

Improving Financial Risk Protection in Armenian Health Care System

Master of Public Health Integrating Experience Project

Problem Solving Framework

by

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Executive summary

Financial risk protection, in spite of extensive efforts and observed progress, still remains a major problem for the Armenian healthcare system. Different studies agree on unacceptable level of out of pocket payments with large proportion of informal payments. This situation may get worse under conditions of global financial and economical crisis; hence, this paper calls to develop a different solution to the problem of financial protection in Armenia. The out-of-pocket payments are strongly regressive. The poorest (whose household incomes are generally below the poverty level) overall pay about five times the percent of household income than the richest, despite having the larger benefit package provided to the poorest under the Basic Benefit Package program. Financial reasons are major barriers to seeking medical care. Data showed that 16%-26% of all Armenian households had catastrophic medical expenditures depending on the poverty definition used.

This paper identifies several key determinants for low financial protection, referring to low healthcare spending, poor governance, inappropriate pricing of services under BBP, low remuneration of health workers, taxation of health care facilities and products, and lack of awareness of patient rights.

The preferred strategy to address this problem is introduction of mandatory social health insurance with a single purchaser organization. This strategy is feasible for Armenia since the State Health Agency has relevant experience as a purchaser organization and hence it would not take long time for it to develop effective policies and has the capacity to operate in all marzes. This strategy does not suggest substitution of the existing resource generation through general taxation but rather diversification of ways to generate additional financial resources for the health system.

1. Statement of the problem

1.1 Conceptual Framework

Financial risk protection is one of the three ultimate performance goals (Health Status, Financial Risk Protection, and Customer Satisfaction) of a healthcare system (1). Three intermediary performance characteristics of a healthcare system define how well those ultimate goals are reached (1). Those characteristics are Efficiency, Equity/Access and Quality, which are determined by the changes of the five “control knobs” called Financing, Payment, Organization, Regulation, and Behavior. These “control knobs” are considered the most important factors that determine the outcomes of a healthcare system and that can be used to change those outcomes (1) (see Appendix 1).

1.2 Defining the problem

Financial Risk Protection or the share of financial burden is the level of financial security that a healthcare system provides to the population that needs medical attention (2). Several objective and subjective measures are used to determine financial risk burden (3, 4). Subjective measures include: 1. catastrophic medical expenditures which is defined as the percentage of households with health expenditures greater than 5%, 10%, 15%, 20% of their income, 2. impoverishing medical expenditures - the percentage of households whose income level drops under the poverty line due to medical expenditures (4). The objective measures include percentage of out-of-pocket OOP payment of total health expenditure and health insurance coverage (4).

Armenia declared its independence in 1991. Immediately following this, disruption of trade and production led to a severe economic crisis and a rise in poverty (5-8). The crisis was complicated by the consequences of a devastating earthquake in the northern part of Armenia and war in Nagorno Karabagh (5-8).

The economic decline had a tremendous impact on the healthcare system of Armenia as well as other social sectors of the country (5). The deterioration of the healthcare system resulted in a major decline in financial protection in healthcare (5). To meet the budgetary constraints and to reduce the State's obligations in providing healthcare, the Armenian government introduced the "Basic Benefit Package" (BBP) in 1997 (6). This package includes medical services that should be provided free of charge to the entire population, and specifies groups of population that should be provided with medical services free of charge (6). The BBP is reviewed annually for changes indicated by the current economic situation. This creates confusion among patients (6). Lack of awareness among vulnerable groups about free or subsidized services under BBP, and the differences in the quality of services provided poses important access and financial protection issues to the Armenian health care system (7).

The public share in health expenditure is important (9, 10, 11). Studies evaluating health care utilization of households in middle and low income countries show the negative effects of out-of-pocket payments (both formal and informal) on households, dropping many under the poverty line with the combined effects of medical expenditure and loss of income due to ill health (12). High rates of out-of-pocket payments usually appear in countries with high poverty rates and thus increasing the poverty; this in turn damages the health status of the country, causing more people to utilize the healthcare system and more people to drop under the poverty line (13-15). In 2006, 13.5% of Armenians lived below the poverty level, while 4.1% were extremely poor (16). This "snowball" effect may intensify with the world financial and economic crisis (17).

The World Health Organization (WHO) predicted that the global financial crisis would strongly affect the health systems of low and middle income countries that primarily rely on general taxation and out-of-pocket payments (17). The effectiveness of general taxation

schemes in healthcare financing primarily relies on the economic activity within the country (1). This suggests that the recent progress observed in Armenia in reduction of out of pocket payments might not be sustainable. This calls for a different solution to the problem of financial protection in Armenia.

1.3 Goals and objectives

This study examines the first steps towards an alternative solution by outlining a strategy for improving financial risk protection in the Armenian health care system.

The objectives of this study are:

1. Identify the magnitude of the problem of low financial protection in Armenian health care system based on relevant literature review and available data analysis.
2. Identify key determinants of low financial risk protection in Armenian health care system.
3. Describe and discuss current interventions directed to increasing or providing financial risk protection.
4. Assess all possible strategies to address this issue.
5. Give recommendations on increasing financial protection in healthcare system of Armenia.

2. Magnitude of the problem

The Armenian health care system is funded through general taxation; however in 2002 it was estimated that most of the revenue, about 65%, came from out-of-pocket payments, of which 93% were informal payments (6). The Household Health Expenditure Survey 2006 (HHE) showed that approximately 51.5% of total health expenditure was out-of-pocket (8). The HHE survey results suggested that some of the services covered by BBP were still paid by households out-of-pocket (8). Another study suggested 80% of the total expenditure on

health in Armenia was out-of-pocket payments and 45% of total expenditures was informal payments (5). There is no mandatory health insurance and very little voluntary health insurance; thus households, have to cover medical care costs that remain uncovered by the government (8). Different studies report different proportions for OOP and informal payments. To summarize, at least half of Armenian healthcare expenditures is out of pocket payments, at least 80% of those out-of-pocket expenditures is informal payments (5, 6, 8). These studies are in agreement that out-of-pocket payments as a percentage of total expenditure on health decreased over time as the government increased the level of financing especially for primary care; however, the out-of-pocket expenditures still exceed acceptable levels by European standards (5, 6, 8).

Out-of pocket payments provide the lowest financial protection and are generally recognized as an inequitable source of financing (18). Table 1 summarizes the financial protection for different financing strategies (1, 9).

According to WHO, Armenia is in top 10 countries with the highest out-of-pocket payment percentages in Europe (Table 2) and consequently holds one of the lowest positions in financial protection rankings.

The latest data on subjective measures comes from the HHE survey, which has been conducted in 2006 (8). More than 75% of total out-of-pocket payments were made for hospital care and medication (drug procurement) and less than 5% for primary care. It is not clear what part of drug procurement is induced by hospital care because when an individual is hospitalized s/he also pays for medications and other assets of hospital care (5, 6). Studies also agreed that the major part of the out-of-pocket payments is made for hospital care and medication (5, 6, 8).

The poorest quintile made payments to hospital care that constituted 10% of total out-of-pocket payments (8). The richest quintile made the least payments as compared with any

other quintiles. The hospital expenditures for overall population claimed 6.2% and for medications 3.3% of household's income. The combined amount of formal and informal payments for primary care (ambulatories and polyclinics) claimed only 0.4% of households' income (8).

Table 3 presents the percentage of income that is spent out-of-pocket by household income quintiles and by types of services for 1568 households participating in the 2006 household expenditure survey (8). There was extreme disparity in total spending when the poorest quintile was compared with the richest. The poorest (whose household incomes are generally below the poverty level) overall paid (26%) about five times the percent of household income than the richest (5.2%), despite having the larger benefit package provided to the poorest under the BBP. The disparity between income groups stands out in hospital care which was 14.7% of the income of the poorest and only 2.0% of the income of the wealthiest quintile (8). In 2000, poorest 30% of households had almost 8 times less income than the richest 30%, but they contributed 1.4 times more to total out-of-pocket payments (19).

This indicates that the BBP has not been implemented effectively for providing adequate financial protection to the poorest groups of the population.

Financial barriers are apparently a problem for the Armenian health care system (8, 20, 21). In 2004, the percentage of those who felt need of medical attention and did not seek care was 42% in Armenia; Armenia ranked second in this percentage among the former Soviet Union countries (FSU) (22). Self treatment was a common response even to serious symptoms such as chest pain and severe abdominal pain; self-treatment included either non-traditional remedies or direct purchase of medications (22). Figure 1 presents the reasons for not seeking primary health care mentioned in the National Household Health Survey 2006; 49% of participants mentioned "lack of money" as the reason (21). In 2007, the probability of needing medical care among the adult population older than 20 years was 30.8%, though

only 74.9% of those who needed medical care actually sought it out (20). The remaining 25.1% did not seek medical care when needed. Of that twenty five percent who did not seek medical care, 47.1% did not seek care due to financial reasons (20). The second reason not to seek medical care was self-care (36.2%) (20).

The National Household Health Survey 2006 estimated that 67.8% of participants knew about the concept of Family Medicine but almost half of them associated it with more expensive healthcare which in fact was mostly free of charge (21). This suggests that the participant's frequent mentioning of the "lack of money" could also be induced by the lack of awareness of the services they were entitled to.

HHE data showed that in 2006 16% of all Armenian households had catastrophic medical expenditures¹ if extreme poverty definition was used and 26% of all Armenian households had catastrophic medical expenditures if the general poverty definition was used (8). Another study estimated that 16.2% of Armenian households spent more than 10% of their total household income on health services in 2000 (50); whereas the percentage in Europe is usually less than 5% (2-3).

Low financial risk protection in Armenia is associated with more adverse health outcomes and serious financial duress; even by optimistic estimates a significant proportion of the population spends a substantial part of their income on health.

¹ Health expenditures in excess of 40% of income above the extreme and general poverty levels were defined as catastrophic. Armenia uses two definitions of poverty; extreme poverty level that includes only the costs of a minimally adequate diet (14,300 AMD ≈80 PPP int. \$ per month) and general poverty level that includes an allowance for non-food necessities (21,555 AMD ≈120 PPP int. \$ per month).

3. Key Determinants

3.1 Low public spending on healthcare

One reason for low financial protection and high proportion of catastrophic medical expenses is small share of public spending on healthcare.

Budgetary expenditures on health as percent of gross domestic product (GDP) in Armenia was only 1.5% in 2007 (16). In 2004, it was 1.3% of GDP (6). Countries with similar demographic characteristics and economic potential (Lithuania, Estonia and Latvia) had public spending at least 4% to 6% of GDP, and high income countries at least 6-8% of GDP (13). The total health expenditure as percent of GDP was 5.9% in 2006 of which 3% were out-of-pocket including formal user charges (16).

3.2 Governance

The high level of out-of-pocket payments, a major part of which is in the form of informal payments, could be a sign of poor governance (23). Figures 2-4 show reverse relationship between out-of-pocket expenditures on health as a percent of total health expenditures and governance indicators² for 48 European countries. The indexes for Armenia are -0.22 in government effectiveness, -0.67 in voice and accountability, and -0.57 for control of corruption. The negative sign indicates that Armenia has substantial room for improvement in governance which itself could lead to better decision making and implementing effective mechanisms of financial protection.

3.3 Pricing of services under BBP

Pricing of services that are covered by BBP do not correspond to the real costs of the healthcare services, which incurs out-of-pocket payments (6, 7). According to RA

² The governance indicators presented here reflect the statistical compilation of responses on the quality of governance given by a large number of enterprise, citizen and expert survey respondents in industrial and developing countries, as reported by a number of survey institutes, think tanks, non-governmental organizations, and international organizations. 3 major (of 6) indicators are used here. The governance indicators are measured in units ranging from about -2.5 to 2.5, with higher values corresponding to better governance outcomes. The World-Bank's data 2006 on governance is used.

government decree N 318 on state guaranteed free medical care and medical services, the final decision on prices suggested by the Ministry of Health is made after confirmation by the Ministry of Finance and Economy (24). The pricing of the services under BBP is more focused to meet restricted budgetary allocations for given year rather than adequate reimbursement of the providers that do not have the authority to decide on prices of services under BBP (6-7). Since the MOH reimbursement for BBP services does not cover the real costs health providers and facilities have strong motivation to generate more financial resources through informal payments.

3.4 Low remuneration of health providers

Health and social work is the 2nd least paid economic activity in Armenia (16). In 2007, the average gross monthly wage for health and social workers was 44,394 Armenian drams (AMD) (≈ 248.6 PPP int. \$)³ (16). Figure 5 represents monthly nominal wages in international dollars for health and social workers from selected eastern-European countries. The remuneration of Armenian health and social workers is actually the smallest among those countries and is almost five times less their average (16). An officially reported cash payment on the part of user to the cashier in a hospital may not fully be reimbursed to a particular physician in a form of salary since a part of it would be spent for taxes (7, 25-27). Actually, if an average health worker lived only on salary his/her net income would be only 22% higher from the currently set general poverty level income (25-26). The low salaries and their arrears encourage health workers to prefer informal payments from patients (7).

3.5 Taxation of health care facilities and products

The health care facilities in Armenia regardless their private or public status are subject to taxation, since even when owned by a local government it is considered as a privately owned

³ Calculated using PPP conversion factor local currency units to international \$ 2005 (178.6) from World Bank (2008). Viewing the world at purchasing power parity [Electronic version]. Retrieved June 14, 2009 from http://siteresources.worldbank.org/DATASTATISTICS/Resources/WDI08_section1_intro.pdf

entity (6-7, 27). When a health facility reports a certain amount of BBP services provided and the State Health Agency (SHA) (purchaser organization) signs an act that confirms the delivery of services under the existing contract and transfers the funds to the facility to cover the costs of BBP services, the facility expenses are equal or more than the SHA reimbursement (7, 27). In this case for BBP services the health facilities are treated as not-for-profit and non-commercial organizations; however, for those services that are not covered by the BBP, the health facilities are treated as for-profit organizations and are subject to profit taxation (7, 27). This situation also creates strong incentives for health facilities to avoid formal OOP payments and take them informally (7).

Until year 2000, pharmaceuticals were exempt from value added tax (VAT), however the amendments made to the taxation law introduced 20% (VAT) on all pharmaceutical products sold in Armenia, except those mentioned in the Essential Drug List of the MOH (6). Given that the Armenian population spends most of OOP payments on pharmaceuticals (8), introduction of VAT suggests that the OOP payments on pharmaceutical products increased by about 20% (47). This poses additional financial burden on the shoulders of the sicker people who need to buy medications decreasing their financial protection.

3.6 Lack of awareness of patient rights

As was stated in the magnitude section of this paper, a large part of the participants in National Household Health Survey 2006 associated the essentially free primary care with more expensive healthcare. This suggests that those who think they can afford the primary care may have the intention to pay out of pocket. Thus out-of-pocket payments may often be induced by the users' beliefs and unawareness about their rights. The annual revision of BBP depending on the current economic situation creates confusion among the beneficiaries about the services they are entitled to (6). Lack of awareness among vulnerable groups about free

or subsidized services under BBP, also poses financial protection issues to the Armenian health care system (7).

4. Intervention Strategies and Priority Setting

4.1 Strategy 1: Strengthening Primary Health Care

In 2003, the government of Armenia approved Decree 1533-N “On Approval of the Primary Health Care Strategy for Armenia Population for 2003-08 and of the 2003-2005 Pilot Programs to Develop New Methods for the Organization and Financing of PHC Service Delivery in Armenia” which set the development of PHC as priority for the next years to come. Increasing accessibility of primary health care and establishment of a PHC system responsive to the needs of population were set as the major goals for this strategy. PHC reforms led to increased financing for PHC services, clearly defined types and volume of services provided by PHC providers and since January 1, 2006 these services became free of charge at the point of service to meet population’s needs. PHC reforms included actions to increase awareness about the PHC services covered by the BBP.

Strengths. This strategy reduces OOP payments (formal and informal) addressing the following determinants: raises more resources for PHC and increases awareness of the population about the PHC services covered by BBP.

Weaknesses. However, this strategy addresses only ambulatory and polyclinic services. The OOP payments (formal and informal) for PHC consumed about 0.4% of household income and they were less than 5% of total OOP health spending. Therefore, this strategy partially improves financial risk protection in Armenia.

Political feasibility. The MOH is already implementing this strategy; it was possible because of high political support from the Parliament and the Government of Armenia.

4.2 Strategy 2: State Certificates for Birth Attendance

On June 1, 2008 the Ministry of Health introduced a new method for financing maternity services through State Certificates for free birth attendance (28). This is a case based type of payment to health facilities (polyclinics and maternities). Women receive this certificate at the 22 week of pregnancy and as warrant for payment to the providers. In other words the user gives the certificate to the provider (instead of cash payment) the provider then gets reimbursement from the SHA (24, 28).

Previously, maternal services had been financed in the same manner as all other BBP covered services (lower than actual costs) providing incentives for informal payments. This MOH with support from the Government revised the reimbursement rates based on the analysis of market prices. The prices for services prescribed in these state certificates almost doubled. Currently, for birth attendance in Yerevan 110,000 – 124,000 AMD is paid, depending on the providers' level. In regions the price for birth attendance is 90 thousands AMD. For cesarean section (CS) the price paid to the facilities is 180,000 – 215,000 AMD in Yerevan and 155,000 AMD in the marzes (28). The strategy was widely discussed in the media to raise the public awareness about this new strategy. It is not clear however based on what economical grounds the ministry of health decided on lower rates for providers from regions, and giving advantage to providers located in Yerevan, bearing in mind that child and maternal death has higher rates in regions (29).

Strengths. This strategy decreases informal OOP payments both in PHC level and inpatient level of care (maternities). It addresses several key determinants like proper pricing of services under BBP, higher remuneration of health providers, and better awareness about services covered by BBP. It has also addressed the key determinant of governance by establishment of a “hot-line” within MOH to receive feedback from the users.

Weaknesses. Although introduction of birth attendance certificates was a strong improvement in increasing financial protection at least in child-maternal health services it might not fully eradicate the incentives on the part of health providers to ask for informal payments. The informal payments are instantaneous while the state reimbursement is not.

Theoretically, this strategy could be extended to all the services covered by BBP. A universal certificate for BBP could be developed and family doctors could be given the authority to provide it in case of need for hospital care. In cases of emergency the certificates could be provided by the ambulance services. However the coverage of family doctors in Armenia has yet room for improvement (33). Also this strategy would require market review of for all services covered under BBP, which could be time-consuming.

Political feasibility. The MOH is already implementing this strategy; it was possible because of high political support from the Government of Armenia, and public pressure to improve child-maternal services in Armenia.

4.3 Strategy 3: Community Health Insurance

Oxfam office in Armenia has been implementing community health insurance schemes. Oxfam, an international charity organization that focuses on development and relief in low-income countries, in late 90's introduced and supported community-based insurance schemes in Southern and northern parts of Armenia to increase access and affordability by providing simple risk-pooling model at local level (village community) (30-31). These efforts were accompanied with extensive small health facility (health posts) building, reconstruction and equipping (30-31). A fixed quarterly contribution of 2000 AMD (\approx 11 PPP int. \$) covered unlimited first aid, basic PHC services and medicine, some referral to higher level care and outreach visits of family doctors and narrow specialists(30-31). After the establishment of free primary health care, the program focused on outreach visits and promotion of secondary health care (30-31). Efforts have been made also to incorporate these schemes to the state

provided primary care in terms of developing mechanisms to make state PHC institutions to provide medication for health posts (30-31). The extensive reconstruction and equipping of health post helped Oxfam to achieve an increase in quality of care (31).

Strengths. This strategy addressed the key determinant of low healthcare spending by additional resource generation. It had primary care focus and addressed the issue of financial protection in hospital care only indirectly, by possible prevention of seeking hospital care. Some studies suggested that if supported financially these schemes could operate rather effectively in the peripheral level of the Armenian healthcare system (30-31). The government could support those schemes to provide financial protection for residents of remote areas of Armenia (30).

Weaknesses. The Oxfam's community insurance schemes had a very segmented and uneven coverage ranging from 10% to 90% per village (30-31). Participation rates were still lower than expected and were not coherent with the population health needs (31). Financial or other barriers to membership remain and should be further addressed (31). Redistribution of financial and health risks is restricted; it happens within small communities. Its voluntary nature leaves room for market failures.

Political feasibility. There is political support among local authorities in marzes and village majors for scaling up the schemes and integrate them into the system (30). There is also public acceptance that these schemes could be a good complement to recent PHC reforms (30).

4.4 Strategy 4: Private Insurance

A possible option for Armenia could be promotion of private insurance companies to enter into the healthcare market. Private health insurance may be voluntarily purchased on a group basis (e.g., by a firm to cover its employees) or by individual consumers (1). Theoretically they are supposed to compete with each other in a competitive market and offer more

attractive policies, and offer differentiated range of products according to users' attitudes, values and financial capabilities (1).

Strengths. This strategy provides more financial protection than OOP payments.

Weaknesses. Although the strategy of voluntary private insurance contains an element of financial protection there are major concerns about this method of financial protection. The US healthcare system primarily relies on private employer-sponsored insurance (1). The main shortcomings of voluntary private insurance approach are the following market failures: adverse selection and cream-skimming (48). In general such an approach implies high administrative costs and extreme fragmentation of pooling (49).

Political feasibility. The government and the public seems to be indifferent to this strategy since there is very little private insurance either offered or purchased in the healthcare market of Armenia (6, 16, 20).

4.5 Strategy 5: Mandatory Social Health Insurance

Option A – Single payer mandatory social health insurance

Social health insurance (SHI) is a method of funding national health care system of a country and providing equal access to healthcare services (32). It may be defined as a form of financing and maintaining health care system in a way to make it equally distribute risks among the population (32, 33). SHI pools both the health risks of the people and financial risks getting contributions from individuals, households, enterprises, and the government (34). It protects people against financial and health burden and is a relatively fair method of financing health care (34). In single payer systems there is usually one major fund of health contributions and progressive taxation is usually implemented. The administrator of the fund is usually the government (35).

Option B – Multi-player mandatory insurance

Under this strategy countries enforce health insurance by legislation, requiring compulsory contributions to competing insurance funds (36). These funds can be run by either public bodies, private for-profit or non-profit companies. They are obliged to provide a minimum standard coverage to all, and are not allowed to discriminate patients by charging different prices depending on their age, occupation, or previous health status (34).

Strengths. In single payer social health insurance the problem of cream-skimming and adverse selection is absent. The systems relying on this method of financing have advantage over multi-payer systems in terms of effective revenue collection, cost control, and financial protection (35). However they offer less choice in insurance products (34-35).

The multi-payer social insurance option may compensate the government's limited ability to collect taxes and offers more choice in insurance products (34-35). However in systems where the insurance funds are private for profit companies the incentives for risk selection still remain, some countries are quite effective in neutralizing those incentives and some are not. In Switzerland for example the health system implies rather defective risk adjustment mechanisms which make risk selection profitable (38). In Netherlands insurance funds still have small financial incentives for risk selection, however the costs of developing a risk selection strategy (spot and attract good risks) are quite high and those costs include also effects of negative public attitudes if the public gets informed about it (32).

Weaknesses. The option of mandatory social health insurance overall in spite of its advantages also might have major challenges (39-40). The major challenges in implementing social insurance are shadow economy and evasion from taxes which is wide-spread in post-communist countries (10, 37, 41). Establishment of SHI in some post-soviet countries (Russia 1993, Georgia 1995, and Kazakhstan 1996) was not always a success in terms of increase in revenues, coverage, efficiency, and redistribution (40, 41). Social health

insurance nevertheless has been considered an optimal way of health care financing for low and middle income (LMI) countries including those that are successor states to Soviet Union (11, 37, 41). Armenia is not an exception in this sense (42).

Adoption of social health insurance may also require big organizational and managerial capacity both on the part of providers and the government (37, 39, 40). In recent years however the government of Armenia is actively engaging the shadow economy by reforming the legal framework of taxation and introducing new projects targeted to reduce shadow economy.

Political feasibility. The issue of SHI was a topic for public discussion for several years. Drafts of laws introducing mandatory social insurance were developed, debated in the parliament and even included in the agenda. Skeptics about SHI had strong arguments against feasibility of SHI in Armenia since at the time Armenia faced strong challenges with shadow economy. The attempts to establish mandatory SHI failed perhaps because the public itself had not fully realized the necessity of having a comprehensive insurance program in the country. Thus, no strong public pressure was there to build an effective lobbying or public campaign for this strategy. However, advocacy work is necessary with relevant parliamentary committees to build political support.

Moreover, social health insurance may affect the interests of various groups in the population (50). The interests of employers might be affected, because they might have to pay contributions; employees, because membership would be compulsory and contributions might be deducted from their income (50). Hence, a consensus has to be built between all those interests affected, and if that consensus is not there the success of SHI might be questioned (50).

5. Specific Recommendations

The financial risk protection is a complex issue that requires development of strategies on systematic level and careful policy and priority setting to address the problem (37). Based on strengths and weaknesses, potential benefits, technical and political feasibility, and easiness of implementation of outlined strategies this paper recommends to introduce Mandatory Social Health Insurance in Armenia. The advantages of social health insurance include (37):

- Maximum risk pooling and financial protection - services are provided according to the need. The financial burden is focused on the ability to pay not the need for services.
- Provides a sustainable source of revenue generation.
- Allows evidence based decision making because service utilization and financial transactions within the healthcare system are transparent.

The main disadvantages include (48):

- Higher administrative costs
- Challenges in adequate coverage for workers in agriculture and the informal sector.

SHI is economically feasible for Armenia (42). However, it has to be done to diversify resource generation sources not to substitute the resources generated through the state budget.

The resources generated from general taxation should continue playing a critical role.

Without their sustainability and persistent growth a comprehensive insurance package will not be possible in Armenia.

Before undertaking any health reforms it is important to assess not only infrastructure and financial capacities but also public and political support for proposed reform actions. To be able to conduct the reforms effectively, one must have an idea how the public will actually react once the reforms are conducted and thus know how to present the reforms to the public and relevant groups of policy and decision makers. It is not clear what are the public attitudes and beliefs about the mandatory SHI today. These are yet to become a subject for

qualitative research. To successfully implement SHI in Armenia the following actions are needed:

1. Conduct a qualitative study to understand perception of the public and policy/decision makers.
2. Introduction of proper legislative mechanism for mandatory health insurance
3. Initiation of extensive public campaigns to gain public trust and awareness on this issue
4. Introduction of state insurance fund under the State Health Agency which will also act as a single purchaser organization. This strategy is feasible for Armenia since the state health agency has relevant experience as a purchaser organization and hence it will not take long time for it to develop effective policies and has the capacity to operate in all marzes of Armenia.
5. Introduction of payment methods by diagnostic referral groups DRG (prospective payments by case) in hospital care and predominantly fee-for-service in primary care. The payment transactions should also be exclusively electronic (E.g. electronic payment cards provided to the insured) and transactions should be made only by the consumers of the health system first in Yerevan then with the development of necessary infrastructure also in regions. This will allow the purchaser organization build a reliable patient information system and monitor financial and service activity of the providers and healthcare utilization of the consumers, hence it will be able to make more evidence based decisions on financing and/or priority setting, also it will be able to detect and penalize inappropriate health services provision and utilization models.
6. Intensive lobbying with the Government of Armenia, particularly the Ministry of Finance, to make sure that funding through general taxation remains sustainable.
7. Develop proper monitoring and evaluation mechanism that will help to continuously make improvements in the existing financing mechanisms.

Other additional steps could include a) reforming tax legislation concerning taxation of health facilities and health products; b) focusing more on preventive care; and c) integrating elements of Oxfam's community insurance schemes into the social health insurance fund to reach remote rural communities of Armenia.

6. Implementation and evaluation

Because the goal of the recommended actions was the improvement of financial risk protection in Armenia, the goal of the evaluation is to measure the changes in financial protection over time.

The evidence whether the recommend course of action is achieving its goal of improving financial protection can be obtained from annual household health expenditure surveys. The Ministry of Health could expect improvement in all subjective and objective measures of financial risk protection by the end of the first year of implementation (see Table 4). The MOH could measure the success of the program looking at the rates of OOP as percentage of total health spending, at catastrophic medical expenditure, and the percent of population covered by SHI. For those indicators for which the data would come from the SHA's electronic databases would be collected annually and trends over time would be examined. Those indicators that would come from a HHE survey would be collected every 5 years (Table 4). Experience of other former soviet countries will serve as a basis for developing 1- and 5- year targets for the specified objectives.

In addition, qualitative studies would be useful to reveal hidden problems concerning the provider's performance, public attitudes and the operation of the SHI in general. Information from these studies could help to correctly formulate and implement major policy reforms in the healthcare system.

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Tables and Figures

Table 1. Financial protection, equity and risk pooling

	Types Financing	Financial Protection	Equity	Risk Pooling
Lowest	Out-of-pocket	Low	Low	NA
	Medical saving account	Medium	Low	Medium/Low
	Community financing	Medium	Low	Medium
	Private health insurance	Medium	Low	Medium
	Social health insurance (mandatory)	Medium	High	High
Highest	National health insurance	High	High	High

Table 2. Top ten countries with highest out-of-pocket payment (European countries 2006)

Country	Out-of-pocket expenditure as percentage of private expenditure on health	Private expenditure on health as percentage of total expenditure on health	Out-of-pocket expenditure on health as percentage of total expenditure on health
Georgia	91.9	78.5	72.1
Tajikistan	97.0	77.4	75.0
Albania	94.7	64.5	61.0
Azerbaijan	83.5	69.1	57.7
Kyrgyzstan	95.4	56.7	54.0
Armenia	87.6	58.8	51.5
Uzbekistan	97.1	49.8	48.3
Cyprus	84.3	55.2	46.5
Bosnia and Herzegovina	100	42.8	42.8
Republic of Moldova	96.6	43.6	42.1

Source: WHO Statistical Information System (WHOSIS) <http://apps.who.int/whosis/en/> (accessed June 2009)

Table 3. Proportion (percentage) of healthcare expenditures from household income

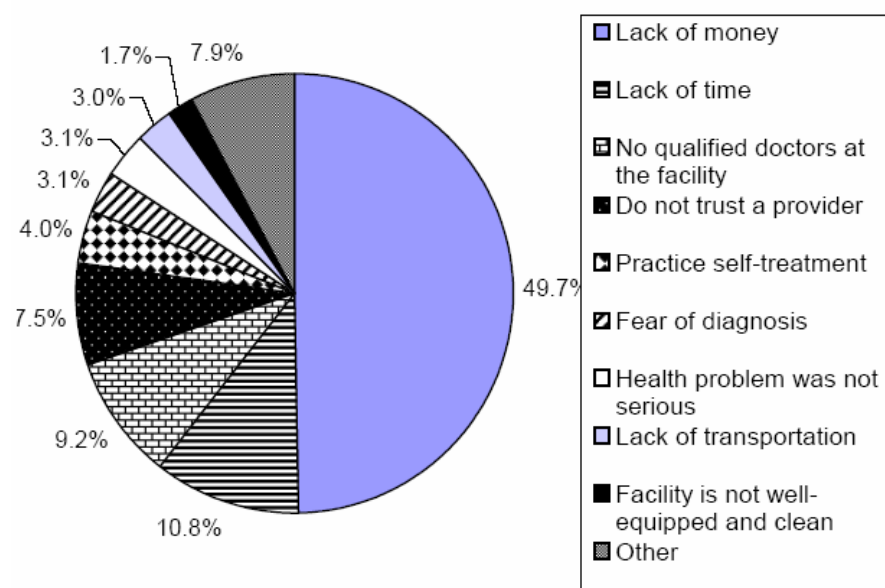
Type of service	Quintile 1 (poorest)	Quintile 2	Quintile 3	Quintile 4	Quintile 5 (richest)	Average
Ambulatory-polyclinic services	0.7%	0.5%	0.3%	0.2%	0.2%	0.4%
Emergency care	0.2%	0.1%	0.07%	0.06%	0.03%	0.1%
Dentistry	0.9%	0.5%	0.5%	0.6%	0.2%	0.5%
Hospital care	14.7%	3.7%	5.0%	5.6%	2.0%	6.2%
Women's consultation, child delivery assistance	1.3%	0.5%	0.8%	0.4%	0.2%	0.6%
Rehabilitation and sanatorium care	0.4%	0.07%	0.08%	0.2%	0.2%	0.1%
Traditional and other healthcare	0.2%	0.02%	0.1%	0.2%	0.03%	0.1%
Laboratory and instrumental diagnosis	1.5%	0.6%	0.7%	0.6%	0.5%	0.8%
Drugs, food supplements and medical supplies	6.2%	2.9%	3.2%	2.6%	1.6%	3.3%
Total	26.2%	8.8%	10.8%	10.6%	5.2%	12.3%

* Source: Survey of 2006 Household Health Expenditures and reproduced from USAID Primary Healthcare Reform Project (2008), *How Great Is The Burden Of Household Health Expenditure In Armenia [Electronic version]*. Retrieved May 26, 2009, from http://www.phcr.am/upload/files/PHCR_article_Access_and_Affordability_Analysis_Eng.pdf

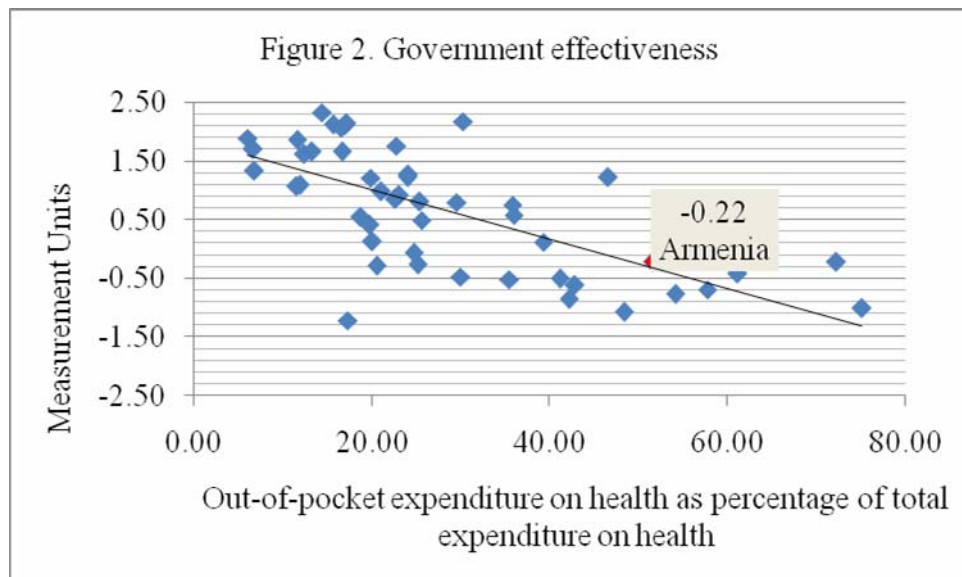
Table 4. Evaluation measurable objectives

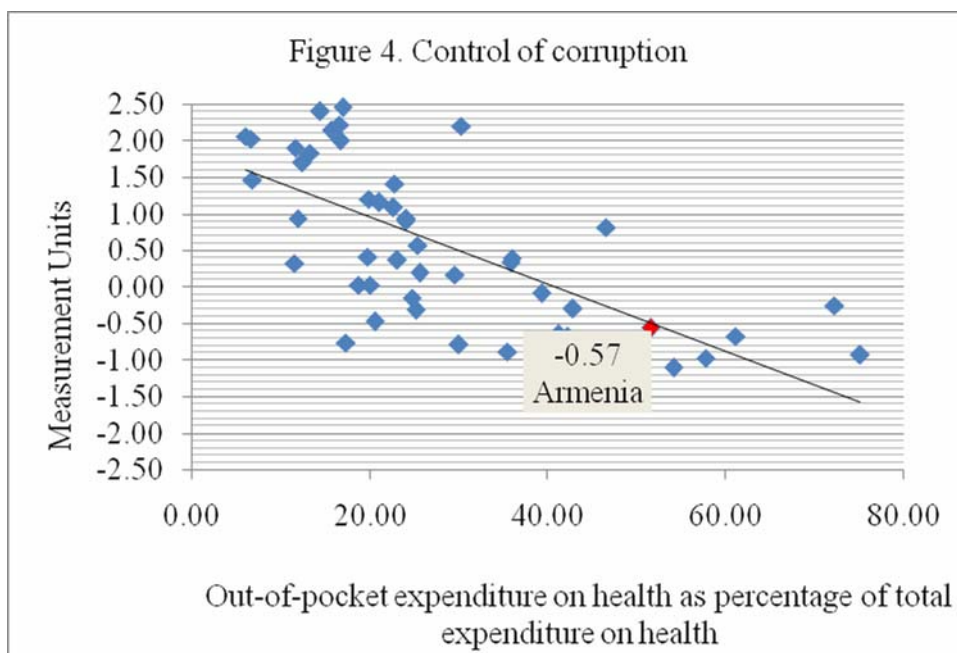
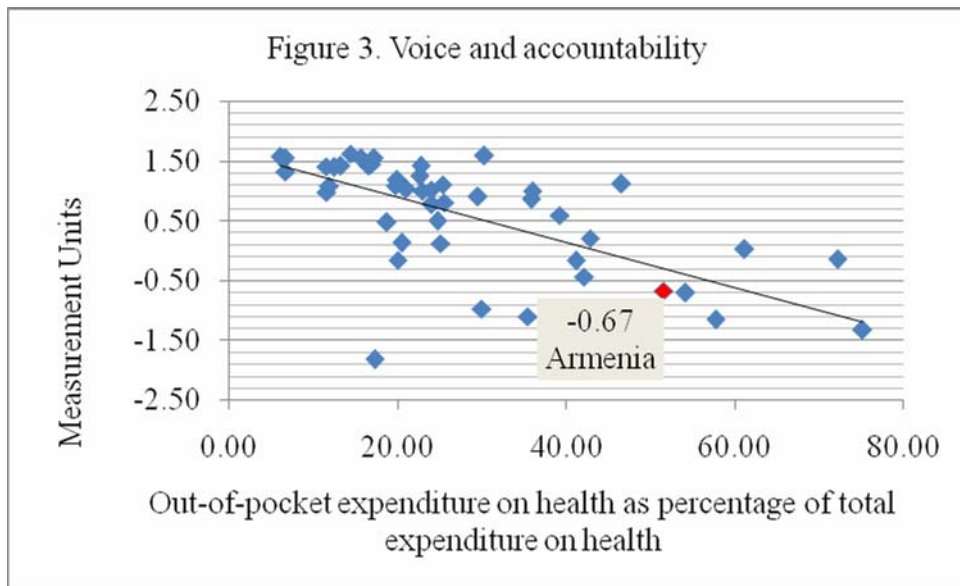
Objective	Specific Indicator	Source	Timing
10% decrease in OOP rates	OOP as % of total health expenditure	HHE	1 year
50% decrease in OOP rates			5 years
Reduce catastrophic medical expenditure to 5% (extreme poverty definition)	Catastrophic medical expenditures	HHE	5 years
30% of population covered by SHI	% of people entitled to SHI services	SHA electronic data set	1 year
70% of population covered by SHI			5 years

Figure 1. Reasons for not seeking primary health care

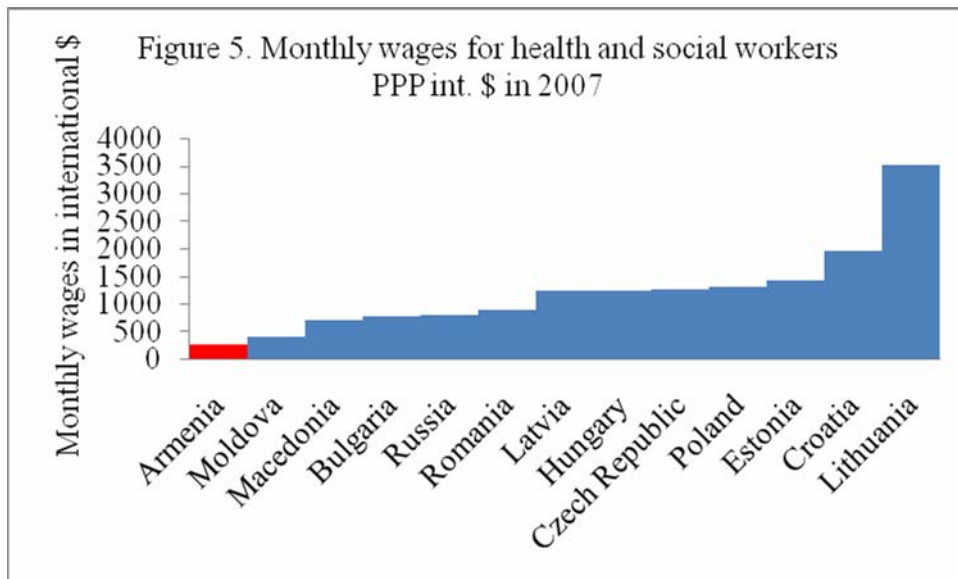


Source: USAID Primary Healthcare Reform Project (2006) National Household Health Survey 2006, baseline evaluation. [Electronic version]. Retrieved June 14, 2009 from www.phcr.am/upload/files/HHS2006_final_eng.pdf





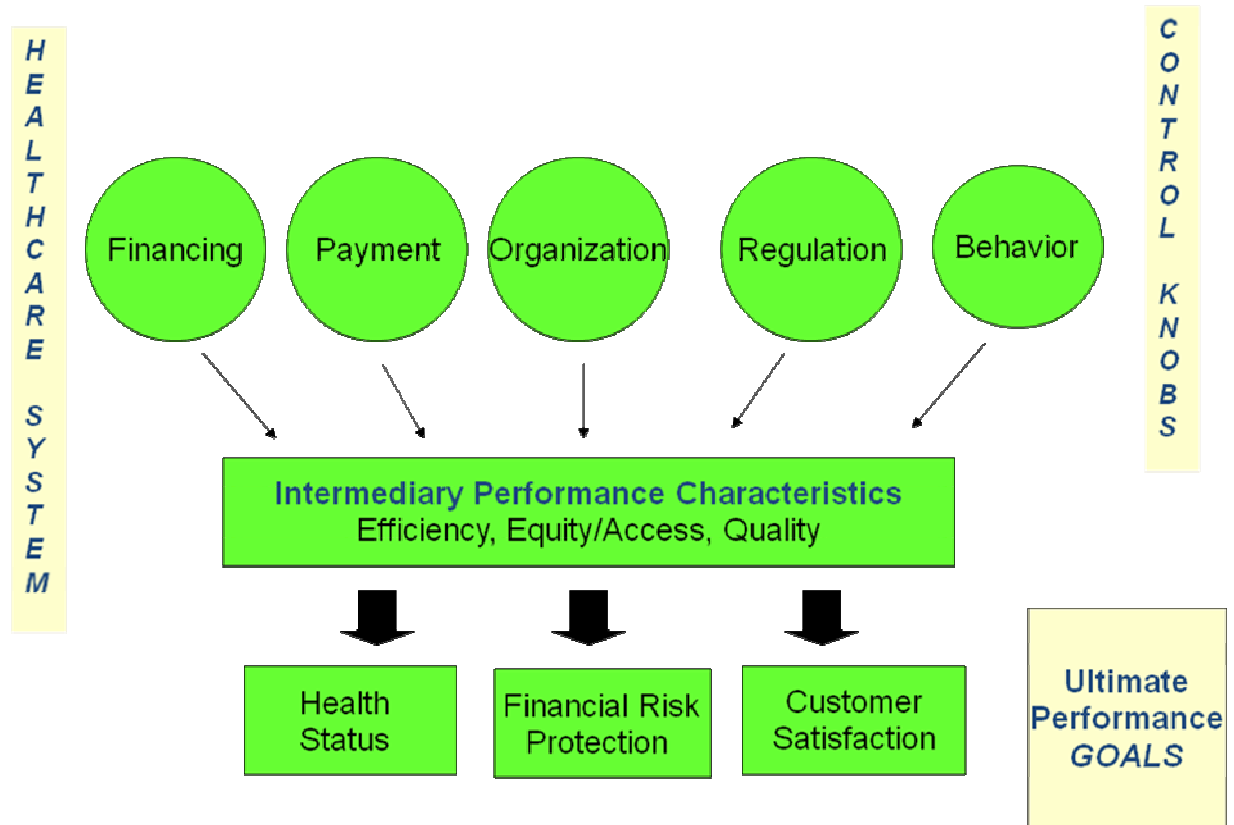
Sources: WHO Statistical Information System (WHOSIS) <http://apps.who.int/whosis/en/> (accessed June 2009) and World-bank's The Worldwide Governance Indicators (WGI) project dataset <http://info.worldbank.org/governance/wgi/pdf/wgidataset.xls> (accessed June 2009)



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Appendix 1

Conceptual Framework



Roberts et al, 2004

Appendix 2

Basic Concepts and Terminology

“Behavior” refers to the health behaviors of individuals and health providers and the efforts to alter those behaviors, such as anti-smoking campaigns and persuading citizens to buy insurance (1).

“Customer Satisfaction” is a measure of healthcare service consumer perception on how well their needs have been met and that an acceptable response to their health problem was provided by the healthcare system (1, 9). In the World Health Organization report, customer satisfaction is replaced by “increasing responsiveness to the legitimate demands of the population” (9). Customer satisfaction is measured by subjective indicators such as those that can be derived from patient surveys (9, 44).

“Efficiency” includes allocative efficiency and technical efficiency. Allocative efficiency is concerned with how well the allocation of the healthcare resources is coherent with the public needs and values (45). Technical efficiency is closer to the common notion of efficiency – maximizing outputs at the available inputs or minimizing inputs for the existing outputs (45).

“Equity” refers to access to and funding of healthcare. Two principles comprise the concept of equity: 1. Vertical equity – how progressively is the financial burden of healthcare distributed according to financial capacity, and how progressive is the healthcare benefit according to healthcare need, and 2. Horizontal equity – fairness among those with same income level (1, 18).

“Financing” refers to the mechanisms implemented to raise funds for the health system and the design of the institutions responsible for healthcare financing, such as insurance companies and social insurance funds (1).

“Health Status” is a collection of objective and subjective measures for the health situation of a country. The objective measures can be grouped into three main categories mortality-based, morbidity-based and complex. Examples of mortality based indicators include maternal mortality rate, life expectancy at birth and Infant mortality rate. The morbidity-based indicators are the estimates of incidence of those diseases that can have a major impact on the health situation of a country including viral diseases such as AIDS and bacterial diseases such as TB and malaria (43). The complex indicators are the measures for disease burden of a country, such as disability adjusted life expectancy and quality adjusted life years (see reference 2 for further discussion). The subjective measures are often derived from data collected from surveys such as national household surveys, which can also be linked to socio-demographic household characteristics. Ultimately, these Health Status indicators are intended to inform health professionals to assist them in improving the health status of the population (1, 9, 43.).

“healthcare quality” two aspects of it are applied in this paper: technical performance and responsiveness to patient preferences. Technical performance is defined as timeliness and accuracy of the diagnosis, appropriateness of therapy and skill with which procedures and other medical interventions are performed (46). Responsiveness to patient preferences is defined by Donabedian (2003) under the rubric of “acceptability” and by the Institute of Medicine (IOM 2001) as “respect for patients’ values, preferences and expressed needs.”

“Informal payments” in this paper we define In. P. - as direct unofficial out-of-pocket payments to health personnel either for services that are covered by the basic benefit package and are supposed to be free of charge or for services that are not covered by the basic benefit package yet are not registered as official payments.

“Organization” refers to the measures taken to alter the mix of providers in the system, how they operate within the system and internally. Such measures typically affect competition, decentralization, and direct governmental control of the providers (1).

“Payment” covers the methods on how the healthcare providers are paid and on how healthcare services are purchased along with the financial incentives these methods create for the providers and the users (1).

“Regulation” refers to the laws that regulate the healthcare sector, including providers, financial institutions and users (1).