advice are activities without real medical impact on patients' health status.

The drug issue is even more complicated in Georgia as many arrangements relating to drug provision were abandoned throughout the time - like prescription of drugs - and there is very limited coverage of drug expenses from public sources. One of the implications is also lack of data on drug consumption that hampers analytic work.

The paper covers the topic of public coverage of drug expenses from different perspectives:

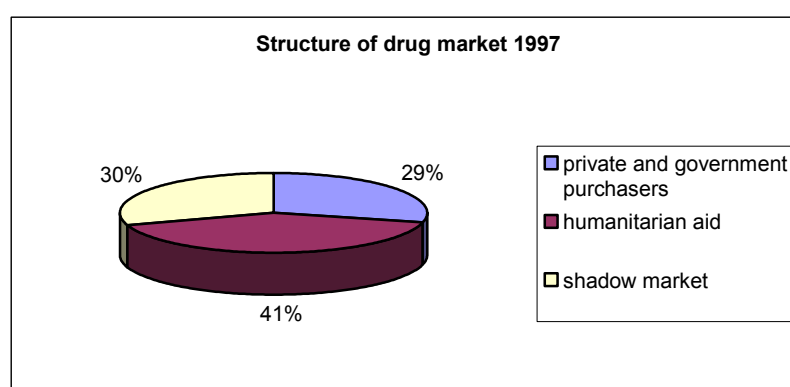
- What drugs should be eligible for public coverage?
- How to determine price of drugs eligible for public coverage?
- What are the options for drug benefit scheme?
- What are the options for drug delivery scheme?
- What are the options for public or publicly assisted coverage of drug expenses?

The paper concentrates on drug provision on PHC level. It is not the ambition of the paper to bring proposals for other health care levels so that questions regarding relationship of drug provision at the interfaces between levels are discussed only briefly.

## 2 Current status of drug provision in Georgia

### 2.1 Current volume of pharmaceutical spending

Pharmaceutical needs of Georgia have always been mostly supplied by import. It is estimated that market amounts to 70-80 million USD<sup>1</sup>. Drugs are supplied by private and government purchasers, humanitarian aid and shadow market<sup>2</sup> (see Picture 1)

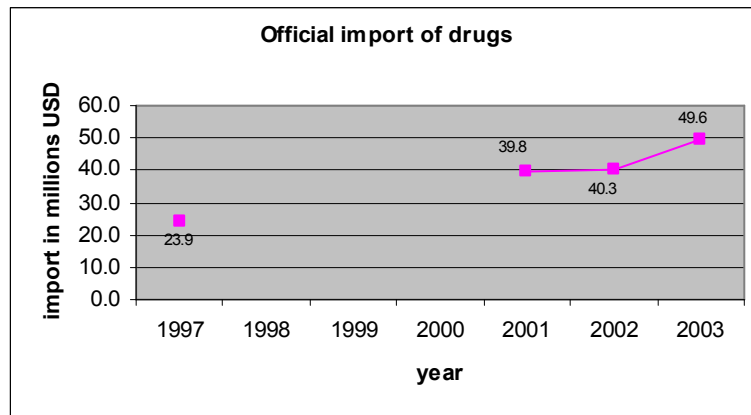


Picture 1

<sup>1</sup> Frans Stobbelaar Drug Benefit Scheme for Primary Health Care in Georgia, OPM/DFID Tbilisi, February 2005

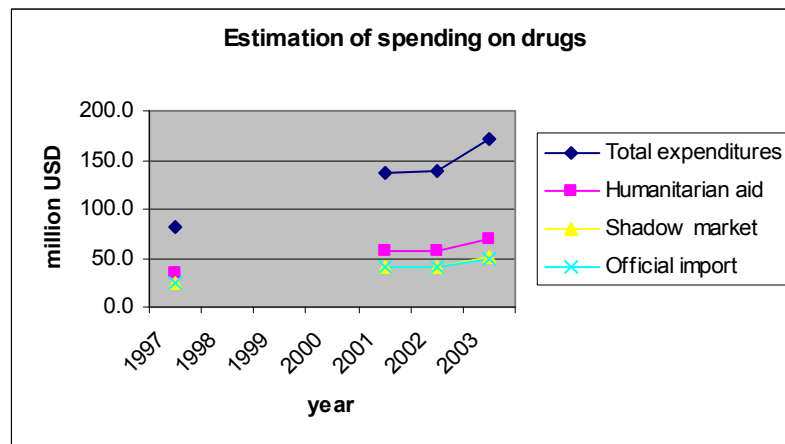
<sup>2</sup> USAID – unidentified paper yet from 1999

Based on recent figures<sup>3</sup> on import of drugs from the MOLSHA the following estimation diagram was derived (Picture 2):



Picture 2

Figures on current share of official import, shadow market and humanitarian aid were not obtained. If we apply structure of spending from 1997 to years 2001-2003 we come to the following figures in picture 3 that may serve as upper estimation of current capacity of drug market in Georgia.



Picture 3

Definitely these figures need verification and especially the estimation of volume of humanitarian aid should be refined.

## 2.2 Free drug provision

Coverage of drugs is very limited within current state and municipal programs. Following table gives a rough overview:

<sup>3</sup> The figures at disposal is total import of antibiotics in 2000-2003 and the share of import of antibiotics on the total official import

Type of drug	Amount in Lari	Comment
Vaccines for immunizations	800,000 in 2004	Some vaccines are supplied through UNICEF
Antirabic immunization (municipal programs)	890,000 in 2004	
Pharmaceuticals for oncological patients	500,000 in 2004	morphine sulphate(MST),morphin hydrochlorid
Pharmaceuticals for transplanted patients	450,000 in 2004	Several tens of patients with kidney transplants (cyclosporin)
Pharmaceuticals for patients with diabetes	program diabetes-3,392,000 program children and adolesc.diabetes-1,200,000 program diabetes melitus-250,000	300 patients with Diabetes Insipidus (desmpopressin) 15,400 patients Diabetes Mellitus (insulin)
Pharmaceuticals for TBC patients	3,100,000(not only for drugs)	izonyaside, rifampycin, DOT drugs- etambutol,streptomycin, pirazin amid
Psychiatry program	2,700,000 (not only for drugs)	Drugs against depression: Antipsychotic, Antidepressants, Antiepileptic, Neuroleptics etc (Haloperidol, Triptazine, Aminazine, Cyclodol, Carbamazepine, Diazepam, Amiltriptiline, Azaleptine, Etaperazin etc.) - per capita for drugs just 2 Lari monthly

The SUSIF pays also for an emergency set of drugs and medical materials that should be available in every PHC practice. The SUSIF pays 30 Lari monthly per one medical team. The list of drugs and medical materials including cost evaluation is in the Annex 7. The list is elaborated according valid legal regulations. The price of this set is evaluated to be 182 Lari annually. The State Ambulatory Program specifies slightly modified list-Annex 8. For cost studies a more suitable emergency set was used-its list and cost evaluation is in the Annex 9.

The state purchases special drugs reimbursed by the state programs directly and distributes these drugs via polyclinics or other health facilities that are engaged in the special state programs (for oncological, transplanted, TBC patients).

### **2.3 Legal status of drug provision in Georgia**

There is a Georgian Law on "Medication and Pharmaceutical Activities" that stipulates both the framework for pharmaceutical activities and drug provision in Georgia. This Law is supplemented by decrees of the Georgian Minister of Labour, Health and Social Affairs that specify some "operational" rules as it is for example prescription of drugs - see Decree 148/N on Prescription of Medications and Their Delivery and Decree 465/O on Transitory rules for approval of forms to prescribe substances subject to special control, medicine forms of these materials and combined medical preparations, their selection and prescription.

It can be derived from the legal acts mentioned above that there is an obligation to use approved forms of prescription with doctor's seal on drugs containing specific substances. Nevertheless; this legal obligation is generally not obeyed with exclusion of drugs containing with very specific substances (narcotics, etc.). The general practise is not to prescribe formally drugs not containing specified substances even in case of drugs that necessarily need doctor's consultation (e.g. antibiotics).

The lack of public coverage of drug expenditures is definitely one of the main reasons for such inappropriate set up as the inhabitants have to buy nearly all drugs by themselves.

## 2.4 Delivery of drugs

The network of pharmacies has been privatized in the past. A license from the MoLHSA is necessary to start the pharmaceutical activity. There is also a shadow market with drugs in Georgia, the nature and the mechanisms of the shadow market were not studied.

The network of pharmacies is definitely adequate or even excessive in Tbilisi. Nevertheless; the availability of drugs is questionable in rural and mountain areas.

## 3 Data foundation

The following method was used to obtain the data for the paper:

- Population based morbidity data (incidence-for acute cases and prevalence-for chronic illness) were obtained based on studies and audits done in the chosen Tbilisi polyclinics<sup>4</sup>.
- The number of episodes of each health problem treated by the PHC setting (1986, 1992, 1996, 2003, 2004) was recorded for which drug requirements are to be estimated.
- Decision what health problems are to be treated at PHC practice level was taken.
- Average standard treatment schedules agreed for each health problem were defined. The drug treatment schedules were developed after reviewing a large number of standard treatment manuals and consultations with people involved in primary health care-clinicians.
- Adjustment of the data was done to be based on the current (2003, 2004) drug consumption (requirements) and current prescribing pattern.
- Data (national, regional, local) on incidence and prevalence were expressed as rates per thousand of the population at risk.

The standard schedule of treatments consists of following items:

- The name of the health problem and ICD-10 number of the diagnosis it includes.
- The generic (mostly) name, dosage, form and strength of each drug to be used in the treatment.
- The average dose.
- The average number of doses per day
- The average numbers of days these doses are to be given.
- The total average quantity of each drug used for a standard course of treatment
- Price of drugs (wholesale and pharmacy)
- The prevalence of the health problem.
- Cost of drugs per thousands of inhabitants

The base data are in Annexes 1 and 2 for health problem of children up to 15 and in Annexes 4 and 5 for health problems of adults. The listed health problems should be relatively exhaustive representation of curative activity of PHC practices.

---

<sup>4</sup> The polyclinics associated with National Family Medicine Training Centre

## 4 Options for choice of publicly covered drugs

There are different options how to specify drugs eligible for public coverage:

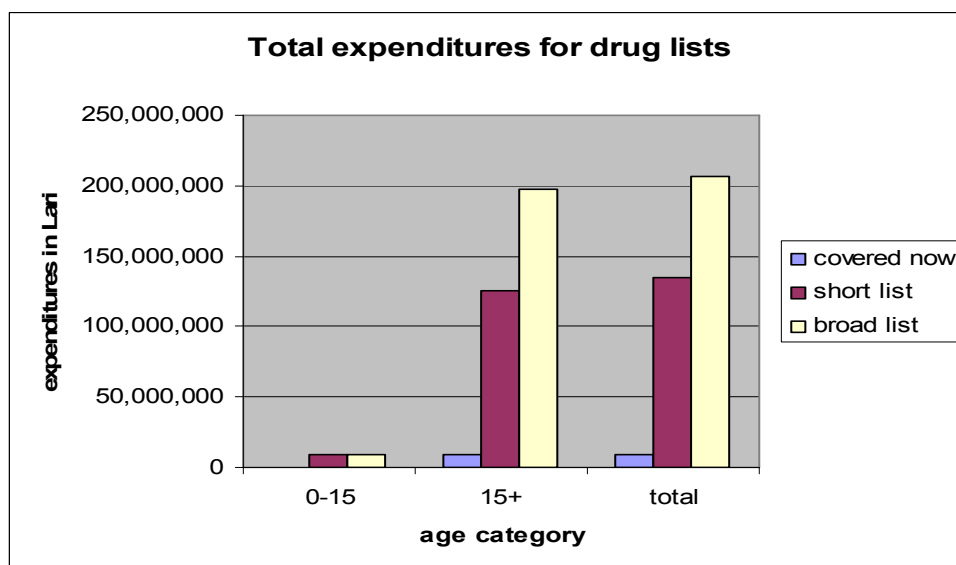
- list of essential drugs (relatively short, only several tens of items) (Macedonia, Croatia, and other)
- positive list of drugs eligible for coverage (Slovenia, Czech Republic and others)
- negative list of drugs not eligible for public coverage (e.g. Germany)

There are also several modifications of the taxonomy mentioned above as for example in Slovenia where both a positive drug list (approximately 1250 drugs) and so called intermediate drug list (approximately 350 drugs) are maintained. The lists differ by different coverage by the compulsory health insurance. The positive drug list has some 8000 items in the Czech Republic for example.

It is recommended to use very a limited list of essential drugs in Georgia. Two proposals for essential drug list were prepared as a starting point of discussion. The second one is an extension of the first one. Both are restricted to the drugs that could be prescribed by PHC doctors such that they don't include drugs for hospital care or drugs that should be prescribed by narrow specialists. We assume only one list for children up to 15. The first list consists of 33 items, the second one of 81 items and the children list has 34 items. For more detail on the composition of the lists and expenditures per drugs see Annex 3 for children up to 15 and Annex 6 for adults.

The following table and diagram shows total estimated expenditures<sup>5</sup> for both lists of drugs.

	0-15	15+	total
covered now	0	9,299,473	9,299,473
short list	9,084,464	125,815,867	134,900,331
broad list	9,084,464	198,052,771	207,137,235



Picture 4

<sup>5</sup> Expenditures are expressed in Lari. Margins of the pharmacies (20%) are included except for the drugs covered from public funds currently. There are bought directly by the state and it is presumed that margins don't apply in this case. It was assumed that 1 USD = 2 Lari



## 5 Options for pricing of drugs eligible for public coverage

### Determination of drug prices by the market

This is the simplest option. However, the state and the public purchaser lose 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<sup>6</sup>.

### 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 neighbouring countries (Slovenia<sup>7</sup>)
- drug prices are determined by a regular tendering process<sup>8</sup>. 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 than the reference price. Examples of such a system can be found in Germany<sup>9</sup>, Czech Republic<sup>10</sup> or in the Netherlands<sup>11</sup>.

---

<sup>6</sup> Martha Ann Holt International prescription drug cost containment strategies and suggestions for reform in the United States

<sup>7</sup> Jurij Fuerst Slovenia-Pricing and reimbursement of Pharmaceuticals

<sup>8</sup> 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.

<sup>9</sup> Martha Ann Holt International prescription drug cost containment strategies and suggestions for reform in the United States

<sup>10</sup> Michal Prokes Czech republic-Pharmaceutical Pricing and Reimbursement

<sup>11</sup> Tanisha Carino Striving for openness and transparency: The Netherlands's Drug Reimbursement System

## 6 Options for drug benefit schemes

There are several options for a drug benefit scheme that are assessed and evaluated:

- publicly supervised delivery of drugs at discounted prices
- public coverage of fixed percentage of price of all drugs on the list of essential drugs
- public coverage of full price of all drugs on the list of essential drugs with fixed co-payment of patients per pack (unit)
- public coverage of excess drug expenses above a specified limit incurred by a patient for an episode of illness
- public coverage of fixed percentage of excess expenses above a specified limit for an episode of illness
- public coverage of excess drug expenses above a specified limit incurred by a patient within specified time interval (per quarter of year, per year)

Each option is assessed from different perspectives, namely:

- What is impact on public funds?
- How does the option improve availability of drugs to population?
- What is a potential for misuse of the scheme?
- What is the manageability of spending from public funds?
- What is administrative complexity of the scheme?

### **6.1 Publicly supervised delivery of drugs at discounted prices**

There is no direct public coverage of drugs but public purchaser uses its purchasing power to ensure for the patients not by-passing the PHC level better conditions to obtain their drugs. Several approaches can be thought over, for example:

- the public purchaser negotiates on decrease of surcharges for specified drugs with pharmacies and distributors provided that the drugs are prescribed
- the public purchaser calls for a tender on specified drugs that will be subsequently delivered to patients with prescriptions through separate channels (selected pharmacies, special counters in selected pharmacies, special pharmacies operated by the public purchaser)

It is a question whether the first option might be stable in a long term perspective. Firstly the distributors and pharmacies may increase the price of the specified drugs on the market and to pretend that they give up of their margin. Another strategy may be to exercise a price shifting to not negotiated drugs.

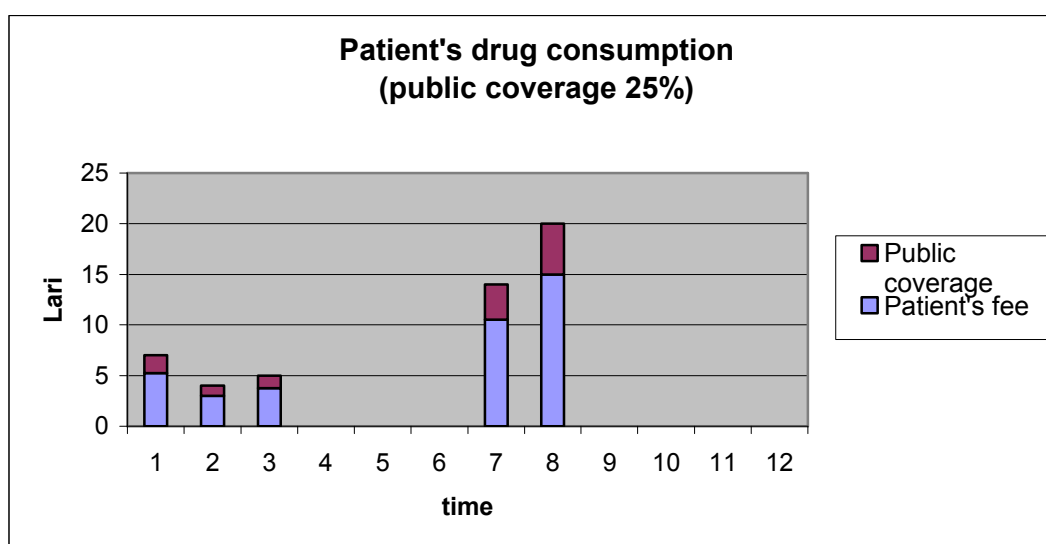
The second option requires alternative delivery channels to the current network of pharmacies. It may bring major distortions to free market development with hardly foreseeable effects in the future. There will be public expenditures associated with building up of an alternative delivery network.

Assessment of the option is summarized in the following table:

What is impact on public funds?	There is no impact on public funds.
How does the option improve availability of drugs to population?	Moderately as this scheme proportionally helps patients with both low and high expenses for drugs. The patients with high expenses still have high expenses.
What is a potential for misuse of the scheme?	There may be attempts to deliver discounted drugs also to non eligible patients (without prescriptions). It may result to gradual deterioration of the scheme.
What is the manageability of spending from public funds?	There is apparently no public spending.
What is administrative complexity of the scheme?	The scheme is relatively simple from the administrative point of view.

## 6.2 Public coverage of fixed percentage of price

This option presumes coverage fixed percentage for all drugs in the specified list of essential drugs from public sources (see illustrative example in picture 5<sup>12</sup>). It can be further elaborated in different directions whether to cover drugs for all inhabitants or only for selected groups of inhabitants.



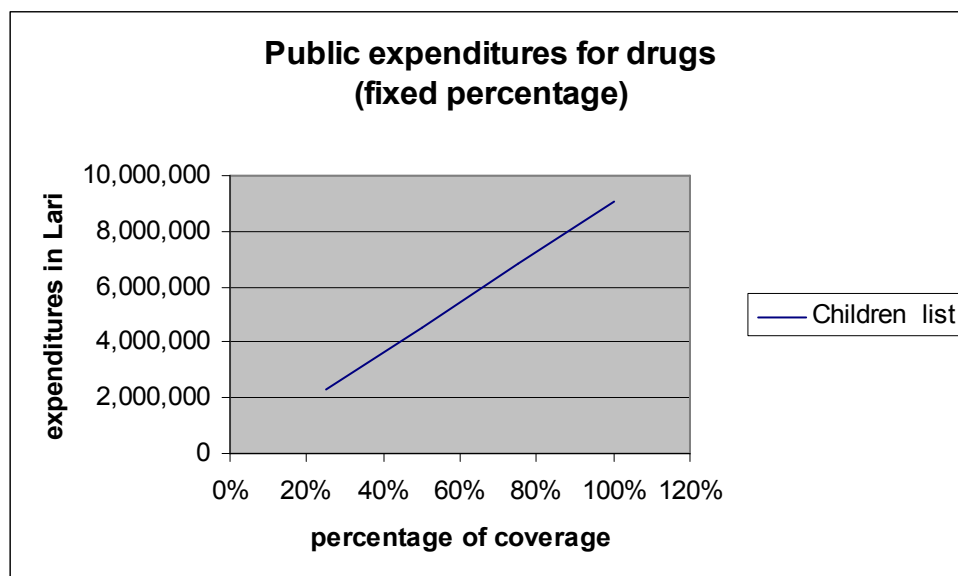
Picture 5

<sup>12</sup> The columns represent individual expenses for drugs throughout time

## Impact on public funds<sup>13</sup>

Method of calculation of impact on public funds is quite simple in this case. Simple percentage is applied for each used drugs. Expected coverage from the public sources dependent on different percentage rates is depicted in the following diagram for children up to 15 and for adults separately. Following diagram show annual volume of public expenditures:

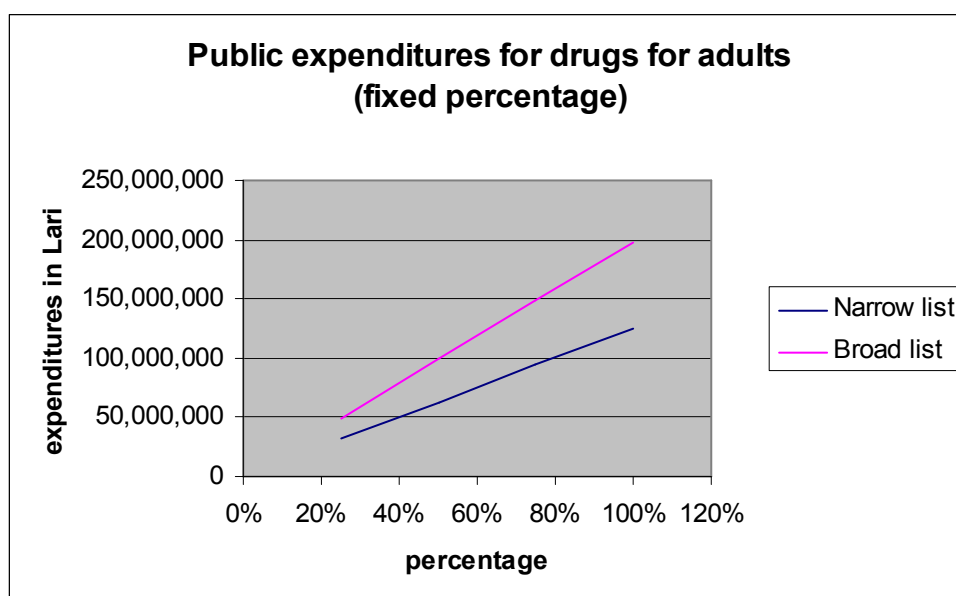
Percentage	25%	50%	75%	100%
Children list	2,271,116	4,542,232	6,813,348	9,084,464



Picture 6 (drugs for children)

Percentage	25%	50%	75%	100%
Narrow list	31,453,967	62,907,934	94,361,900	125,815,867
Broad list	49,513,193	99,026,386	148,539,578	198,052,771

<sup>13</sup> Drug expenditures are expressed in Lari per year



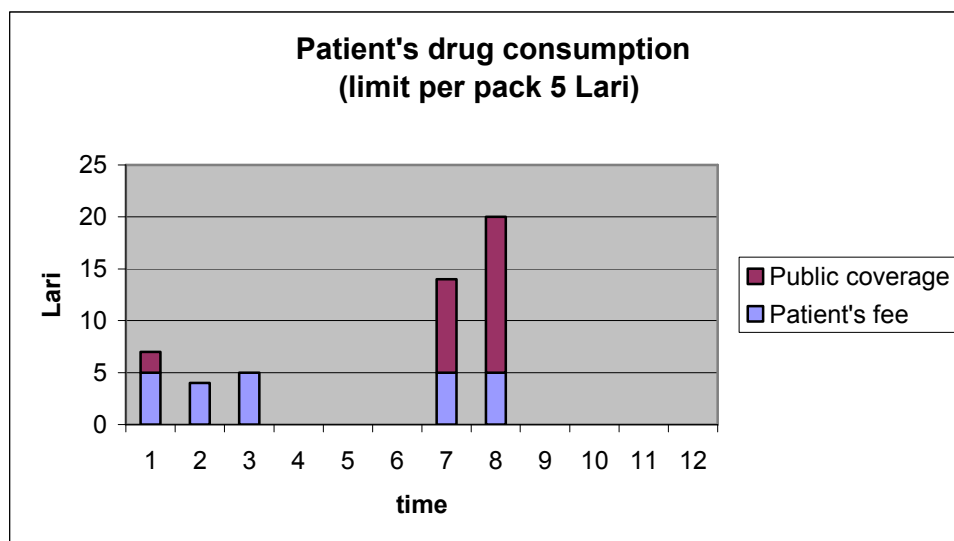
Picture 7 (drugs for adults)

Other assessment is reviewed in the following table:

How does the option improve availability of drugs to population?	Quite moderately as it proportionally equally support patients with small and high expenses for drugs. To alleviate problem of individual high expenses requires high expenditures of the public purchaser within this beneficiary scheme.
What is a potential for misuse of the scheme?	The scheme provides no great space for misuse. It is relatively simple and straightforward.
What is the manageability of spending from public funds?	The manageability may be problem as the public coverage applies to all prescribed drug (from the specified list of essential drugs) to all patient. The thread lies in big number of publicly covered prescriptions.
What is administrative complexity of the scheme?	The scheme is relatively simple and straightforward.

### 6.3 Coverage of price per pack above a specified limit

Within this scheme the patient pays fixed co-payment per package of drugs (alternatively per prescription) regardless of price of the drug (see illustrative picture 8). In case of lower price than is the co-payment the drug is free-of-charge for the patient. Paying higher co-payment for drugs priced less than the co-payment hardly makes sense because the doctors would advice the patients to buy such drugs on the free market.

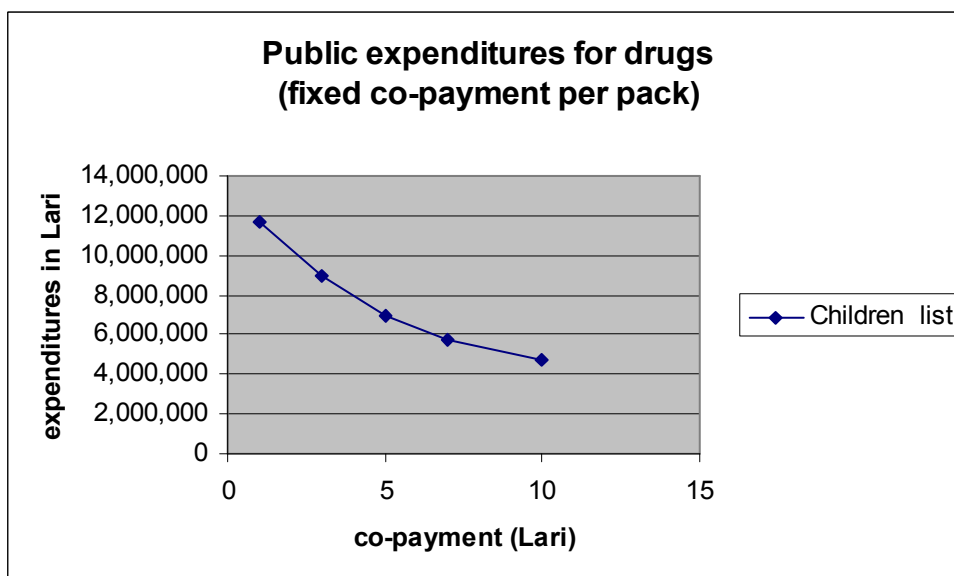


Picture 8

### Impact on public funds<sup>14</sup>

The next diagram shows expected annual volume of public coverage depending on different price limits (co-payments) for one pack of drug.

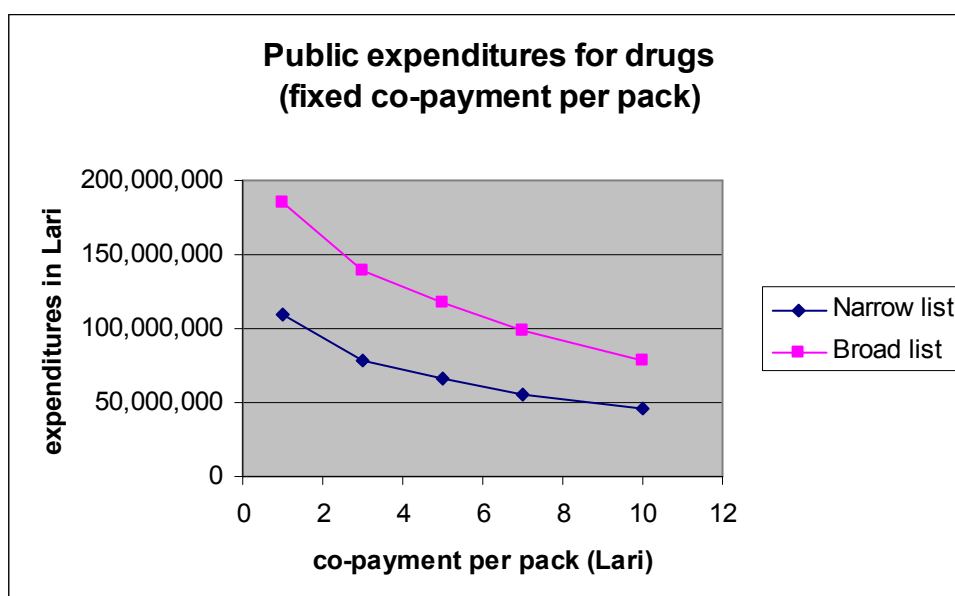
Co-payment(Lari)	1	3	5	7	10
Children list	11,711,652	8,965,500	6,947,940	5,787,972	4,698,696



Picture 9 (drugs for children)

Co-payment(Lari)	1	3	5	7	10
Narrow list	108,983,534	78,064,918	66,099,910	55,787,134	45,544,637
Broad list	184,504,366	138,932,381	117,403,829	98,737,426	78,504,653

<sup>14</sup> The following model was used: if the total dosage for one episode fits into one pack, the smallest one was chosen. If not the least number of packs was used.



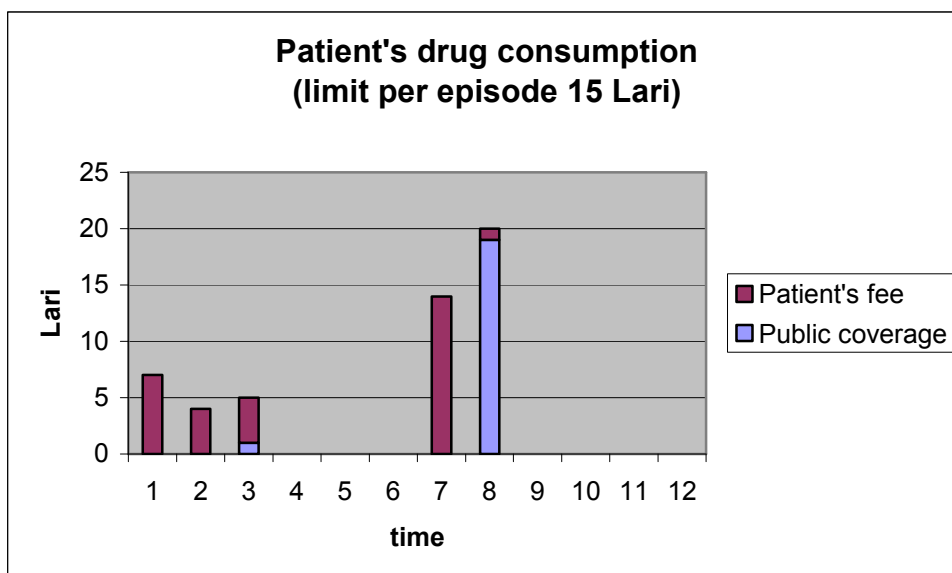
Picture 10 (drugs for adults)

Other assessment is reviewed in the following table:

How does the option improve availability of drugs to population?	Compared to the option 2 a bit better.
What is a potential for misuse of the scheme?	The scheme provides no great space for misuse. It is relatively simple and straightforward.
What is the manageability of spending from public funds?	The manageability may be problem as the public coverage applies to all prescribed drug (from the specified list of essential drugs) to all patient. The thread lies in big number of publicly covered prescriptions.
What is administrative complexity of the scheme?	The scheme is relatively simple and straightforward.

#### **6.4 Public coverage above a specified limit per disease episode**

The patient pays all drugs out-of-pocket up to a specified limit for one episode of treatment (see illustrative picture 11). Expenses above the limit are covered from the public funds. If the length of the treatment exceeds the defined time limit (quarter of a year, a year), the assessment base for public coverage is delimited by this time limit. Continuation of treatment is considered to be a new episode of treatment.

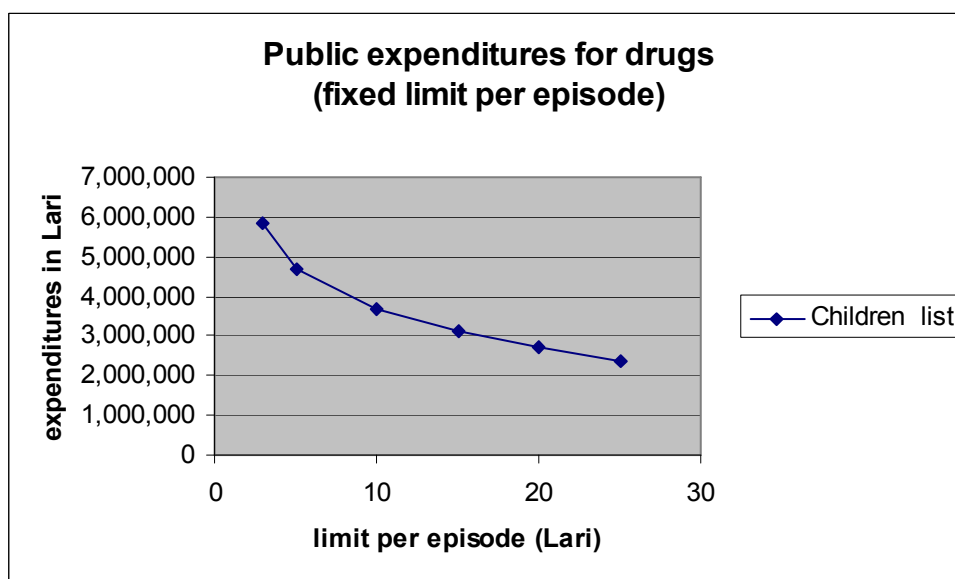


Picture 11

### Impact on public funds

The next diagram shows expected volume of public coverage depending on different expense limits per an episode of treatment.

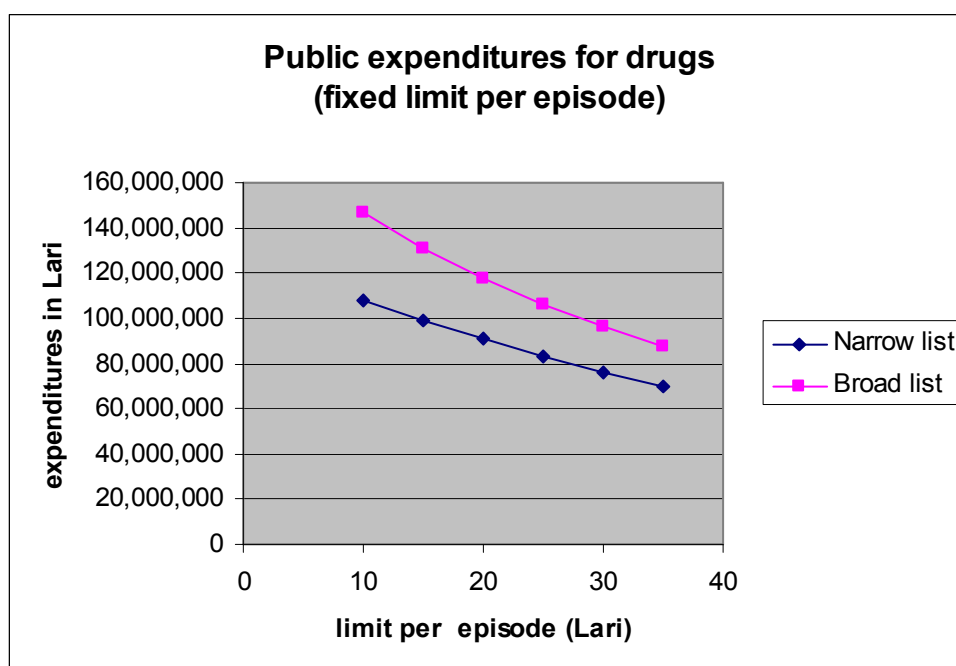
Limit(Lari)	3	5	10	15	20	25
Children list	5,833,721	4,658,995	3,664,508	3,105,133	2,699,196	2,367,666



Picture 12 (drugs for children)

Limit(Lari)	10	15	20	25	30	35
Narrow list	107,416,855	98,609,922	90,743,265	83,157,549	76,142,013	69,802,437
Broad list	146,347,094	130,507,700	117,208,595	105,984,047	96,231,647	87,384,311





Picture 13 (drugs for adults)

Other assessment is reviewed in the following table:

How does the option improve availability of drugs to population?	Relatively well as expenses for each episode of a disease are capped.
What is a potential for misuse of the scheme?	The scheme allows gaming with episode of treatment.
What is the manageability of spending from public funds?	The manageability may be better as the public purchaser will deal only with smaller number of episodes eligible for the public coverage.
What is administrative complexity of the scheme?	The scheme is complicated as all drugs have to be summed up for one episode. The reimbursement of the patient has to be done probably by the public purchaser.

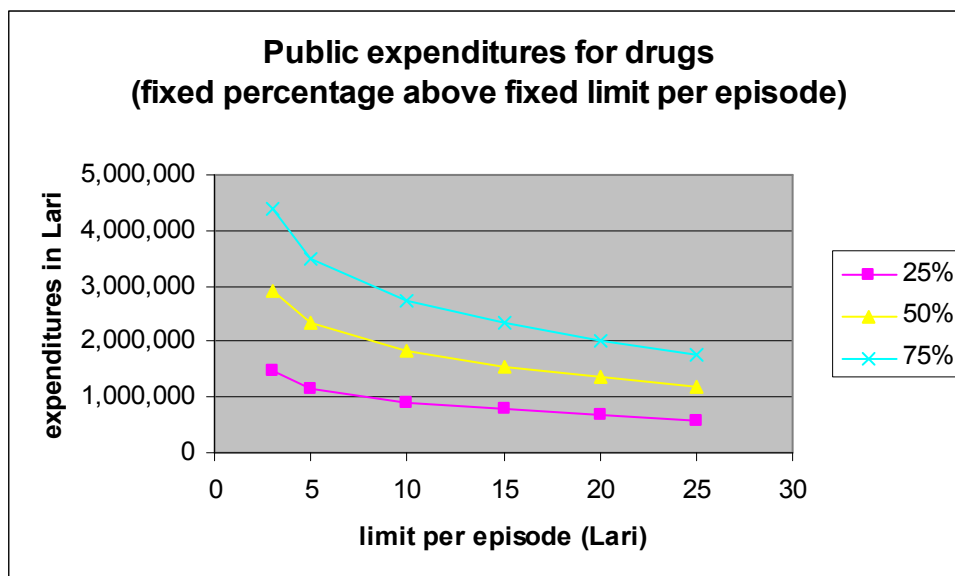
### 6.5 Public coverage by a fixed percentage above a fixed limit for an episode

This option is a combination of option 6.2 and 6.3. It offers to the public purchaser another lever how to limit expenditures of the public fund.

#### Impact on public funds

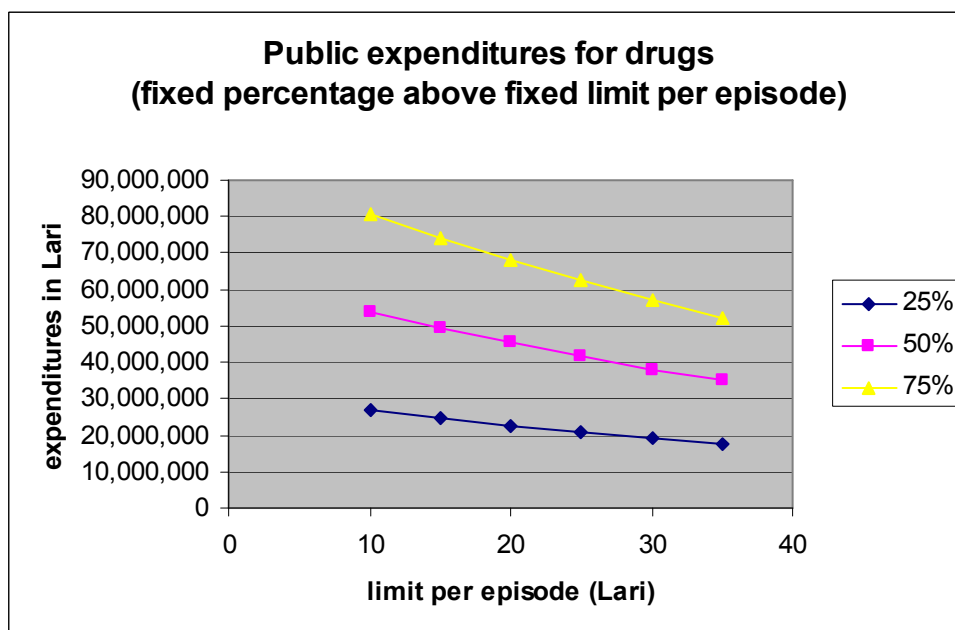
The next diagram shows expected volume of public coverage depending on different expense limits per an episode of treatment and percentages of coverage.

Limit(Lari)/percentage	3	5	10	15	20	25
25%	1,458,430	1,164,749	916,127	776,283	674,799	591,917
50%	2,916,860	2,329,497	1,832,254	1,552,567	1,349,598	1,183,833
75%	4,375,290	3,494,246	2,748,381	2,328,850	2,024,397	1,775,750



Picture 14 (drugs for children)

Limit(Lari)/percentage	10	15	20	25	30	35
25%	26,854,214	24,652,481	22,685,816	20,789,387	19,035,503	17,450,609
50%	53,708,428	49,304,961	45,371,632	41,578,774	38,071,006	34,901,218
75%	80,562,641	73,957,442	68,057,448	62,368,161	57,106,509	52,351,827



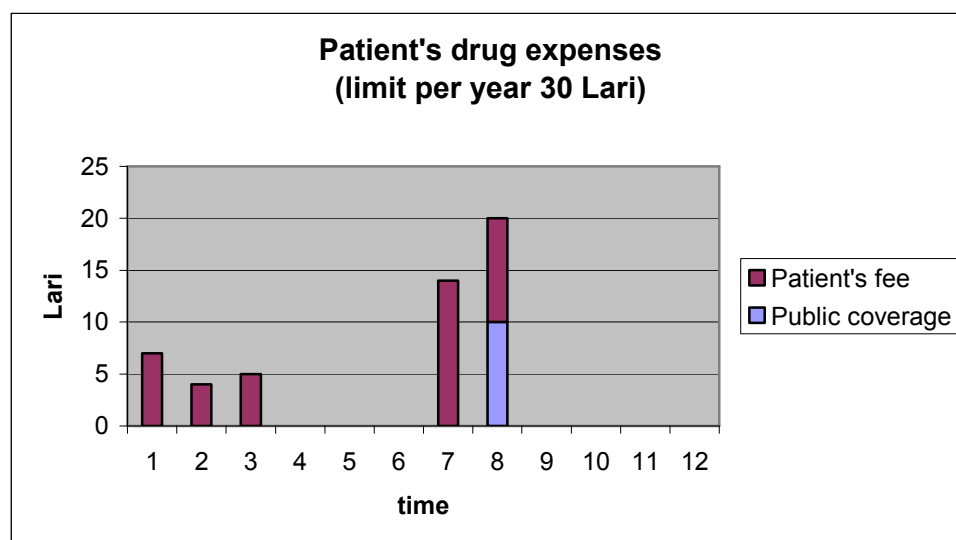
Picture 15 (drugs for adults, short list of drugs used)

Other assessment is reviewed in the following table:

How does the option improve availability of drugs to population?	It is worse compared to 6.4 as there is no absolute cap on drug expenses.
What is a potential for misuse of the scheme?	The scheme allows gaming with episode of treatment.
What is the manageability of spending from public funds?	The manageability is a bit better compared to 6.4 as the public purchaser has another control variable.
What is administrative complexity of the scheme?	The scheme is even a bit complicated than 6.4.

### 6.6 Public coverage above a specified limit per year

The patient pays the all drugs out-of-pocket up to a specified limit for one period of time-quarter of a year, a year (see illustrative picture 16). Expenses above the limit are covered from public funds.



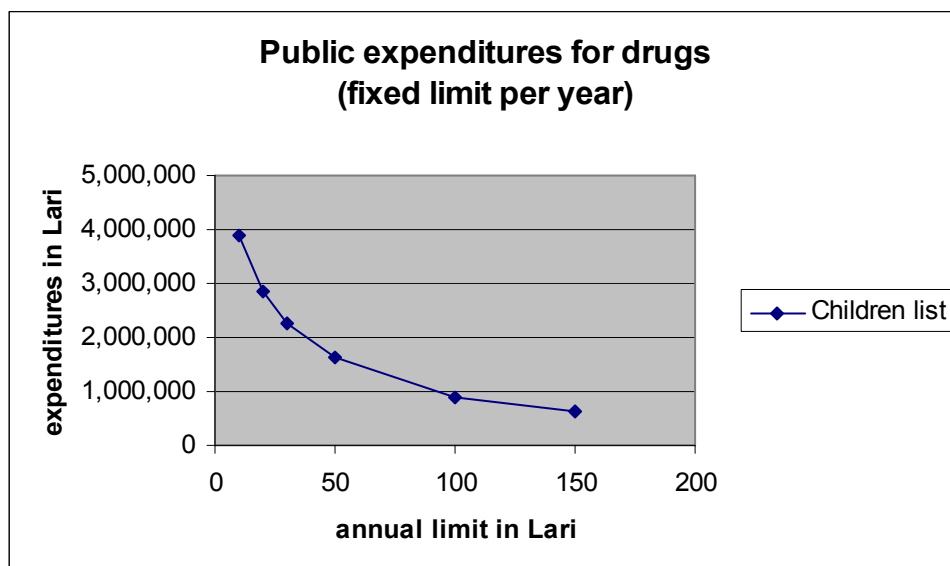
Picture 16

#### Impact on public funds<sup>15</sup>

The next diagram shows expected volume of public coverage depending on different expense limits per year.

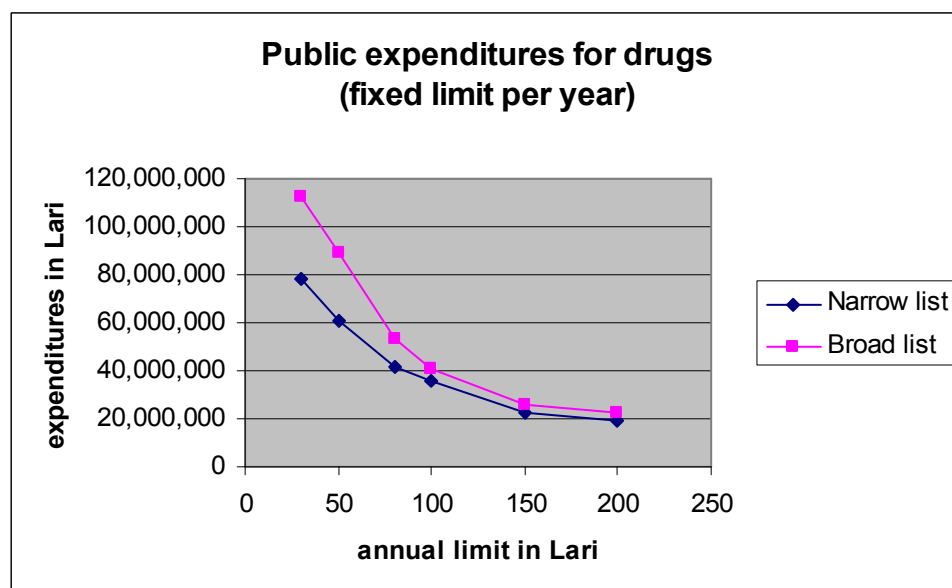
Limit(Lari)	10	20	30	50	100	150
Children list	3,873,767	2,848,547	2,267,634	1,631,478	878,748	625,392

<sup>15</sup> 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. Five independent modeling trials were done and the average was calculated and shown in the pictures above.



Picture 17 (drugs for children)

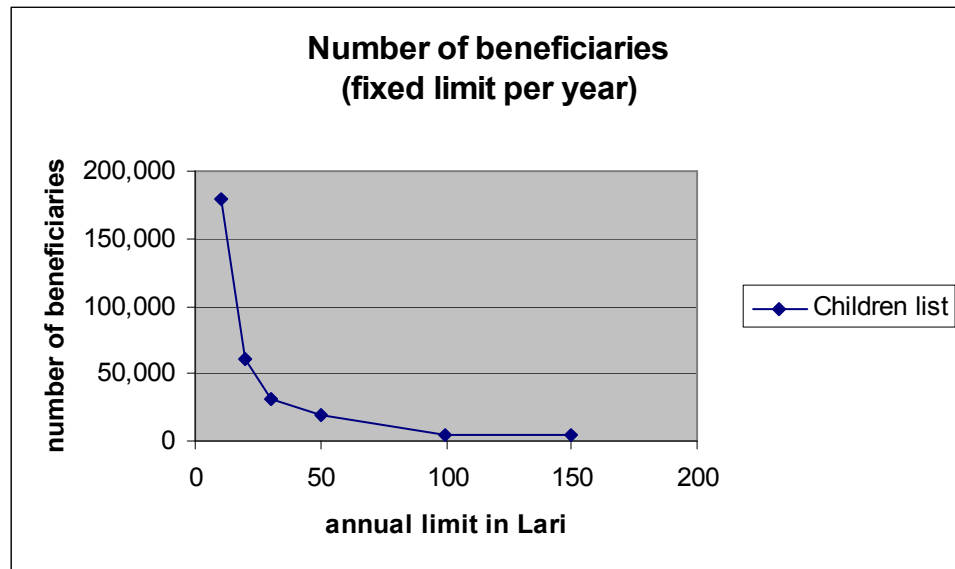
Limit(Lari)	30	50	80	100	150	200
Narrow list	78,189,542	60,434,993	41,402,106	35,868,770	22,667,777	18,851,544
Broad list	112,423,108	88,877,553	53,465,319	40,466,041	26,159,569	22,712,339



Picture 18 (drugs for adults)

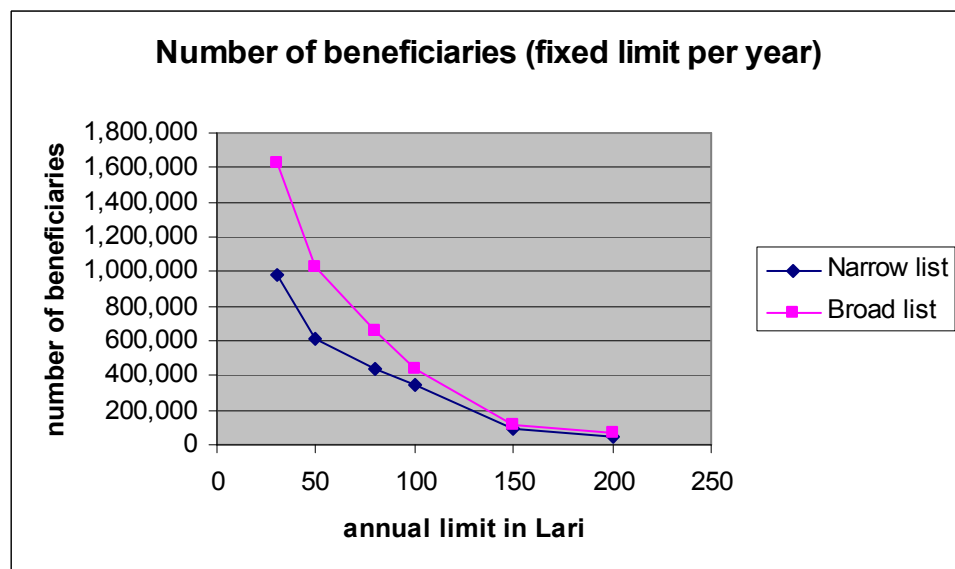
This option is selective and enables to reduce public expenditures to any pre-defined limit. It presumes involvement of the public purchaser in direct reimbursement of individual beneficiaries. Therefore estimation of number of patients eligible for reimbursement under different annual limits was calculated to bring the picture of possible administrative burden of the public purchaser.

Limit(Lari)	10	20	30	50	100	150
Children list	179,955	60,200	30,745	18,920	4,945	4,085



Picture 19 (drugs for children)

Limit(Lari)	30	50	80	100	150	200
Narrow list	983,926	615,416	438,213	348,773	89,483	49,063
Broad list	1,628,496	1,032,086	654,503	443,373	118,723	66,263



Picture 20 (drugs for adults)

Other assessment is reviewed in the following table:

How does the option improve availability of drugs to population?	Well, as there is an absolute cap of patient's expenses annually.
What is a potential for misuse of the scheme?	The scheme provides only limited space for

	misusing.
What is the manageability of spending from public funds?	The manageability is a bit better compared to 6.4 as the public purchaser has another control variable.
What is administrative complexity of the scheme?	The scheme is relative simple from administrative point of view.

## 7 Options for drug delivery schemes

There are several options for delivery of drugs to patients provided there is at least partial coverage by the public purchaser. The schemes differ by who delivers drugs to patients and who reimburses drugs (portion of price of drug covered by public sources). There is some dependence on drug benefit schemes (see chapter 6). Some drug delivery schemes fit better with chosen drug benefit schemes than other do. The listed options for the drug delivery scheme will be assessed from following points of view:

- What are the prerequisites for quality delivery of drugs to patients?
- What is availability of drug delivery to patients?
- What is the administrative burden associated with the drug delivery scheme?
- What is the financial burden associated with the drug delivery scheme?
- What is the risk of misuse by patients, doctors and pharmacists?
- How well fits the drug delivery scheme to the drug benefits scheme?
- How well could be controlled public spending on drugs?

We will investigate four options of drug delivery scheme in the following paragraphs:

**Option 1** – a doctor prescribes drugs to a patient, a pharmacy delivers drugs to the patient and the public purchaser reimburses pharmacy for delivered drugs.

**Option 2** – a doctor prescribes drugs to a patient, a pharmacy delivers drugs to the patient but the doctor reimburses the pharmacy. The doctor gets a pharmaceutical budget from the public purchaser to cover the public part of drug expenses.

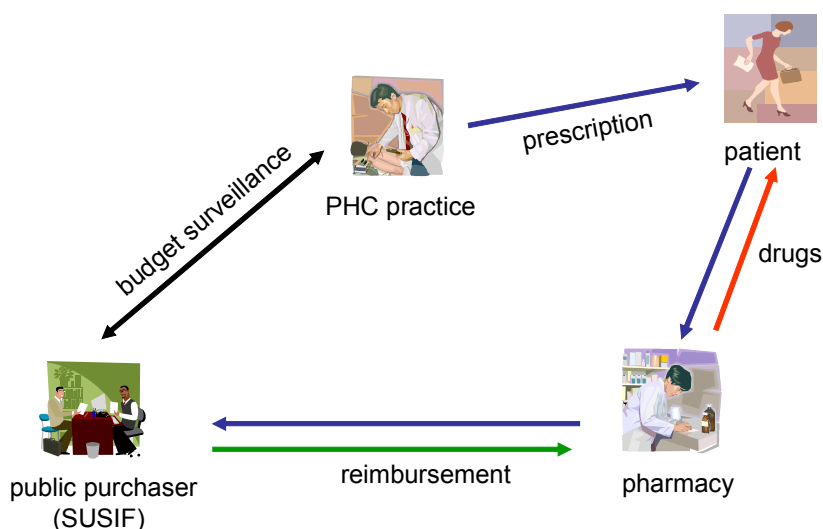
**Option 3** – a doctor prescribes drugs to a patient, a pharmacy delivers drugs to the patient, the patient pays the full price to the pharmacy and asks subsequently the public purchaser for reimbursement for publicly covered part of the price.

**Option 4** – a pharmacy delivers drugs to a doctor as a bulk delivery, doctor pays the pharmacy for the delivery, the doctor delivers to a patient necessary drugs from his/her deposit, the patients pays to the doctor the price without deducted public coverage, the public purchaser provides a pharmaceutical fund to the doctor to cover the public part of drug expenses.

## 7.1 Pharmacy delivers and public purchaser reimburses the pharmacy

The scheme is as follows: a doctor prescribes drugs to a patient; the patient goes to any pharmacy contracted by the public purchaser. The pharmacy delivers the prescribed drugs to the patient; the patient pays the price of drugs minus the public coverage according to the chosen drug benefit scheme. The pharmacy invoices the public purchaser for reimbursement of public coverage for delivered drugs. The public purchaser monitors spending on drugs for the doctor and in case of excess spending it acts according to the contract with the doctor<sup>16</sup>.

The following picture<sup>17</sup> shows schematically the flows of documents, money and drugs.



Picture 21

The scheme assumes that the pharmacies will be also contracted by the public purchaser to ensure common invoicing disciplines and to eliminate disputes as much as possible. The public purchaser may to contract only subset of pharmacies on the market to ensure better price conditions for patients and for him.

The following table provides assessment of the option.

<sup>16</sup> It is very important to monitor prescription patterns and drug expenses for each medical team. A virtual budget for drug expenses should be created for each contracted PHC practice that reflects number and profile of registered population. In case of excess of the budget different measures can be taken. The first choice is to analyze the reasons for overrunning of the budget. The second choice may be in reduction of a proportional part of income of the medical team.

<sup>17</sup> 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

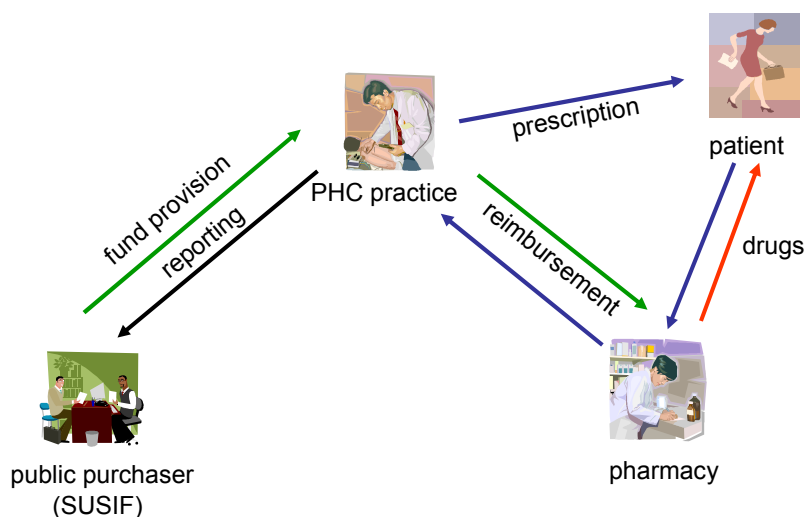
What are the prerequisites for quality delivery of drugs to patients?	Good, as drugs are deposited and delivered by qualified pharmaceutical personnel and drugs are deposited in prescribed manner in the pharmacy.
What is the availability of drug delivery to patients?	Depends on the network of contracted pharmacies. Definitely good in urban areas, problems may be in rural areas and definitely will be in mountains areas.
What is the administrative burden associated with the drug delivery scheme?	The administrative burden is on the interface between a pharmacy and the public purchaser. It is moderate. Each contracted pharmacy has to introduce the system of invoicing of the public purchaser.
What is the financial burden associated with the drug delivery scheme?	There are some investments on the side of the pharmacy (computers, invoicing programs) that can be used for normal operations as well. The public purchaser has to invest into control system for invoices from pharmacies. It has also deposit the prescriptions (either on optical media or in true paper archive). The price of drugs comprises the margin (about 20%) of the pharmacy.
What is the risk of misuse by patients, doctors and pharmacists?	A doctor and a pharmacy may conspire to prescribe drugs for persons not aware of it and to substitute for them ware for personal use of the doctor. The public purchaser will reimburse the drugs unconsciously.
How well fits the drug delivery scheme to the drug benefits scheme?	Fits well to delivery schemes that allow calculation of the public coverage based on a single prescription (see 6.1 – 6.3).
How well could be controlled public spending on drugs?	Not too well as for the doctor and for the pharmacy there is a payment by “third party”. The control is partially accomplished by patient’s cost sharing.

## ***7.2 Pharmacy delivers and the doctor reimburses the pharmacy***

The scheme is as follows: a doctor prescribes drugs to a patient, a pharmacy delivers drugs to the patient but the pharmacy invoices the doctor and he/she reimburses the pharmacy directly. The doctor gets a pharmaceutical fund from the public purchaser to cover the public part of drug expenses. The doctor reports on usage of the pharmaceutical fund to the public purchaser.

The picture shows schematically the flows of documents, money and drugs.





Picture 22

The following table provides assessment of the option.

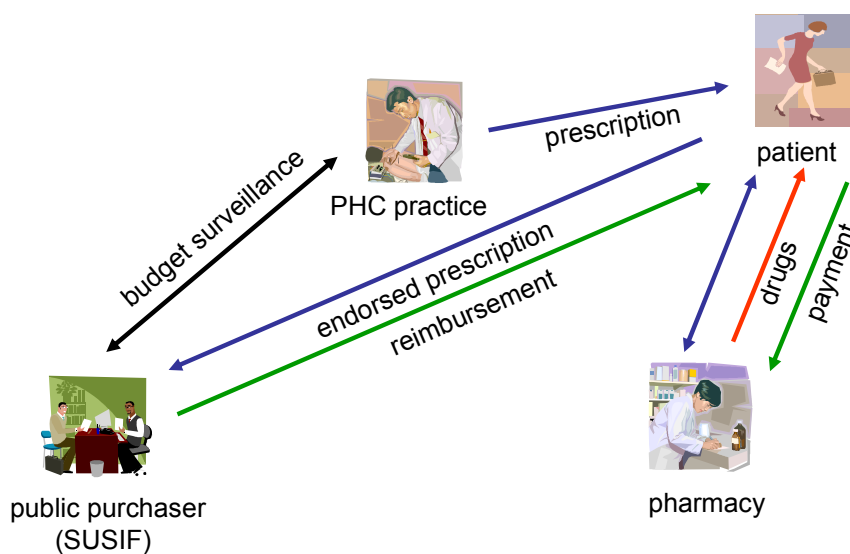
What are the prerequisites for quality delivery of drugs to patients?	Good, as drugs are deposited and delivered by qualified pharmaceutical personnel and drugs are deposited in prescribed manner in the pharmacy.
What is the availability of drug delivery to patients?	Depends on the network of pharmacies that are allowed to invoice his/her doctor.
What is the administrative burden associated with the drug delivery scheme?	The administrative burden is on the interface between a pharmacy and the doctor. It may be exceptional high for the doctor unless only small number of pharmacies is allowed to invoice him/her.
What is the financial burden associated with the drug delivery scheme?	There are some investments on the side of the pharmacy (computers, invoicing programs) that can be used for normal operations as well. The doctor has also to invest into control system for invoices from pharmacies. The price of drugs still comprises the margin (about 20%) of the pharmacy.
What is the risk of misuse by patients, doctors and pharmacists?	A doctor and a pharmacy may conspire to prescribe drugs for persons not aware of it and to deliver instead drugs for the patient items for personal use of the doctor. The doctor may hide such fraudulent expenses in his/her pharmaceutical budget.
How well fits the drug delivery scheme to the drug benefits scheme?	Fits well to delivery schemes that allow calculation of the public coverage based on a single prescription (see 6.1 – 6.3). It may also fit to “aggregated” schemes (6.4-6.6) but on account of higher administrative burden of the

	doctor.
How well could be controlled public spending on drugs?	Better than option 1 as the doctor directly holds the pharmaceutical fund <sup>18</sup> .

### 7.3 Pharmacy delivers and the public purchaser reimburses the patient

The scheme is as follows: a doctor prescribes drugs to a patient, a pharmacy delivers drugs to the patient, the patient pays the full price to the pharmacy, he/she gets the endorsed prescription from the pharmacy back and he/she asks subsequently the public purchaser for reimbursement for publicly covered part of the price. The public purchaser monitors spending on drugs for the doctor and in case of excess spending it acts according the contract with the doctor.

The picture shows schematically the flows of documents, money and drugs.



Picture 23

The following table provides assessment of the option.

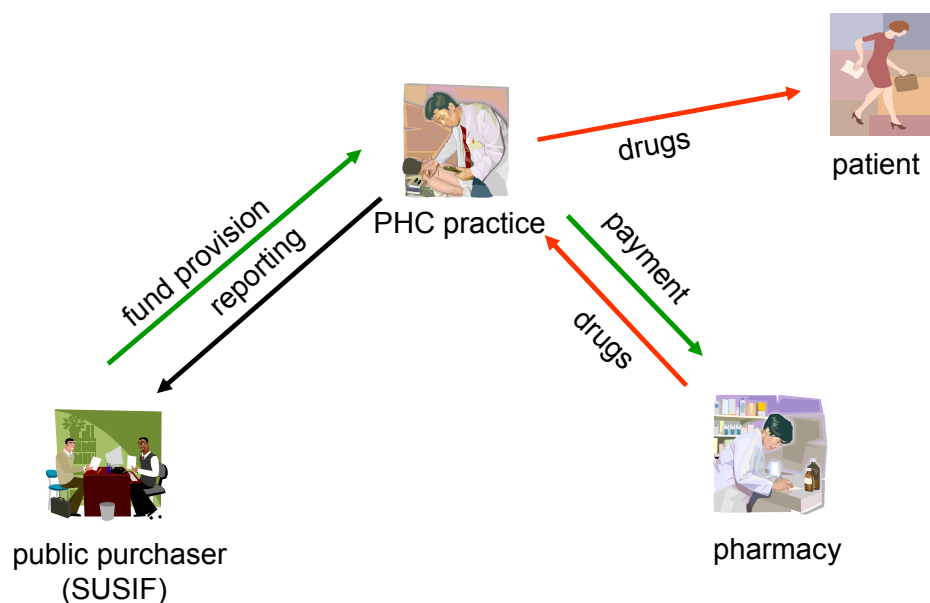
<sup>18</sup> Rules for management of the pharmaceutical fund must be specified in the contract between the public purchaser and the doctor. It must be specified what happens in case of savings in the pharmaceutical fund (give savings to the public purchaser back, retain the savings for future, use it for the sake of practice), how can the doctor ask for increase of the fund in case of exhaustion of the fund and how the doctor has to report on the expenditures from the fund. It is very important to monitor prescription patterns and drug expenses for each medical team also in this option. In case of exhausting of the fund similar measures can be taken as in the option 1.

What are the prerequisites for quality delivery of drugs to patients?	Good, as drugs are deposited and delivered by qualified pharmaceutical personnel and drugs are deposited in prescribed manner in the pharmacy.
What is the availability of drug delivery to patients?	Depends on the network of all pharmacies. Definitely good in urban areas, problems may be in rural areas and definitely will be in mountains areas.
What is the administrative burden associated with the drug delivery scheme?	The administrative burden is on the side of the patient and on the side of the public purchaser. It is inconvenient to the patient to ask money back from the public purchaser. The public purchaser on the other hand has to handle plenty of people personally.
What is the financial burden associated with the drug delivery scheme?	There investments on the side of the public purchaser to create network of contact places for patients. The price of drugs still comprises the margin (about 20%) of the pharmacy.
What is the risk of misuse by patients, doctors and pharmacists?	It is a bit less compared to other options as for a plot all three side are needed: a doctor, a pharmacy and a patient.
How well fits the drug delivery scheme to the drug benefits scheme?	Fits well to all schemes.
How well could be controlled public spending on drugs?	Comparable to option 1.

#### **7.4 A doctor delivers and the public purchaser reimburses the doctor**

The scheme is as follows: a pharmacy delivers drugs to a doctor as a bulk delivery, doctor pays the pharmacy for the delivery, the doctor delivers to a patient necessary drugs from his/her deposit, the patients pays to the doctor the price without deducted public coverage, the public purchaser provides a pharmaceutical fund to the doctor to cover the public part of drug expenses.

The picture shows schematically the flows of documents, money and drugs.



Picture 24

The following table provides assessment of the option.

What are the prerequisites for quality delivery of drugs to patients?	May be questionable, depends whether in the doctor is able to ensure fulfillment of prescribed conditions for depositing of drugs. The problem of unused drugs has to be solved in such arrangement.
What is the availability of drug delivery to patients?	Very good in all areas as the patient gets his/her drugs at the spot.
What is the administrative burden associated with the drug delivery scheme?	The administrative burden is on the side of the doctor that has to run similar agenda as the pharmacies.
What is the financial burden associated with the drug delivery scheme?	There investments may be on the side of the doctor to ensure appropriate deposit and security of the drugs. The price of drugs might not comprise the surcharge (about 20%) of the pharmacy as the doctor can offtake drugs directly from distributors.
What is the risk of misuse by patients, doctors and pharmacists?	Misuse by the doctor is easier than in other options as conspiracy with the pharmacist is not necessary.
How well fits the drug delivery scheme to the drug benefits scheme?	Fits well all delivery schemes.
How well could be controlled public spending on drugs?	Comparable to option 2.

## 8 Options for public or publicly assisted funding

We have discussed in the preceding chapters options for drug benefits schemes and their costing based on different set up of the input parameters. Now we should look for financial sources for public coverage of cover patients drug expenses and/or assess options for state involvement in coverage of drug expenses under supplementary insurance schemes that are based at least partially principles.

There are different options for state engagement in the field of drug coverage:

- the state can increase public funding of the PHC to accommodate drug expenditures incurred within chosen drug benefit scheme
- the state can shift a portion of public funds from reimbursement of PHC providers to coverage of drug expenditures. Shifted funds would have to be substituted by increase of patient's co-payments
- the state can manage nation-wide supplementary insurance scheme for coverage of drug expenses
- the state can create favourable conditions for mutual insurance funds including supervision of their activities and stability

Some involvement of the state is urgently needed as without a drug component the BBP for the PHC is not too much attractive for the population and the danger of by-passing or not using the PHC level at all persists which would undermine achievements of the PHC reform. On the other hand there might be a remarkable gap between current drug expenditures and the level of drug expenditures that could be achieved by more extensive public coverage. It is known that drug expenditures can exhaust any public funds at disposal unless there are efficient cost containment mechanisms in place.

Options for state involvement in drug coverage are briefly discussed in the following paragraphs.

### **8.1 Increase of public funding**

This is the most straightforward option provided the state budget or the social funds can afford it. It is beyond the scope of this paper to assess feasibility of the option from the fiscal point of view.

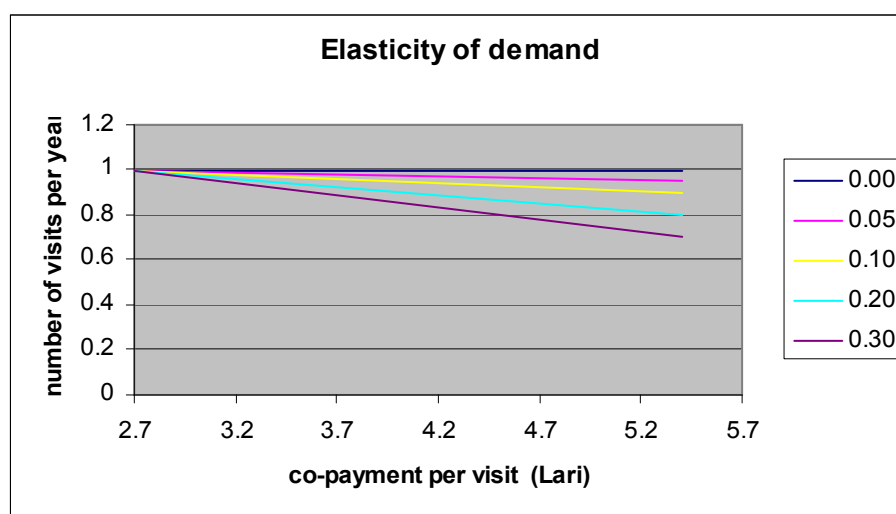
According the calculations presented in the chapter 3 the public coverage of drug expenses may vary between 0 and 160 million Lari annually dependent on the drug benefit scheme and the set up of parameters of the chosen scheme. It should be noted that this figure is based on the current price estimates of drug therapies and the prevalence data at disposal (see Annexes 2 and 5). The figure may even change with non avertable penetration of new drugs and new forms of drugs that will affect the essential drug list in medium and/or long term perspective. The impact of such development has to be assessed in future.

## 8.2 Shift of public funding from PHC providers to drug expenses

In case there is no chance to cover the chosen drug benefit scheme by additional public funds the reallocation of the public funds for the PHC is the second choice.

Risk of the option consists in low level of public funding of the PHC providers at present. It seems that for desirable funding of the PHC providers in Georgia it is necessary to get out additional money from the patients<sup>19</sup>. According to the calculations<sup>20</sup> about 8 100 Lari annually are at disposal for public funding of a single(solo) PHC practice whereas some additional 5 600 Lari annually are necessary to bring funding of the practice to the desirable level. It should be noted that estimated 8100 Lari are for an optimized network of PHC providers in Georgia but this is not the case now. Current funding of one medical team (equivalent of a solo practice) is about 5 000 Lari annually. That makes the situation even worse. Additional 5 600 Lari required to cover the funding gap result in co-payment about 2.7 Lari per visit (for an optimized network of PHC providers).

If we shift some amount of public funding from PHC providers to funding of drug expenses we have to increase patient's co-payments in order to keep the funding of the PHC practices at the sustainable level. It may have an adverse effect on number of visits as some patients may be discouraged from visiting his/her PHC doctor. The elasticity of demand depicts the relation between the price of a service and the demand for the service<sup>21</sup>. If the elasticity is 0 there is no dependence of the number of visits per inhabitant on the amount of the co-payment. If the elasticity is 1 there is equal percent decrease of number of visits as there is percent increase of co-payment. We will assume a linear functionality for simplicity<sup>22</sup>. We start from the initial assumption that for co-payment 2.7 Lari there will be approximately one curative visit per inhabitant annually.



Picture 25

<sup>19</sup> Jiri Nemeč Options for financing of PHC in Georgia, GVG, January 2005

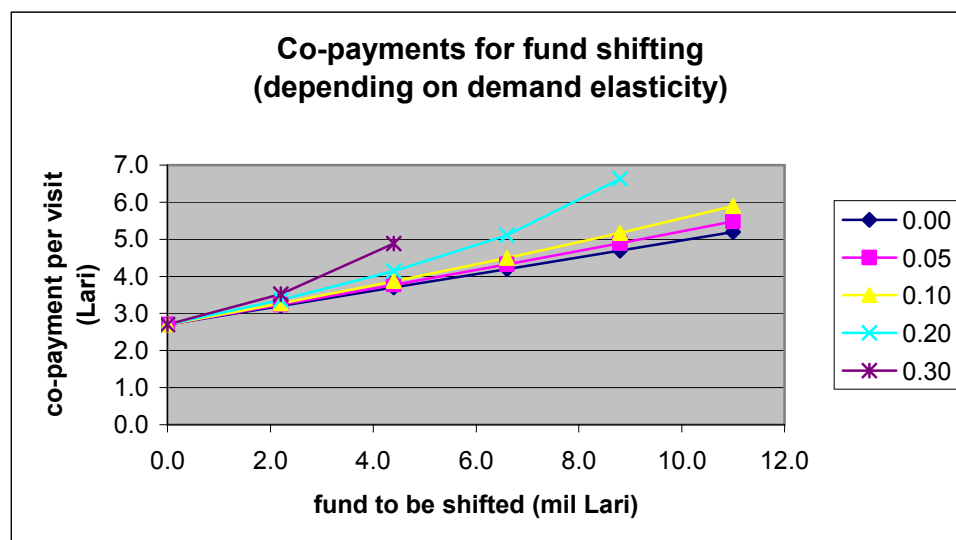
<sup>20</sup> Jiri Nemeč Proposals for PHC reform in Georgia, GVG, March 2005

<sup>21</sup> We will define demand elasticity as a ratio of relative decrease of demand and relative increase of price:

$$\text{Elasticity} = \frac{(\text{decrease of number of visits} / \text{number of visits in initial state})}{(\text{increase of co-payment} / \text{co-payment in initial state})}$$

<sup>22</sup> Usually the demand curve is a bit dropped.

The following diagram shows dependence of co-payments to be paid by patients on volume of public funds shifted out the funding of the PHC providers. The dependence relation is depicted for different elasticity of demand indexes.



Picture 26

The diagram shows that shifting of funding may have very negative effect on co-payments. If we want to shift some 8-10 million Lari, the co-payment should climb to some 6-8 Lari even with very moderate elasticity of demand<sup>23</sup>. Moreover, as the share of public funding decreases the PHC practices become more dependent on income out of patients and more vulnerable to fluctuation of this income. The PHC practices become also less controllable by the public purchaser. Therefore, the option of shifting public funding out of PHC providers towards drug expenses can be used only to a very limited extend. in the current situation in Georgia.

### 8.3 Voluntary insurance schemes

The basic principle of national health insurance scheme (it doesn't matter whether exercised by social insurance or health national services) is solidarity between rich and poor and between ill and healthy that enables to pool financial resources and to ensure access to health care across all classes in the society. It is recommended not to abandon such objective also in the Georgian context. If there is for some reasons short-term or medium-term lack of financial or organizational capacities to achieve relative equity of access to health care other substitutive arrangements have to be sought.

Besides classic private health insurance adjusting premium rates to individual's health record - and that would be probably not affordable for the majority of the Georgian population - there are mutual or supplemental insurance schemes as a second priority solution at disposal.

These schemes usually do not rely on the principle of solidarity between rich and poor but they can ensure the principle of solidarity between healthy and ill people at least.

Supplemental or mutual health insurance scheme may be arranged on national or regional and/or municipal level- so called micro insurance schemes. The basic principle behind such schemes is that enrolees pay regularly and voluntarily a flat insurance premium that has to cover

<sup>23</sup> The dependence of the co-payment on the volume of the fund to be shifted out is not linear as you can see in the picture



expenses of health care incurred in the framework of defined package of benefits plus administrative and acquisition costs.

The critical precondition for sustainability of such schemes is to acquire a critical mass of enrollees. It enables to cut share of administrative costs to an affordable level and better pooling of financial resources. A principal threat to sustainability of such schemes is that if they operate in poor areas, they can therefore accumulate very limited funds although medical needs are the same or even higher compared to rich areas.

The preferable choice would be to run supplemental or mutual health insurance scheme on nationwide basis. Such scheme may be perceived to be too far from the population especially in rural areas that may result in high level of distrust. The micro insurance schemes organized around communities are in more favourable position in respect to trust or understanding of population but on the other hand they suffer from low level of membership.

All such voluntary schemes face the problem of adverse selection and high drop-out rates. The adverse selection means that people with higher probability to use health services will seek to obtain insurance policy more often and also will show lower drop-out rates. It further hampers the sustainability of such micro insurance schemes that have to be supported very often by donor's subsidies.<sup>24</sup>

## 9 Conclusions and recommendations

The provision of drugs under at least partial public funding seems to be one of most important prerequisites for the success of the PHC reform. Current public funding of drug expenses is focused only to limited groups of chronically ill people. The majority of drugs is acquired individually and without any prescription of a doctor. According to different households surveys there are a lot of households in Georgia that can afford proper medication only on account of dramatic impact on their standard of living or not at all.

The state may motivate inhabitants not to by-pass the PHC level by enforcing the policy of prescribing drugs that shouldn't be taken without a medical advice. In circumstances where nearly all drugs would be bought by patients themselves such measure can be hardly implemented.

It is desirable to supplement such negative incentives by some positive ones as it is partial public coverage of drug expenses and to make the BBP in the PHC more attractive. If we think within some 30million Lari annual financial envelope for public coverage for drug expenses we can derive several proposals from previous calculations.

It can be derived from the calculations that the potential for children up to 15 are moderate under described protocols of drug therapy. It seems that it might be within reach of public funds to compensate for drug expenses for children either fully or with small co-payments per pack or low coinsurance (say 25 percent out-of-pocket payments, 75 percent of public coverage). It will result according our calculations into some additional 6.8 million Lari of public spending. It should be affordable within current public financial envelope for the PHC in Georgia. In the worst case it can be financed by relatively small fund shifting (see 8.2) and moderate increase of official user's co-payments.

There is a different case for adults. Their drug expenses would climb to some 130-210 million Lari annually depending on the list of reimbursed drugs. Flat benefit schemes (fixed percentage, fixed co-payment) seem to be out of reach of current public funds for health care. More selective benefit scheme is advisable such as public coverage of annual individual expenses above the predefined limit (150-200 Lari per year).

Generally such selective schemes may open some possibilities for unfair behaviour and should be accompanied with strengthening of some administrative procedures (obligatory

---

<sup>24</sup> David M.Dror and Alexander S. Preker Social Re Insurance, World Bank and ILO publication



prescriptions of covered drugs, audits done by the public purchaser etc.) and careful choice of the drug delivery scheme. One of the options that may be considered as a first choice for the initial period may be direct reimbursement of patients for drug expenses by the public purchaser although it would result in a need of moderate strengthening of public purchaser's capacities.

Anyway the issue of drug coverage shouldn't be neglected in ongoing discussion on PHC reform and it was an objective of this paper to bring some structured information as input to the discussion. Hopefully the objective will be met.

**Annexes** (in a separate paper)