FINANCING OF THE HEALTH CARE SYSTEM IN THE REPUBLIC OF ARMENIA IN THE PERIOD OF 1999-2001: PERSPECTIVES FOR IMPROVEMENT

Master of Public Health Thesis Project Utilizing Problem Solving Framework

HASMIK HARUTYUNYAN
MPH Candidate

College of Health Sciences
American University of Armenia

Primary Advisor: Robert McLean, PhD
Secondary Advisor: Varduhi Petrosyan, MS, PhD Candidate

Yerevan, Armenia

October 2003

Abstract

In recent years there has been a sharp increase in interest in how the health sector should be financed in high as well as middle and low income countries.

The main sources of mobilizing resources for health services are taxation revenues, social health insurance contributions, private actuarial insurance premiums, and out-of-pocket payments. The first two sources (state budget and social insurance contributions) are considered to be public systems regulated and justified by appropriate legislation, while the third and the fourth (private insurance premiums, direct payments) are private and voluntary.

Under continuing pressure to contain costs, increase efficiency, and raise service standards, health policy makers have introduced a range of changes to health care in the quest for improved performance. A further concern has been the desire to ensure access to health care of various groups on an equitable basis.

The issues and development trends present in heath sector financing of the Republic of Armenia in the last decade have brought about a situation where access to health care, has declined dramatically, primarily due to economic factors. At present, less than 10US$ per capita of public financing is available for health services annually and official public sources for health account for less than 25% of estimated health care expenditures; the rest coming largely from under-the-table payments directly from patients to health care professionals. Increased incidence of informal out-of-pocket payments has created a serious financial barrier to essential health care services, in particular for the poor and the sick. The situation is aggravated by excess capacity of deteriorating hospital and polyclinic infrastructure and unbalanced supply of human resources.

The above mentioned deficiencies have led to an increasing ineffectiveness of the national health services in producing good health and possible negative impact on health status indicators of population.

The Government of Armenia is committed to reforming the health care sector. The reform strategy was first outlined in 1995 Minister of Health's "Program on Development and Reforms of the Health Care System in the Republic of Armenia, 1996-2000." During the past ten years of transition, the key government health policy initiatives to deal with the main sector issues have been to:

- strengthen primary health care (PHC);
- implement health financing reform to create incentives for efficiency and ensure population's access to essential health care services; and more recently,
- optimize (rationalize) the health services network.

The aim of the financing component of the health care reform is the introduction of a new system and mechanisms of health finance to improve the efficiency of limited public spending on health.

The paper shows the dynamics of the health care financing situation during the period of 1999-2001, the results of the Armenian health care financing reform, analyzes the major issues still present in the Armenian health care financing system, and current and potential intervention strategies. Finally, based on the discussion of relative advantages and disadvantages of the outlined strategies, their potential benefits, technical and political feasibility and ease of implementation a course of action is recommended aimed at the establishment of an optimal model of health care financing in Armenia.

Acknowledgments

This Master of Public Health Culminating Project (Thesis) summarizes my investigation of the Armenian health care financing system development during the period of 1999-2001, and the results of the health care reform carried out in Armenia. The problem of the health care finance is of personal and professional relevance for me as my work in the State Health Agency and international organizations in the last five years has focused on the issues of health policy in Armenia and the reform of the health financing system in particular.

As an MPH student my thanks go first of all to the whole MPH Program Faculty of the American University of Armenia for teaching the skills and knowledge necessary for my professional practice in the area of health care administration.

Special thanks are expressed to my advisors Dr. Robert McLean and Varduhi Petrosyan, as well as to Dr. Michael Thompson, for their valuable comments and sterling work in editing the text of the project. Additional assistance in organizing drafts and often meeting tight deadlines in the process was provided by Yelena Amirkhanyan, teaching associate.

Next I would like to acknowledge generous support of the Ministry of Health and the State Health Agency officials for making available their databases and valuable information without which this study would quite simply not have been possible.

Acknowledgements are of course also due to the experts of the World Bank and the Dutch TNO (Organization for Applied Scientific Research) involved in the field of the Armenian health care reform, discussions with whom, both formal and informal, have shaped my thinking about the content and process of reform.

Finally, I would like to thank my family, who has had to put up with the intrusions into family life which studying inevitably involves. Any errors are of course my responsibility.

Table of contents

1. Statement of Problem

1.1 Problem Definition

Inappropriate financing of health care in Armenia during the last decade has led to declined accessibility to health services with an increasing ineffectiveness of the national health care system in producing good health and possible negative impact on health status of large segments of population [1, 2, 3].

The main issues present in the health sector financing could be described in the following points:

- Almost exclusive state budget (public) financing
- Official public sources accounting for less than 25% of estimated HC expenditures
- Less than 10US$ of per capita public health expenditure annually
- Increased incidence of informal out-of-pocket payments directly from patients to health care professionals [1, 2, 3, 4, 5].

Wide-spread under-the-table payments have created a serious financial barrier to accessing essential health care services, in particular for the poor and the sick [5, 6]. The situation is aggravated by excess capacity of deteriorating hospital and polyclinic infrastructure and unbalanced supply of human resources [3, 4, 5].

Current research shows that health status indicators are responsive not only to health system performance but also to socio-economic determinants of health (e.g., low income and poor environmental conditions) [1, 3, 7].

Mortality rates from hypertension and cardiac angina have increased (hypertension 8.1/10,000 population and acute myocardial infarction 7.2/10,000 population in 2000 against 5.9/10,000 and 5.4/10.000 in 1994), comprising 54% of general mortality. The indicators of

infant mortality (IMR) and maternal mortality (MMR) were 17.3 per 1000 births and 52.0 per 100,000 births respectively in 2000 as compared to 14.0 per 1000 births and 27.1 per 100,000 births in 1994 [3, 8]. Moreover, surveys results are significantly higher than the reported numbers and more in line with the evidence from other countries of similar socio-economic circumstances [9]. For example, the Demographic and Health Survey of Armenia reported IMR as 34 per 1000 births in 2000. The higher numbers could be explained by the possible overestimation of the denominator figures (official population statistics).

Tuberculosis morbidity is growing. In 2000 the incidence of tuberculosis was 33.8/100,000 against the 15.8 in 1994. Morbidity from different sexually transmitted diseases is growing, too. By the end of 2000 there were 34.5/100,000 patients with syphilis registered for follow-up as compared to 15.5/100,000 by the end of 1994. The prevalence of psychiatric disorders is the highest after ischemic heart and respiratory diseases. Fifty six percent of the psychiatric patients registered at mental health institutions in 2000 were of working age [3, 8].

The key challenge in terms of health outcomes for Armenia is to sustain the current levels through securing population access to essential health services and implementing effective public health programs.

1.2 The Purpose of the Study

The paper shows the dynamics of the health care financing situation during the period of 1999-2001, the results of the Armenian health care financing reform, analyzes the major issues still present in the Armenian health care financing system and current and potential intervention strategies. Finally, based on the discussion of relative advantages and disadvantages of the outlined strategies, their potential benefits, technical and political feasibility and ease of

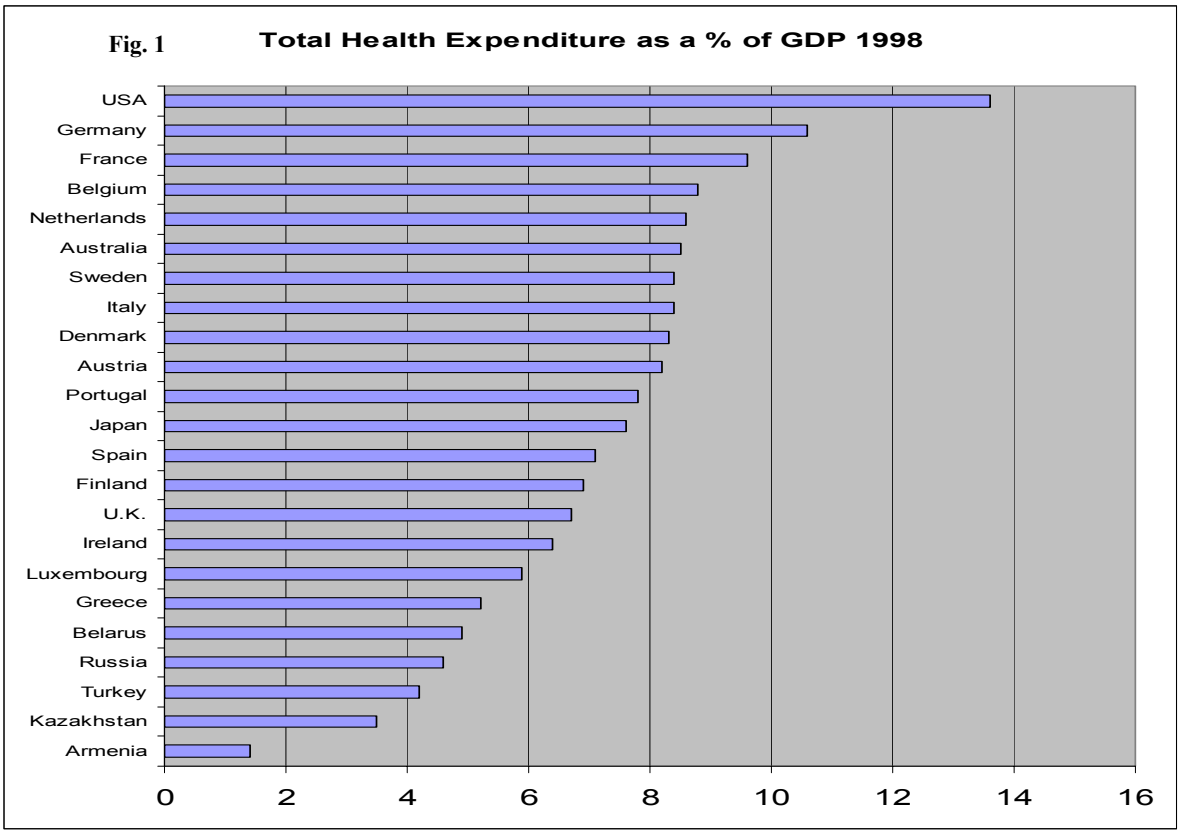
implementation a course of action is recommended aimed at the establishment of an optimal model of health care financing in Armenia.

The presented data have been extracted from the databases of the Ministry of Health (MOH) and the State Health Agency (SHA) of the Republic of Armenia. The main limitations of the data are the absence of accurate estimates of private, out-of-pocket payments in health care and possible overstatement of population numbers in official population statistics.

2. Magnitude of the Problem

2.1 Health Care Resources in Armenia

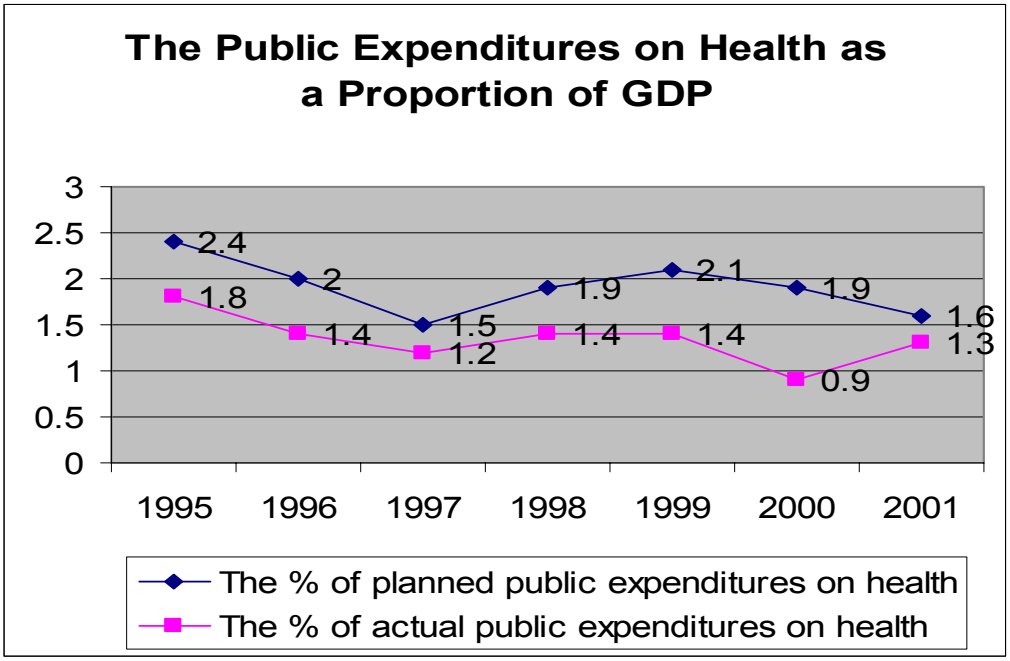
There are wide differences among countries in both the volume and methods of health care financing (Fig.1) [10, 11].



Source: The World Development Indicators Database 2001

The world average proportion of Gross Domestic Product (GDP) spent on health has grown from 3.0% in 1948 to 7.9% in 1997 [10]. As a general rule, rich countries spend a higher proportion of GDP on health care than poor countries [10]. As it can be seen in Figure 2, the United States (US) spends far more than any other country with 13.6% of GDP being spent on health care. Excluding the US, the average of all countries is 8.0%, while the average for low income countries with per capita income from $785 to $3,126 is 2.5% [10, 11, 12].

According to the World Development Indicators Database in 2000 the Gross National Income (GNI) per capita was 520 US$ in Armenia [12]. The decline of economic output of 33% between 1990 and 2000 led to diminished public expenditures [12]. Public expenditures on health have disproportionately suffered more. In year 2000, public expenditures on health amounted to 0.9% of GDP (Fig. 2) or 4.33% of total public expenditures. This is significantly less compared to countries with similar income levels and social indicators.



Source: European Observatory on Health Care Systems

Given the low level of public expenditures on health care, private expenditures have gained an increasing role. It was estimated to be 60% of total annual health care expenditures in 1999. However this figure may well represent a large underestimate as the real magnitude of out-of pocket contributions is unknown [1]. According to the World Bank estimations, official payments for medical care amount to 10-12% of the total income of medical facilities, whereas total private out-of-pocket financial flows to the hospital are 3.5-4.0 times higher than the state budget allocations [12].

The Table 1 shows the structure of health care expenditures in 1998-2001, the proportion of public expenditures on health in total public expenditures and the gaps between the planned health care budget and actual financing [12].

Table 1. Public and Private Expenditures in 1998-2001.

	1998	1999	2000	2001
Nominal GDP (bill. drams)	955,385	987,443.7	1,031,338	1,175,487
Public expenditures on health care approved in the budget (bill. drams)	17,650.9	20,565.1	19,883.6	18,572.3
Actual public expenditures on health care (bill. drams)	13,687.2	13,605.5	9,663.7	15,745.6
Actual public expenditures on health care, % planned	77.5	66.1	48.6	84.8
Actual public expenditures on health care, % of total public expenditures	6.69	5,61	4.33	6.44
Humanitarian aid (bill. drams)	2,906.1	6,178.9	4,838.4	9,964.9
Private expenditures (formal and informal; bill. drams)	20,280.7	41,651.1	29,004.2	48,510.4

Source: Armenia MTEF 2003-2005

Humanitarian aid is one of the official sources of the current financing of health care. It is mainly received through the MOH channels from governmental and non-governmental organizations and the Armenian diaspora and usually consists of pharmaceuticals, medical equipment/supplies and food.

Formal payments are those made by patients based on the official price-lists of medical facilities. The processes of price formation and formal payments are poorly regulated, and the proportion of formal payments is minor in the official financing of health care in Armenia [8].

Informal payments are the unofficial sharing of the costs of medical care paid by the population. They present the difference between the total health care expenditures and total official funds and mainly consist of cash payments to the medical care personnel and, payments for medication and food made by the patients. According to the estimations of SHA the proportion of informal payments in the total health care spending was 45.1% in 2000 [2].

Informal payments reduce access and affordability of health services for the poor and the sick in particular [9, 11]. On aggregate, the utilization of inpatient services measured by per capita hospital discharges per year was 0.05 hospital discharges and for outpatient services about 2 physician visits per person per year in 2000. This is about three times less than what the mainstream international evidence shows for countries with similar epidemiologic profiles [12].

3. Key Determinants

The above described dire situation of the Armenian health care financing system is partially determined by deficiencies of the former structure of the health care system [1]. The system during the Soviet era and until early 1996 was highly centralized and tax-based (funding drawn from general taxation) in line with the Semashko model [7].

Although there were remarkable achievements of the past system including the entitlement of the entire population to a full range of health services, a high degree of equity in access to affordable services, an evenly distributed burden of financing of health care, and extensive and dense infrastructure of health facilities, they have led to many damaging effects and negative impacts such as [4, 7]:

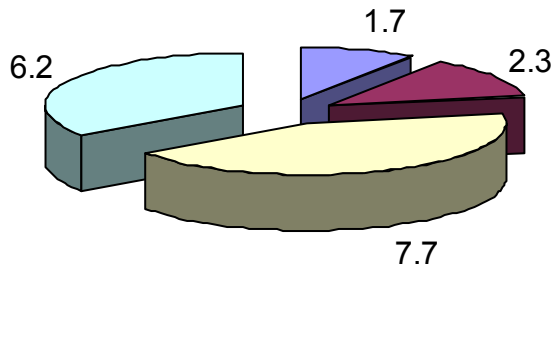
- Rigid over-centralized structures with an over-emphasis on institutionalized care—the state (MOH) was responsible for almost all health services planning and regulation as well as operation and financing. Patients were not allowed to freely choose a health care provider.
- Under financing and low priority of the health sector—the constraints on financial resources did not allow to equip and supply the large number of oversized and overstaffed facilities and pay the health professionals adequately.
- Health care services were financed by line item budgets, based on capacity rather than actual utilization, which provided no incentives to control costs or operate efficiently.
- The delivery of health care services free of direct charge stimulated the demand for health care services, while the methods applied for financing the health care facilities and for paying health professionals (paid as civil servants) worked as disincentives and reduced the efficiency of health care services.
- The quality of health care did not comply with western standards, and unofficial gratuity payments were commonly expected especially for secondary and tertiary care.
- Overspecialization at the expense of public services and primary care resulted in a lack of functional integration.

Since independence (in 1991), government income fell sharply while the costs of health care mounted. The planned proportion of the state budget devoted to health services grew to over 13.0% in 1996 and still proved insufficient to meet health care needs. The situation was untenable and as a consequence of Armenia's severe economic problems, and extreme difficulties experienced in collecting tax revenues, a predominantly private out-of-pocket financing was introduced in the health care system [1].

The current problems in health care financing are determined by different factors that could be summarized in the following points:

- Low proportion of public funds allocated to health in the Republic of Armenia which could not provide coverage of costs of essential health care services to the population;
- Low execution rates of already meager health budgets, which created gaps between the planned and actual financing. Gaps existed also between actual financing and performance of medical care providers resulting in accumulation of arrears (Fig. 3) of around 10 billion AMD to health care institutions [2]. The performance levels exceeded the planned budget by around 24% in 2000. The underfinanced medical care providers have no possibility to assure appropriate quality of medical care, apply modern techniques, buildings and equipment, and provide pharmaceuticals.

Fig.3 Arrears of the State Budget to Medical Care Provider Institutions (in billion drams)



Source: State Health Agency

- Prices in the official health sector far below the real economic prices (1/2 to 1/3 as much according to the SHA calculations), and low salaries of the health care workers, which resulted in no factual protection from unofficial out-of-pocket payments to health care providers;
- Small proportion of the officially paid medical services;
- Not transparent system, private payments not contributing to maintenance, and no accountability in the use of private funds;
- Imperfect mechanisms of provider payment which haven't contributed to the improvement of quality and utilization of health care services.

The above mentioned deficiencies not only seriously undermine the effectiveness and sustainability of system diminishing access to health services particularly for the vulnerable, but also seriously undercut the credibility of Government health reform interventions [11].

4. Strategies for Improvement of the Health Care Financing Systems and Provider Payment Mechanisms

4.1 General Trends Worldwide

The World Health Organization (WHO) has divided the health care financing systems into six groups [13]:

- Public financing based mostly on compulsory social insurance (model of Bismarck), e.g. Germany (the first social health insurance system established over 100 years ago) France, Austria, the Netherlands, Belgium and Switzerland;
- Public financing based mostly on taxation/state budget (model of Beveridge), either through national health insurance or national health services systems, e.g. Nordic countries, Spain, Great Britain and Canada;

- Systems in transition from the insurance to state budget financing, e.g. Italy and Greece;
- Systems in transition from the state budget to insurance financing (some of the former socialist and Soviet Union republics, including Armenia) as a replacement for or to supplement existing funding;
- Totally state budget (model of Semashko), some former Soviet Union and Central European countries;
- Private financing, based on voluntary insurance and out-of–pocket spending, e.g. the US.

However in any health care system there is likely to be a mix of financing health care and different forms of health services may be most appropriately funded in different ways. For example, public-health measures, such as immunization, birth control, promotion of healthy nutrition and lifestyles, sanitary-hygienic measures, and screening, are unlikely to be successfully funded through user charges, but require collective (state budget) financing [14].

In low income countries resources may also be provided to the state health sector in the form of loans or grants. In case of grants, this has the effect of directly subsidizing the service. Loans imply later repayments and are more usually used for capital financing than for operating funds. The usual source of loans and grants in developing countries is through donor funding [14].

Thus, main sources of mobilizing resources for health services are taxation, social health insurance contributions (usually in the form of payroll taxes), private actuarial insurance premiums, and out-of-pocket payments [10]. The first two sources (state budget and social insurance contributions) are considered to be public systems regulated and justified by

appropriate legislation, while the third and the fourth (private insurance premiums, direct payments) are private and voluntary.

Figure 4 provides a summary of the main ways of financing the health care system.

Government tax-funded systems pay for health services out of general government revenue. There may also be some special health taxes, e.g. on health damaging goods and activities. Decisions about the overall funding of services are made as part of the overall planning of government expenditure [15].

Social insurance systems pay for health services through contributions to a health fund. The most common basis for contributions is the payroll, with contributions both from employer and employee. Contributions are income dependent, i.e. are based on the ability to pay, and access to services depends on need. The health fund (or funds) is usually independent or government body, working within a tight framework of regulations. Under social health insurance there is a fixed list of entitlements to services (benefits package), while contribution rates are set at a level intended to ensure that these entitlements can be met [7, 15].

Private actuarial insurance is based on risk. People pay premiums based on the expected average cost of providing services to them. Contributions are health risk dependent, i.e. people who are in high-risk groups pay more, and those with low risks pay less. Services covered by the insurance may vary between different companies and different insured persons. The basis is exactly the same as for insurance on a car or house [7, 15].

Insurance schemes consist of an insurance body on the one hand, the insured persons on the other and a "third party"/ "spending side", namely the provider of health care , such as hospitals, physicians, nurses and pharmaceutical industry [15].

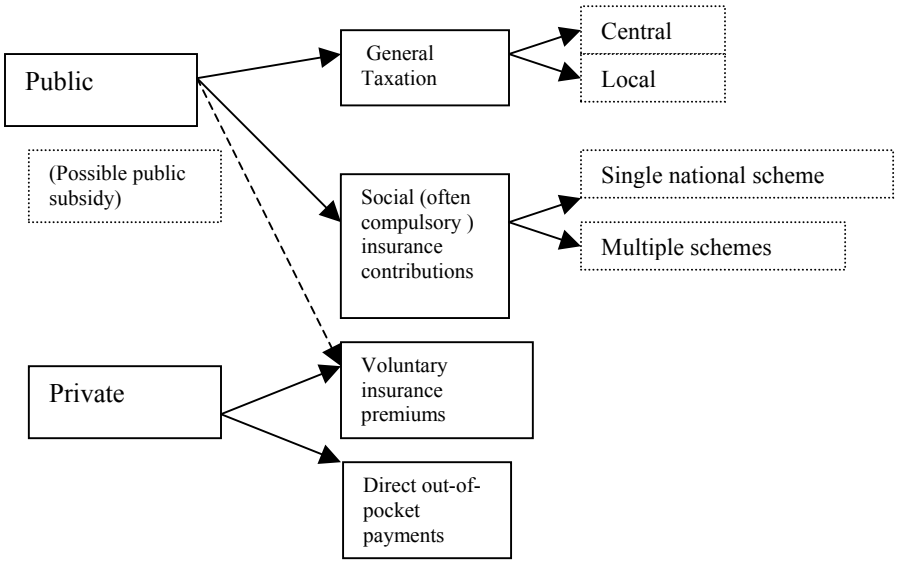
Out-of-pocket payments include direct payments, co-payments and deductibles.

Direct payment by patients involves neither elements of insurance nor mutual support. Patients are charged fully for the services they use according to a set tariff [1, 15].

Co-payments (user-charges) by patients are additional payments made by patients, often at the point of service, for health care services they receive, as supplements to government funding or health insurance financing [15, 16].

Deductible is the amount (usually annual) that an individual must pay out of pocket before the health insurance plan will begin to make any payments [15].

Fig. 4 Methods of financing



Source: Maxwell (1988)

The publicly financed systems may be organized according to two different models [2, 7]:

- Integrated model—the basic characteristic of such a system is that health care finance and the delivery of care are organized into one single structure.

- Contract model—health care financing agency is a separate structure ("third party payer") contracting physicians, hospitals and other provider institutions for the delivery of health services. In this case physicians and provider institutions (the health care delivery system) may belong to the public sector but also operate in the private sector (either on a profit, or not-for-profit base).

Under continuing pressure to contain costs, increase efficiency, and raise service standards, health policy makers have introduced a range of changes to the health care system in the quest for improved performance. A further concern has been the desire to ensure access to health care of various groups on an equitable basis [7, 10, 13, 15, 17].

Health care systems in different countries have undergone significant changes. Those countries which have traditionally relied on a market in health care are making greater use of regulation and planning. Equally, those countries which have relied on regulation and planning are moving towards a more competitive approach [10, 18, 19].

> *"National experiences teach us that neither pure centrally-planned nor free market health systems can achieve maximum efficiency. A complex mixed system seems to be an answer*."[18]

Thus the emphasis has moved away from the simple dichotomy of "planning versus markets" to a discussion of how the two may be combined [10, 18].

Interest in markets led to separation of purchaser and provider (of health care services) responsibilities in integrated systems and could explain the move towards the contract model. The introduction of competition into publicly financed health care systems offer prospects for increased consumer choice, producer autonomy and efficiency in the health care systems, without sacrifices in equity [10]. One of the earliest attempts to promote competition was done

in the Netherlands [19] and this was quickly followed by moves to introduce competition in the United Kingdom, New Zealand and Sweden [10].

Some countries have tried to examine how services that were previously provided in the public sector could be supplied by private companies under contract to public sector. This reflected trends in a number of major industries to restructure their operations away from vertical integration to contracting with suppliers [10].

To overcome the crisis of the health care system most of the former socialist countries (FSC) of eastern and central Europe where the tax-based financing has been the most important source of funding have tried to introduce other methods of health care financing in the form of health insurance and official user charges as a way of generating additional revenues for the sector [7]. Social health insurance is one major component of the general reform of the health care sector. Countries such as Czech Republic, Estonia, Hungary, Russia, Slovakia and Slovenia have already established a health insurance system and are currently in the stage of building it up [7, 20, 21, 22].

4.2 Social Health Insurance

Introduction of social health insurance as a replacement for or supplement to existing financing mechanisms, means a transition from a bipolar structure of relationships between the population and providers of care, to the classical triangular structure of social security with bilateral relationships between social health insurance, population and providers [7, 15].

More or less common characteristics of social health insurance scheme are:

- compulsory membership

- solidarity and equity, it combines risk pooling by mutual support, by allocating services according to need and distributing financial burdens according to the ability to pay
- no risk selection
- employer and employee contributions
- strong government regulation
- implementation by non-governmental institutions
- embedded in a system of social security [15].

An advantage of social health insurance compared to the tax-based method of health finance is that there exists a more direct relationship between the payment for health care and the benefits people get in return. This may make people more willing to contribute than if the payment is absorbed in general taxation [15].

The presence of social health insurance scheme may also influence the volume of resources (level of funding) spent on the health care as it implies the creation of a separate, visible flow of resources. Finance by means of social insurance may thus be less vulnerable than tax based schemes to macro-economic policies constraining public expenditures [15].

Other advantages include helping to establish patients' rights as customers of the health care providers, operating in pursuance of the government health policy goals while maintaining a degree of independence from government and association with efficient provision of health services [7, 13, 17, 24].

The main disadvantages of social insurance financing are high administrative costs, problems of cost containment, problems of ensuring coverage for workers in agriculture and the informal sector [15].

4.3 Private Insurance

It is very difficult to create a social insurance system that covers the whole population and covers all of the existing health care services. Some countries choose private insurance as a route to wider coverage. Offering voluntary membership may entice certain population groups to join, particularly those groups who are not covered by an insurance scheme, may require services not included in the compulsory insurance package or may be dissatisfied with the existing quality of health care services [15].

It has been argued that private insurance performs better on efficiency than social insurance [7, 17]. However, there are inherent weaknesses in using voluntary insurance as the main method of financing health services. These include over-utilization and inappropriate use of services; an incentive for insurers to select low risk patients ("cream skimming" of patients); the difficulty of ensuring equitable access to health care for different groups in the population; and the high level of administrative costs [5, 15, 23].

4.4 Official User Charges

These include direct out-of-pocket payment for health care services and co-payments made by patients. They represent a radical new initiative in the FSC aimed at strengthening health care financing through bridging or partially filling the financing gaps and short-falls in expected producer revenues resulting from budget deficits. They also represent a method for formalizing seemingly considerable unofficial payments [7, 16, 24].

Co-payments applied as supplements to government or insurance funding may be designed to influence behavior patterns among patients and providers (encourage/discourage consumption of particular health care services [15]. But clearly the user charge debate is controversial particularly for the low income countries, as it effectively means a price increase for health care

for precisely those who need them. This will impact both the incomes of the sick, and/or their utilization of health care services [15, 16, 24].

4.5 Provider Payment Mechanisms

During the last few years, some of the FSC are changing the methods of remuneration of providers in primary and secondary care, as well as dental and ancillary care services and pharmacies [7]. Each method has different effects on:

- the quality of health services
- cost containment
- administration [4].

Fee for service (and price per item)—is the most common method of payment and the most "market-like." Providers get paid for each treatment act or product they provide. The fees or prices may be uncontrolled or based on an established fee or price schedule. The main strength is that provider's reward is closely linked to level of effort, but it creates incentives for excessive and unnecessary treatment [7, 15].

Case payment is based on a single case rather than a single treatment act. A case payment may be based on a single flat rate per case, regardless of diagnosis or on a schedule of diagnoses. It ties provider's reward fairly well to output, but is technically difficult to implement and may result in misrepresentation of diagnosis by providers in order to receive higher payment [7, 15].

Bonus payments—a bonus can be paid to providers as an incentive to achieve certain economic or health policy objectives, such as prescription of fewer drugs, health promotion or preventive medicine. The establishment of a bonus system requires sophisticated control mechanisms for monitoring the achievement of the objectives [15].

Flat rate payments are frequently used to finance particular investments. Providers may receive a fixed budget to buy equipment for example. In this case it is important to establish clear specifications for investment and other measures that ensure quality control [15].

Salary—a salary system is normally based on a labor contract between the provider and the health fund. Based on this agreement the provider is paid by the health fund a monthly salary plus supplementation such as employer's contributions to social security. The employee works on a time basis, not for the quantity of the services provided. Administratively it is the simplest method and facilitates prospective budgeting, but can easily create incentives for provider to under service patients and reduces productivity [7, 15].

Capitation fee covers services for one inhabitant person over a certain period (normally one year). In order to encourage competition and high quality service, the person should have the right to change the nominated provider on a regular basis, again usually annually. It doesn't need to break down physician's work into procedures or cases, facilitates prospective budgeting, gives provider incentive to minimize cost of treatment and carry out preventive activities. The weaknesses are that provider may select patients based on risk and reject high cost patients and may under service accepted patients. Besides it makes difficult to analyze provider's practice [7, 15].

Global budget may be defined as the payment of a particular sum that covers the total cost of services or products delivered during a given period of time. The providers will agree among themselves how they will divide the total budget given to them. Under a budget system, both the provider and the health fund run a certain risk—namely the risk of increased morbidity or unexpected increases in factor costs [7, 15].

The table 2 provide a summary of the different payment systems and their effects on cost containment, quality and administration.

Table 2. Comparison of Performance of Different Payment Systems

Payment System	*Cost Containment*	*Quality*	*Administration*
Fee-for-service	Very poor	Very good	Very difficult
Case payment	Good	Fair	Difficult
Bonus payment	Good	Good	Easy
Flat rate	Good	Good	Easy
Salary	Fair	Poor	Very easy
Capitation fee	Very good	Fair	Very easy
Global budget	Very good	Fair	Easy

Source: WHO (1994)

These systems can be combined, which greatly increases the number of options. Combinations can also produce a unique set of incentives, encourage certain behaviour or penalize inappropriate health services provision patterns.

5. Policy & Priority setting

5.1 The Government Health Care Reform Strategy in Armenia

The Government of Armenia has undertaken key reform initiatives to deal with the main sector issues. The reform strategy was first outlined in the 1995 Health Minister's "Program on Development and Reforms of the Health Care System in the Republic of Armenia, 1996-2000" [25].

Market-like mechanisms have been widely introduced, although planning and regulation have not been completely abandoned. The health sector reforms have led to change of legal status of the health care institutions and marked decentralization. State health care institutions have been converted to state joint-stock companies/enterprises, which could generate their own

revenues parallel to state budget financing. The health system today comprises a network of independent, self-financing (or mixed financing) hospitals and policlinics that provide private services in addition to state funded ones and have considerable decision making powers [1].

Decentralization process contributes to a new flexibility within the health sector. It involves privatization and elements of devolution of the operation and ownership of health facilities (except institutions providing public health services) to local governments and granting autonomy to health institutions by the MOH (the responsibilities of the MOH are now more strategic policy making, development of normative documents, licensing, monitoring, and supervision). Almost all pharmacies, the majority of dental services and medical equipment technical support services have been privatized as have number of hospitals in Yerevan [1, 7].

During the past ten years of transition, the key government health policy initiatives to deal with the main sector issues have been to:

- strengthen primary health care (PHC);
- implement health financing reform to create incentives for efficiency and ensure population's access to essential health care services; and more recently,
- optimize (rationalize) the health services network [5].

5.2 The Financing Component of Health Care Reform in Armenia

The aim of the financing component of the health care reform is the introduction of a new system and mechanisms of health finance to improve the efficiency of limited public spending on health [1, 2, 3, 4, 5].

The 1996 "Law on Medical Aid and Services Provision to the Population" [26], which ended the Soviet system of health care financing and legalized alternative financing mechanisms for health care services (including out-of-pocket payments), provided the initial legal framework for

the health financing reform. Its main elements are based on the strategies prevailing in European countries. Their usefulness and feasibility in the context of political, socio-cultural and economic circumstances existing in Armenia is discussed below.

Introduction of Basic Benefits Package-- Starting from July 1, 1997, according to the "Law on State Budget of the Republic of Armenia" [27] the health care financing is carried out through state procurements (State-Order) of medical care and services included in the Basic Benefits Package (BBP). The BBP was introduced in order to limit the responsibilities of the state in funding health care services. The BBP is the package of health care services with presumed high ratios of benefits to costs and is supposed to cover essential health care needs of entire population in primary care, hospital in-patient care, ambulatory and ambulance services; and provide for the special health needs of vulnerable population groups, as described in the annual state target health programs [1, 3, 4, 5].

Two main approaches underlie the formation of the BBP of the recent years: (a) health care priority programs, stipulating provision of essential medical care and services irrespective of the social status of recipients and (b) programs of social orientation, stipulating free medical care and services to the social vulnerable groups of population. The nature and the size of the programs and vulnerable groups included in the BBP are being adapted annually. This process is heavily influenced by political and social factors [4, 5].

The current BBP is not in line with the financial reality and the limited resources of the public sector. Despite the tendency of the recent years to decrease the number of state-order programs no real reduction has taken place. Mainly re-grouping and merging of programs has been performed, without clear specification of beneficiaries. In 2001, the government has addressed the targeting issue by linking the socially oriented BBP programs to means-tested

social assistance benefit system, but the number of beneficiaries wasn't reduced. There are overlaps between the current BBP programs [4, 5].

The cost reimbursement rates of the BBP services (prices in the official health sector have been far below the real economic prices) resulted in no factual protection of patients from unofficial out-of-pocket payments to health care providers [1, 2, 4].

During 1998-2001, the funds allocated to hospital care made up 65-60% of the public expenditures on the BBP (28-35% to ambulatory-polyclinic and 7-8% to ambulance services) [2].

The hospital care program contains services that are considered not cost-effective such as hemodialysis, treatment of chronically ill, forensic medical expert examination of psychiatric patients and draftees, and some others [2, 3, 4, 5].

It is obvious that strong government commitment is need to overcome the existing political and societal barriers in the process of definition of a "realistic" BBP in line with the available financial resources, the existing infrastructure and quality of services, health care priorities and real cost of health care services.

Establishment of the State Health Agency -- In 1998, there was a shift from the public integrated model to a public contract model similar to that carried out in some of the Western European countries [7, 10]. Government has established the State Health Agency to administer public health care funds. Creation of the SHA introduced a split between the purchaser and the provider and a need for contracting in health care in quasi-market environment. It is currently the third party payer for primary, secondary and tertiary care facilities [1, 5].

As financing reforms did not extend to health insurance premium collection, and as all revenues for public financing of health care come from taxation, the SHA tasks remained

confined to distributing the state allocations for health received from the Ministry of Finance. The agency is committed to paying providers for those health services that belonged to the BBP, audit them (that is, to monitor the quality and contents of services), and perform analysis of financial data. The SHA became effective in January 1999 and performed reasonably well in using modern contracting methods and in learning to apply provider payment methods to prevent budget overruns [5]. Establishment of the SHA was also a step forward to develop institutional capacity for possible introduction of mandatory social health insurance, if it were to become feasible under macro-economic conditions.

Introduction of Health Insurance-- In 2000, "Concept of Introduction of Mandatory Medical Insurance" [28] was prepared by the Ministry of Health for the purpose of defining the organizational, financial and legislative mechanisms to be applied to the introduction of health insurance as a supplement to the state budget funding.

The concept stipulates the establishment of compulsory medical insurance scheme in Armenia to be operated by one single fund to achieve economies of scale in the collection and management of health fund contributions (reducing administration costs), as well as stimulate transparency and accountability and to ensure solidarity among various groups with different risk profiles [4, 15, 30].

In recognition of the economic and organizational problems that can hinder the adoption of the insurance system (including widespread unemployment, the presence of a significant underground economy and tax evasion and the additional tax burden that social insurance entails) this will be implemented gradually in a step-by-step fashion [1, 4, 29].

However, from the perspective of feasibility a system of comprehensive compulsory insurance can not be developed in short-term. It is estimated by the Ministry of Health that the

development of such a system may take at least ten years [1, 4] and requires the following preconditions: political decision that this is the only realistic mechanism for the future financing of health care; rationalization of the health care system which currently is characterized by widespread inefficiencies, revision of the BBP, specification of national health programs to be covered by the state budget, specification of premium rates and conditions for the system's financial stability [4, 29].

With regard to the economic preparedness the most important indicators are 'sustained' economic growth and absolute growth of the 'official' economy, gradual increase in public spending for health, positive labor-market developments with growth of number of officially-paid jobs and positive development in income-salary levels of employees in the public-private sectors and regular payment of salaries [4].

Legislation has been passed for voluntary insurance, but there is no effective health insurance scheme currently in operation in Armenia [1]. It is expected that the system will be needed and developed in future in parallel with the compulsory system to provide for wider coverage of population groups and health care services. Armenian tax legislation should be revised to remove legal barriers so that voluntary insurance is developed and population had motivation to get additional private insurance outside of the compulsory package [1, 4].

Introduction of Direct User Charges-- The inadequacy of levels of state funding for health care is obvious, and the government clearly recognizes the need to tap new financing sources and to redistribute the cost of providing services [1]. Apart from exploring the possibility of introduction of health insurance, a system of direct out-of-pocket payments, whereby patients pay the full cost of treatment directly to medical providers, has been introduced.

Although there is considerable concern that direct user charges are administratively inefficient and socially unjust [1, 16, 24], they are currently the only financing alternative in Armenia that are expected to put an end to under-the-table payments and help cover the state budget deficits [1].

Improvement of Provider Payment Mechanisms-- During the last few years and with the establishment of SHA the methods of reimbursement of providers have been changed. A shift has been made from the input-based to performance-based financing [1, 2, 3, 5].

Under the pressure of funding constraints in Armenia systems that score high on both cost containment and administration, such as capitation or global budgets are acceptable.

The SHA applies case based financing of hospitals so that the "money follows the patient." With the purpose of cost containment and elimination of gaps between the available public funds and levels of services executed by providers the capped global budget principle was introduced for the hospital care reimbursement in 2000, while the reimbursement of ambulatory-polyclinics is performed through per capita financing mechanism [2, 5].

Application of a combined system (bonus payments, flat-rate payments) to create incentives for quality improvement is being considered [29].

6. Specific Recommendations

Based on the discussion of the outlined strategies, the following course of action is recommended in the short -run:

1. Revise the state-funded basic health benefits package with possible reduction of the included services and raise of reimbursement rates in order to bring it in line with available resources and reduce the gap with the real cost of service. Pricing of services should be based on real cost to properly account for public funds used and incremental increases of the budget.

2. Conduct needs assessment to streamline the basic package and improve targeting with clear specification of beneficiaries.

3. Introduce formal co-payments into the BBP programs. Co-payments should be established with caution and selectively to the state-funded services of secondary importance to contain unnecessary consumption, and to redistribute the cost of providing services, without touching health gain activities to the poor. The population needs to understand the reasons for co-payments and what are related costs and benefits. A link between co-payments and improved quality of care needs to be established for both patients (reduction of informal payments, better availability of drugs) and physicians (part of co-payment being used as a performance related remuneration to medical staff). Co-payments also need to be integrated within the legal framework.

4. Redistribute the funds allocated to BBP by decreasing the hospital care program allocations and increasing funds to primary care level services.

5. Improve the provider payment mechanisms in particular in the area of primary care to create financial incentives for family physicians and enable the desired shift made from the expensive hospital care to much more cost-efficient services on primary level.

A combination of payment methods for primary care is recommended. For the income of family physicians capitation fees for every individual registered with the provider (up to a maximum number of patients), bonus payments for reaching certain performance targets (e.g., immunization levels) and fees for specific services (e.g. night calls, services for the elderly) could also be paid. In addition, for the fixed costs of the service (building, equipment, auxiliary personnel), they may be reimbursed by flat rate-payments.

6. In the long-run, establish a social health insurance system. Under the social health insurance system the health care costs of non-vulnerable population could be covered by the insurance premiums paid by that population, while the premiums of vulnerable groups could be paid by government out of taxes or social premiums. Thus, the state health care budget funds would be almost exclusively spent for the social medical insurance of vulnerable groups with the rest of the public funds focused on very few programs for non-vulnerable population, such as psychiatry, tuberculosis and tertiary care functions. Therefore, the state budget allocations to the health sector should increase to ensure accessibility to essential health care for the vulnerable groups if the compulsory medical insurance were to be implemented. In parallel it is recommended to encourage the development of the voluntary insurance with appropriate legislative mechanisms.

7. The implementation of the new systems of financing and provider payments in Armenia should be supported by the establishment of appropriate information management and quality assurance/control systems as well as by appropriate legislation/regulation.

8. The changes in health care financing are closely linked to the other components of the health care reform. Changing only the system of health care financing without changing the structure of health services and without reconstructing the whole socio-political framework of the health care system would not be effective. The importance of optimization (rationalization) of the health care system can not be underestimated, the reduction of the excess capacity being one of the essential prerequisites for achieving greater cost-effectiveness in the use of resources and success of implementation of an optimal model of health care financing in Armenia.

7. Implementation & Evaluation

Although generally supported and pushed forward by the MOH, the reform process has experienced a certain degree of resistance. Several health policy/reform documents on strategy, privatization and medical insurance have been adopted by the government in the last few years. However, due to frequent changes in the Armenian government, sustainability of each reform direction and its implementation could not be ensured. It is clear that the transition to a smoothly functioning health care system will need strong government commitment, active involvement of authorities from different sectors, inter-sectorial cooperation, and technical and financial support by international organizations.

Comprehensive evaluation of the health care reform in Armenia has not yet been conducted. Most of the pursued initiatives have been implemented relatively recently and a longer period is needed to assess their impact.

The Government has significantly improved budget execution (the planned health care totally executed in 2002) and the level of public financing in health sector in 2003 is increased by about 26% [30]. Recent studies of the medical facilities' reports performed by the SHA and other agencies suggest that accessibility of care has begun to improve [2, 12].

The indicators for monitoring the appropriateness of the recommended course of actions may include: the amount of public allocations for health, the public expenditures on health as a proportion of GDP and total public expenditures, the proportion of various financial flows in the structure of total health care expenditures, informal payments as a proportion of total health spending, the proportion of public funds allocated to primary care services, the proportion of the population covered for basic health services, the range and availability of services, utilization rates, indicators of service quality (e.g., potentially avoidable hospital admissions, in-patient

mortality rates, rates of complications and patient satisfaction) and health indicators of the population.

It is clear that the prospects for health status as well as the health care system are inextricably linked with the future success or failure of the Armenian economy. As the economy stabilizes and embarks upon a period of longer term sustained growth, increasing incomes will also generate additional funding for health services to allow implementing health insurance, extending the basic package, reducing the amount of out-of-pocket payments and devoting additional resources to primary care. In the meantime, efforts should be focused on establishing an affordable system in which quality of care can be guaranteed.

References and bibliography

1. European Observatory on Health Care Systems (2001). *Health Care Systems in Transition. Armenia.* Copenhagen: WHO. Regioanl Office for Europe.
2. Ter-Grigoryan, A. (2001). *The Health Care Financing in Armenia.* 58-71. Yerevan.
3. Mkrtchyan, A. (2001). *New Tendencies in Health Care of Armenia* [in Russian]. Yerevan: Publishing House "Hagop Meghapart."
4. Heijnen S., den Exter A. (2001). *The Concept and Law on Medical Insurance in Armenia* TNO report PG/VGZ/2001.011. Leiden: TNO Prevention and Health.
5. World Bank (1997). *Republic of Armenia. Health Financing and Primary Health Care Development Project.* Staff Appraisal Report No. 16475 AM. Municipal and Social Services Country Department IV. Europe and Central Asia Region: World Bank.
6. Chaudhury, N., Hammer, J., Murrugarra, E. (2003). *Impact of Fee-Waiver Programs on Health Utilization in Armenia*. Policy Research Working Paper 2952: World Bank.
7. World Health Organization (1993). *The Process and Management of Change-Transition to a Health Insurance System in the Countries of Central and Eastern Europe.* Copenhagen: WHO. Regional Office for Europe.
8. Medical Information and Statistical Center of the Ministry of Health (2001). *Health Care in the Republic of Armenia—2000*. Yerevan: Ministry of Health.
9. National Statistical Center (2001). *Demographic and Health Survey of Armenia 2000* [in Armenian]. Yerevan: National Statistical Center.
10. Ham, C. (ed.) (1997). *Health Care Reform: Learning from International Experience.* Buckingham: Open University Press.

11. http://www.worldbank.org/data/wdi2001/pdfs/tab2_10pdf (16.08.03). 2.10 Enhancing Security. World Development Indicators.

12. Ministry of Finance (2003). *2003-2005 Medium Term Expenditure Framework of Armenia.* Draft Report. Yerevan: Ministry of Finance.

13. World Health Organization (1997). *European Health Care Reform. Analysis of Current Strategies.* R. Saltman, J. Figueras (eds). European Series, No.72. Copenhagen: World Health Organization Regional Office for Europe.

14. Green, A. (1999). *An Introduction to Health Planning in Developing Countries*, 2nd edn. Chap. 5, 95-115. New York: Oxford University Press Inc.

15. World Health Organization (1994). *Social Health Insurance. A Guidebook for Planning.* Normand, Ch., Weber A. Geneva: World Health Organization.

16. Rhodes, G (2000). *Rapid Assessment of Co-payments*. Leiden: TNO-PG.

17. World Health Organization (1996). *European Health Care Reform. Analysis of Current Strategies.* Copenhagen: World Health Organization Regional Office for Europe.

18. Hsiao, W.C. (1994) "Marketization"—the Illusory Magic Pill. *Health Economics*, 3:356.

19. Dekker, W. (1987). *Willingness to Change*. The Hague: SDU.

20. World Health Organization (1996). *Health Care Systems in Transition. Estonia.* Copenhagen: WHO. Regional Office for Europe.

21. Sheiman, I. (1997) *Innovations in Health Care Financing.* International Conference. Washington: World Bank.

22. Rubas, L. (1994) *Health Care Transformation in the Czech Republic: Analysis of the Present Situation and Objectives for the Future.* Prague: Committee for Social Policy and Health.

23. Government of the Republic of Armenia. "Law on Medical Aid and Services Provision to the Population." Passed on 04.03.1996.

24. Minyaev, V. A., Vishnyakov, N. I., et al. (1998). *Social Medicine and Health Care Organization,* Vol. 2, 418-425, S. Petersburg.

25. Creese, A. et al. (1991). "User Charges for Health Care: a Review of Recent Experience." *Health Policy Planning,* 6(4):309-19.

26. Ministry of Health (1995). "Program on Development and Reforms of the Health Care System in the Republic of Armenia, 1996-2000." Yerevan: Ministry of Health.

27. Government of the Republic of Armenia *"Law on the 1997 State Budget of the Republic of Armenia."* Passed in 1997.

28. Ministry of Health of Armenia (2000). *The Concept of Introduction of Mandatory Medical Insurance in Armenia.* Yerevan: Ministry of Health.

29. PADCO/Armenia Social Transition Program (ASTP) (2001). *An Assessment of Health Financing Options for Armenia.* Report No.47. Yerevan: PADCO/ASTP.

30. Government of the Republic of Armenia *"Law on the 2003 State Budget of the Republic of Armenia."* Passed in 2002.

31. Weale, A. (ed) (1988). *Cost and Choice in Health Care*: London: King's Find.

32. Golinowska, S., Tumowska, A. (1995). *Poland. Private Markets in Health and Welfare.* Oxford: Berg.

33. Annel, A. (1995) Implementing Planned Markets in Health Care: the Case of Sweden. Birmingham: Open University Press.

34. Schieber, G., Maeda, A. (1997). *A Curmudgeon's Guide to Financing Health Care in Developing Countries. In: Innovations in Health Care Financing.* Proceedings of a World Bank Conference. March 10-11. Washington: World Bank.

35. World Health Organization (1995). *Lessons from Cost Recovery in Health. Discussion Paper 1.* Creese, A., Kuttzin J. Geneva: World Health Organization.

36. Maxwell, R.J. (1988) Financing Health Care: Lessons from Abroad. *British Medical Journal,* 296: 1423-6.

37. Glaser, W. (1991) "Paying the Hospital: American Problems and Foreign Solutions". *International Journal of Health Services,* 21-3: 389-399.

38. United Nations Development Program (1999). *Five years of Human Development in Armenia.* Yerevan: UNDP.

39. Rhodes, G., Schaapveld, K., Texier, B. (1997). *World Bank Supported Georgia Health Project: Interim Evaluation of the Georgian Health Care Financing Reform.* Leiden: TNO-PG.

40. Gertler, P., Hammer, G. (1997). *Strategies for pricing publicly provided health services. In: Innovations in Health Care Financing.* World Bank Discussion Paper No. 365. Washington: World Bank.