IMPROVING HEALTH FINANCING IN ARMENIA

Developed by International STTA Frank Feeley, Health Finance Specialist, Boston University School of Public Health for Primary Health Care Reform Project

June, 2009

DISCLAIMER

The author's views expressed in this report do not necessarily reflect the views of the United States Agency for International Development or the United States Government.

Primary Healthcare Reform Project
3A/1 Aghbyur Serob Street
Yerevan 0019, Republic of Armenia

Phone: (37410) 261312
Fax: (37410) 267526
www.phcr.am

TABLE OF CONTENTS

ACRONYMS 3

EXECUTIVE SUMMARY 4

Support MOH in reducing catastrophic household health payments by reviewing available studies identifying options and making recommendations 4

I. INTRODUCTION 5

II. THE CURRENT PROBLEM IN ARMENIA 6

Low Levels of Health Spending 6
High Capacity and Low Fiscal Effort 9
High Out of Pocket Health Expenses 10
Low Utilization 10

III. ARMENIAN GOVERNMENT RESPONSE 11

MTEF Commitment 12
Social Safety Net 12
Maternity Vouchers 13

IV. THE CONCEPTUAL OPTIONS FOR ARMENIA 13

Increasing Tax Funding in the Current System 14
Selectively Formalizing Co-Payments 16
Insurance 17
Voluntary 17
Employment Based 17
Social 17
Supplementing Tax Funding; Russia, Kyrgyzstan 18
Targeting the Poor: Mexico 19
Other Insurance 19
Targeted "Demand Side" Payments—Vouchers for Critical Interventions 20

V. CONCLUSION 20

ACRONYMS

MTEF	Medium Term Expenditure Framework
PHC	Primary Health Care
PHCR	Primary Health Care Project
SHA	State Health Agency
TB	Tuberculosis
TRF	Total Fertility Rate
WHO	The World Health Organization

EXECUTIVE SUMMARY

Support MOH in reducing catastrophic household health payments by reviewing available studies identifying options and making recommendations[1]

Last year's analysis of health care affordability by PHCR, using data from the 2006 Household Health Expenditure Survey, showed that 16% to 26% of Armenian households incur catastrophic health expenditures. Out of pocket health expenditures are highly regressive, substantially greater than public health expenditures, and appear to deter some necessary utilization of referral services. In response to this report, PHCR asked Boston University to outline policy options which might address the problem of health care affordability in Armenia.

Key Findings

1. Armenia, along with Georgia and Azerbaijan, lags well behind other former Soviet countries and all of "the West" in the proportion of the GDP going to health from public funds and social insurance. This proportion is also below that in many developing countries. Compared to all these countries, Armenia devotes a smaller percentage of its national budget to health care

2. As a result of low public health spending and the large number of physicians, Armenia has relatively little public money to spend on each physician. This not only keeps salaries low, but it restricts the amount of public funding available for drugs, supplies and equipment, and ancillary staff. As a result, health providers are forced to seek out of pocket payments to supplement salaries or obtain drugs.

3. These high levels of out of pocket payments result in low levels of utilization of hospital services----Armenia is near the bottom in admissions per 100 per year.

4. Out of pocket payments are catastrophic for a significant percentage of Armenian households (16% to 26%, depending on the poverty level used).

5. Financial catastrophes from health costs will continue, as will low utilization of beneficial services, unless Armenia increases the percentage of GDP going to health care through public and risk pooled mechanisms

6. Options to increase the flow or targeting of funds to health include:
    - Increasing the proportion of health in the Government budget (and reducing the proportion from some other uses)

[1] Given the highly sensitive nature of this issue, the deliverable for this task identifies and analyzes options, but does not recommend a specific course of action to be taken by the Government of Armenia. If the MOH chooses to consider any of these options, analysis of the application and implementation in Armenia can be undertaken though Technical Assistance at some point in the future.

- Increasing taxes or tax collections (preferably from the highest income groups)
- Targeted taxes (cigarettes, etc) dedicated to health spending
- Rationalizing out of pocket payments into a transparent copayment policy with a cap on out of pocket expenses
- Selective private insurance initiatives
- Selectively raising payments in the scheme for the socially vulnerable
- Expanding the voucher scheme to clearly defined health conditions for which the available treatment is very effective
- Creation of a social insurance program for formal sector workers, and integration of social insurance and public funds in a strong state purchasing agency.[2]

Ultimately, the strategy which raises the amount of public funds available for health care in Armenia may have a number of these elements. If the political will exists to increase the proportion of the GDP going to health through public or risk pooled funds, PHCR can provide further analysis of the particular options at interest. Such options can be explored in parallel to reforms designed to improve the productivity and quality of the existing health system. The path to reform taken by Kyrgyzstan may be an interesting model. But unless Armenia adopts strategies to increase health funding from public and risk pooled sources to 2.5% to 3.5% of GDP, catastrophic health expenditures will remain high and some Armenians will avoid medically necessary care because of the expense.

I. INTRODUCTION

Armenia is a country with many doctors and hospital beds. Although it inherited the publicly funded Semashko health care system from the Soviet Union, its citizens now pay, out of pocket, a larger portion of the health care bill than the citizens of most developed or developing countries. All former Soviet countries faced the struggle to afford a Semashko-derived system in a market economy. As a result of economic growth and health reform, health care in most former Soviet republics, from Estonia to Kyrgyzstan, is now more affordable than it is Armenia. Analysis of the 2006 Armenia household health expenditure study shows that formal and informal patient payments were:

- substantially more than the total amount of public health care spending
- highly regressive, and
- had catastrophic financial impacts on a significant percentage of the population.

We do not know how many Armenians were deterred from obtaining necessary medical care by high costs.

While the 2009 household health expenditure survey will provide an opportunity to analyze progress in making health care more affordable, it is clear that the level of public and risk pooled funding for health in Armenia is still low by any international standard.

[2] If formal sector wages account for 20% of the GDP, a 4% levy for social health insurance would increase the available public funds for health care by almost 50%.

This paper briefly analyzes the extent of this funding shortfall and its impact. In the second part of the paper, we provide a brief introduction to strategies available to Armenia to increase health care funding and reduce financial barriers to necessary medical care. It is not our role to recommend a single path to making health care more affordable. However, selection and implementation of one or more of these strategies should be a matter of priority for Armenian leaders interested in improving the health status and financial security of the population.

II. THE CURRENT PROBLEM IN ARMENIA

Low Levels of Health Spending

As a percentage of the Gross National Product, expenditures on health care by Government in Armenia are among the lowest in the world, lower than in many poor nations in Africa and Asia. After falling to a low of 0.8% of GDP in 2000, public health care spending recovered to 1.39%-1.45% in 2005 and 2006.[3] Government indicated in the Medium Term Expenditure Framework (MTEF) for 2007-2009 its desire to further expand health care spending to 1.8% to 2.0% of the GDP. However, with the world financial crisis affecting the economy and limiting Government revenues, implementation of the MTEF is currently on hold. If public health spending reaches 1.8% of GDP this year, it will likely be because GDP has fallen, not because of increasing expenditures on health.

The table below[4] shows public (including social health insurance) funding for health as a percentage of the GDP in three groups of countries----former Socialist economies, a selection of developing countries, and the large Western industrial democracies. The first column shows the percentage of the total economy (Gross Domestic Product---GDP) which is spent on health. The second column shows the proportion of total health spending that is public (including social insurance program), and the third column shows the % of GDP spent on health by Governments and social insurance programs. The last column shows health as a percentage of total Government expenditure.

[3] 2007-2009 Medium Term Expenditure Framework, p.85.
[4] Data from WHO Statistical Information System (WHOSIS).

Table 1. Patterns of Health Spending

Country	% GDP on health	Proportion Public	% GDP on health from public sector	% Gov. expenditure on health
Former Socialist Economies				
Albania	6.5	0.403	2.6	***8.6***
Armenia	5.4	0.329	**1.8**	***8.2***
Azerbaijan	3.9	0.248	**1.0**	***3.8***
Belarus	6.6	0.758	5.0	10.5
Czech Republic	7.1	0.886	6.3	14.4
Estonia	5	0.769	3.8	11.5
Georgia	8.6	0.195	**1.7**	***5.9***
Hungary	7.8	0.708	5.5	11.1
Kazakhstan	3.9	0.642	2.5	9.3
Kyrgyzstan	6	0.395	2.4	***8.4***
Latvia	6.4	0.605	3.9	10.8
Lithuania	5.9	0.673	4.0	11.9
Mongolia	4.3	0.775	3.3	11
Moldova	7.5	0.555	4.2	11.3
Poland	6.2	0.693	4.3	9.9
Romania	5.5	0.703	3.9	12.4
Russian Federation	5.2	0.62	3.2	10.1
Slovakia	7	0.744	5.2	13.9
Slovenia	8.5	0.724	6.2	13.4
Tajikistan	5	0.228	**1.1**	***5***
Turkmenistan	4.8	0.667	3.2	14.9
Ukraine	7	0.528	3.7	8.4
Uzbekistan	5	0.477	2.4	***7.4***
Vietnam	6	0.257	**1.5**	***5.1***
Developing Countries				
Argentina	10.2	0.554	5.7	14.2
Brazil	7.9	0.441	3.5	***6.7***
Colombia	7.3	0.848	6.2	17.7
Cuba	7.6	0.908	6.9	11.7
Egypt	6.1	0.38	2.3	***7.3***
Ethiopia	4.9	0.61	3.0	10.8
India	5	0.19	**1.0**	***3.5***
Indonesia	2.1	0.466	**1.0**	10.8
Kenya	4.5	0.466	2.1	***6.1***
Mexico	6.4	0.455	2.9	12.5
Nigeria	3.9	0.309	**1.2**	***3.5***
Pakistan	2.1	0.175	**0.4**	***1.5***
Philippines	3.2	0.366	**1.2**	***5.5***
South Africa	8.7	0.417	3.6	9.9
Sri Lanka	4.1	0.462	**1.9**	***7.8***
Thailand	3.5	0.639	2.2	11.3
Turkey	5.7	0.714	4.1	13.9

Developed World				
Australia	8.8	0.67	5.9	17
Canada	9.7	0.703	6.8	17.5
Germany	10.7	0.769	8.2	17.6
Israel	7.8	0.665	5.2	11.2
Italy	8.9	0.766	6.8	14.1
Japan	8.2	0.822	6.7	17.8
Netherlands	9.2	0.649	6.0	13.2
Korea	5.9	0.53	3.1	10.9
Spain	8.2	0.714	5.9	15.4
Sweden	9.2	0.817	7.5	13.6
United Kingdom	8.2	0.871	7.1	16.2
USA	15.2	0.451	6.9	21.8

Bold face type marks the countries that provide less than 2% of GDP in public health spending, or that spend less than 9% of Government budgets on health.

The developed countries generally spend more than 8% of the GDP on health care. Even Korea, which has developed more recently, spends almost 6%. Of equal importance, the percentage of GDP spent on health care by Governments and social insurance programs generally exceeds 6%. In every case, developed country Governments are spending more than 10% of their budgets on health care, and except in Israel and Korea, health is more than 13% of Government expenditure. In the United States, Canada, Germany and Japan, more than 17% of Government expenditures (including social insurance) go to health.

Health expenditures by Government are lower in the developing world. But those countries that are most developed, or generally considered to be making an effort to address the health of their populations, spend more than 2% of the GDP on public health funding, and devote over 10% of Government budgets to health. In every case, these countries have a younger population than Armenia, so relatively fewer citizens are at risk for costly chronic disease. And they have much smaller health care establishments. The laggards in this group---notably Nigeria and India----are widely recognized as having inadequate and poorly managed public health systems, which force people to pay for much of their medical care from their own pockets.

Turning to the former Socialist countries, we see a most interesting pattern. Public expenditure on health generally runs between 2% and 3% of GDP, more in the countries of Eastern Europe. To reach this level, these countries devote 9%-10% or more of public spending to health. There are a few significant exceptions to this rule (shown in bold). One is Tajikistan, the poorest of the former Soviet countries. One is Vietnam, which has seen a “de facto” privatization of its public hospitals. The other three countries spending less than 2% of the GDP on health care from public sources are Azerbaijan, Georgia, and Armenia. As a result, private payments and external donations make up from 80% (Georgia) to 67% (Armenia) of all health spending in these countries.

High Capacity and Low Fiscal Effort

Unlike developing countries with low fiscal effort for health, the legacy of the Semashko system leaves the former Soviet countries with large cadres of health personnel and extensive networks of health facilities. WHO statistics for 2006 shows that Armenia has 11,133 physicians, one doctor for every 270 citizens. It has one hospital bed for every 227 citizens. The funds committed by Government must be stretched over this extensive health network.

An analysis in 2003[5] showed the relatively low level of public expenditure per physician in former Soviet countries that occurs when low public spending must be stretched over the inherited Semashko system. The table below shows expenditure per physician: in total, and from public and private sources. Public expenditure per physician in the three Central Asian countries shown in the table was substantially less than those in developing countries. Yet these countries devote as much or more of the economy to public health spending as Armenia (see Table 2 below).

The latest statistics available from WHO (for 2006) show that Armenia has a per capita income (at Purchasing Power Parity) of $4,950 and a population of 3,010,000. If 1.8%[6] of the economy goes to health care through public sources, public spending per physician was $23,664,[7] generally below the levels calculated three years earlier for the three Central Asian countries.

Table 2. Health Expenditure per Physician

Country	Total expenditure per physician	Public expenditure per physician	Private expenditure per physician
Denmark	$790,704	$649,168	$141,536
Japan	$1,081,290	$829,350	251,941
Germany	$760,262	$570,957	$189,305
France	$759,467	$577,195	$182,272
U.K.	$1,046,437	$847,614	$198,823
Spain	$353,619	$247,180	$106,439
Poland	$230,110	$160,387	$69,723
Mexico	$261,958	$121,549	$140,410
Russia	$105,459	$76,458	$29,001
Brazil	$498,327	$203,317	$295,009
Turkey	$288,182	$204,897	$83,285
Thailand	$986,975	$566,524	$420,451
Kazakhstan	$61,527	$45,038	$16,038
China	$130,079	$82,470	$47,609
Kyrgyzstan	$54,040	$33,343	$20,697
Uzbekistan	$28,870	$22,374	$6,496

[5] Cheryl Cashin and Rich Feeley, "Allocating Funding to the Health Sector: A Review of International Experience" Boston University/USAID ZdravPlus Program, March 2003.
[6] This value is from the WHO data base, but may include some donor funding. The National Health Accounts and MTEF suggest a somewhat lower level of public health spending (1.6% of GDP).
[7] Calculations using data from the WHO Statistical Information System for 2006.

What does low public spending per physician mean? Most obviously, it means low salaries. But it also means that there is little public money left over after payrolls to cover the costs of drugs, tests, equipment, and ancillary staff. As an almost inevitable result, physicians are drawn into private fee for service practice, or doctors and facilities must supplement public salaries, formally or informally. It also means that funds are inadequate for the drugs, tests, and therapies that physicians prescribe and these will only be available if patients supplement public funds with their own. The situation seen in Armenia, with high levels of out of pocket spending, is inevitable.

High Out of Pocket Health Expenses

Last year, PHCR prepared an analysis of the impact of out-of-pocket health spending based on the 2006 Household Health Expenditure Survey[8]. This report documented the impact of out-of-pocket health expenditures. Concentrated in hospital costs and drug purchases, these household expenses averaged 26.2% of household income. The expenses were highly regressive, accounting for only 5.2% of reported income for the richest quintile, but 26.2% of reported income for the poorest. A further analysis looked at the proportion of Armenian households experiencing health expenditures that were catastrophic by international definition.[9] The analysis was conservative, because reported incomes were adjusted upward to the level reported in larger socioeconomic surveys. Using the absolute poverty measure (only enough for a minimum intake of food), 16% of the households had catastrophic health expenditures. Using the higher general poverty level, over a quarter of Armenian households (26%) incurred catastrophic health expenditures in 2006.

Low Utilization

The extent to which health costs deter necessary health expenditure is hard to determine. The Household Survey asked if respondents sought professional medical care when ill. But it did not ask if those who consulted a doctor obtained the services recommended----hospital admissions, drugs or tests. While we do not know how many patients deferred or declined hospital admissions because of the expected cost, we can compare hospital utilization in Armenia with other FSU countries and European countries with a well developed health system and (like Armenia) a well educated and aging population. As noted above, Armenia inherited a generous supply of hospital beds. Unlike some areas in Africa, almost all Armenians have ready geographic access to primary health care, which should serve as a gateway to hospital and specialist services.

---

[8] "How Great is the Burden of Household Health Expenditure in Armenia" USAID/Primary Health Reform Project.

[9] Health expenditures exceed 40% of the difference between household income and the official poverty level.

Table 3
Hospital Admissions per 100 Residents per Year

Western Europe[10]		**Former Soviet Union**[11]	
Austria	26.1	**Armenia**	**7.5**
Belgium	16.2	**Azerbaijan**	**5.4**
France	16.4	Estonia	16.4
Germany	19.9	**Georgia**	**5.7**
Ireland	13.9	Kazakhstan	17.3
Italy	14.0	Kyrgyzstan	12.7
Netherlands	10.3	Latvia	19.5
Norway	17.4	Lithuania	21.3
Portugal	11.2	Russia	21.4
Spain	11.6	Tajikistan	9.8
Sweden	15.1	Ukraine	20.5
		Uzbekistan	15.0

In the countries of Western Europe, more than 1/10th of the population is admitted to hospital every year, suggesting that a person would be admitted, on average, seven times during his lifetime. In the US, hospital admissions are less frequent, but the US health care system has invested massive amounts in hospital outpatient facilities that perform--- on an outpatient basis----surgeries, chemotherapy and diagnostic tests usually done inpatient in other countries.

The "Caucasian disease" of limited public health spending linked to low levels of service utilization is confirmed by the data for Former Soviet Countries. Only Georgia, Azerbaijan and Armenia admit fewer than 8 patients per 100 citizens per year. Even poor Tajikistan admits 9.8, and it has a younger population. The typical post-Soviet pattern runs between 13 and 21 admissions per 100 citizens. With 30% of the population over 60, Armenia would expect to have as much or more need for hospital care as these countries. In comparison to either Europe or its former Soviet counterparts, Armenia appears not to be delivering the level of hospital services that would be implied by the Semashko tradition or any objective measure of medical necessity.

.

III. ARMENIAN GOVERNMENT RESPONSE

The Armenian Government appears to admit that more money is needed for health care, although they have perhaps not acknowledged the extent of underfunding and the consequences outlined above. Government initiatives to address the adequacy of health funding include the following.

[10] From OECD Data for 2005.
[11] Data from Who Europe.

MTEF Commitment

The Armenian Government planned to increase the proportion of the GDP going to health services from the Government. The 2007-2009 Medium Term Expenditure Framework called for increasing health spending from 8% of all Government expenditure in 2005 to 8.8% of all Government expenditure in 2009. Total public health spending would rise from a recorded 1.4% of GDP[12] in 2005 to 1.7% of GDP in 2009----still well below the level seen in other Former Soviet Countries outside the Caucuses. The additional money was to be obtained by targeting a disproportionate share of the expected growth in public revenues to health, not by shifting existing budgets from other uses.

Primary care had been the principal beneficiary of larger allocations to health in the years to 2008. Primary care was also favored in the 2007-2009 MTEF with funding scheduled to go up 16.3% in 2008 and 14.9% in 2009. Hospital payments were expected to increase by smaller percentages.

The global financial crisis and the decline in revenues caused the Government to put the plans in the MTEF on hold. There were no increases in basic primary care capitation payments this year, leaving no room for salary increases in this sector. Absolute levels of public expenditure for health are not rising in 2008, although a decline in the Armenian economy might result in an increase in the percentage of the GDP going to health through the public expenditure. At the moment, the Government does not appear to be in a position to substitute some public funding for a portion of existing private payments.

Social Safety Net

Building a social safety net has been the Government's primary strategy. Certain services (including primary care) are to be provided free for every Armenian, an additional set of services for those who are socially vulnerable. These services are paid for by the State Health Agency through a state order. Inpatient services are paid according to a case based rate, while primary care facilities receive a combination of capitation based payments and a limited amount of fee for service reimbursement for drugs and tests. The Government also funds directly facilities providing certain services viewed as particularly important to the public health---such as treatment of TB, AIDS or venereal diseases.

As a targeting strategy for Government funds, this approach seems reasonable. Services of lower importance are left for out-of-pocket payment, and wealthier citizens are expected to pay for some services that the poor receive for free. However, the amounts paid for these targeted services must be adequate to provide an income acceptable to the professionals providing the service, and the payments must cover the costs (drugs, tests, procedures) necessary for effective treatment. The data from the Household Expenditure Survey suggests that the State Order payments are insufficient to meet needs. Almost all of the poorest quintile of Armenians should be socially

[12] The discrepancy from the 1.8% reported by WHO in 2006 may be attributable to recording a portion of donor assistance for health within public expenditure in the WHO data but not in the MTEF.

vulnerable and eligible for the larger package of State funded services. But they pay 26% of their income for health services. Essential drugs are often not available because facilities have exhausted the designated budget. And the level of out of pocket hospital expenditures for the poor confirms that the State Order is not being taken as "payment in full."

Maternity Vouchers

The maternity voucher implemented in July 2008 is a direct response to the high out of pocket payments for maternity and delivery that were standard throughout the country, even though "free" delivery was nominally part of the Basic Benefit Package. Public payment rates for maternity services were raised dramatically and each pregnant woman is issued a voucher which specifies all of the services that physicians and hospitals are obligated to provide for free. In two marzes, USAID also funded local non-Government organizations to assist women in asserting their right to free services under the maternity voucher.

A preliminary evaluation by the USAID anti-corruption project indicates that the maternity voucher program has been successful in one marz[13] where it was supplemented with the NGO grant. Health care personnel report receiving higher payments from their employers for delivery services, and women expressed the opinion that costs---while not reduced to zero---were much less. However, there is as yet no countrywide evaluation that compares out of pocket maternity payments today with those before the maternity voucher. Some evidence should be available from the new Household Health Expenditure Survey now underway. However, results may be different where there was no special effort to support women in asserting their right under the voucher, or in Yerevan, where expected incomes from fee paying patients may be much higher than in the marzes.

IV. THE CONCEPTUAL OPTIONS FOR ARMENIA

To reduce out of pocket expenditures for health, Armenia must find a way to increase the funding that goes to the health sector from public or risk pooled sources. One way to do this is to shift budget priorities from other sectors, increasing the portion of Government expenditure going to health. Another option is to increase Government revenue as a portion of the economy, but this requires new taxes or better collection of existing taxes.

Tax funding is not the only way to improve equity and access to health care. This can also be achieved through social health insurance, or by a well regulated system of private insurance with appropriate subsidies for the poor. The private health insurance market in Armenia covers only those employees in the best jobs, and accounts for less than 2% of health expenditure. There is as yet no social health insurance system to supplement tax funding for health care, as there is in Russia, Kyrgyzstan or the Baltics.

[13] Report prepared for MAAC and presented June 16, 2009. Available only in Armenian version at this writing.

In the concluding sections of this report, we provide further discussion of the options open to increase public health spending.

Note:
One way to make health care more affordable is to rationalize the health care system, obtaining more effective, better quality services from a smaller but more productive health care work force. In nearly two decades since the break up of the former Soviet Union, outside observers have pointed to the high ratio of physicians to population (particularly high in Armenia) and the large number of hospital beds built by the Soviet regime. With a smaller staff and less infrastructure to maintain, higher individual salaries could be paid to health care workers from a given amount of health funding. It is not the purpose of this report to identify or argue for such efficiencies. However efficient the health care system, it will have high and inequitable out of pocket payments if public/risk pooled spending is less than 2% of the GDP, as has been the case in Armenia. In this section, we focus on ways to expand the funds that are available, or to restructure funding in a way that would make health care costs less inequitable.

Increasing Tax Funding in the Current System

One reason that the countries of the Caucuses spend so little on health care is that a smaller proportion of the national economy flows through Government coffers. While Azerbaijan does have oil, Georgia and Armenia do not have the oil or mineral resources that provide royalties in Russia and Kazakhstan and give their Governments greater economic power and proportionately larger total budgets. But it is also apparent that the tax systems in Armenia[14] and Georgia are not very effective in tapping the incomes of the wealthiest citizens. Health funding could increase if the Government were to make tax collection more efficient, or levy new or higher taxes, particularly those that would be paid by the wealthiest. A disproportionate amount of these new taxes could then be dedicated to the most important health services, or to reduce the burden of health care costs on the poorest. In South Africa, for example, the wealthy are largely left to obtain their health services through private insurance, but the Government has sufficient tax revenue from this group and other tax sources that it can spend nearly 4% of the economy in public health funding. As a result, the poor pay little for health care and the most important services are available to them free in public facilities.

The money that flows into public health care expenditures is a function of two things; the proportion of the total economy which flows through the Government, and the proportion

[14] Armenia has a very high Gini coefficient of 0.59, an indicator of very unequal income distribution. This is up from an estimated 0.25 in Soviet times. "The Transition to Inequality," Thomas Kelly and Armen Yeghiarzarian.

of Government expenditures that go to health. If Armenia cannot increase taxes, it could shift a larger proportion of public spending into health care. The MTEF called for bringing health care spending to 8%-9%, only slightly above the rate in Table 1. But most post-Soviet countries and many developing countries that perform well in health care put 10% or more of public expenditure into health. In the developed economies, this percentage is generally over 15%.

As discussed below, some of the "public" money for this often comes from social insurance or payroll taxes dedicated to health care. But Governments can make clear decisions to shift the balance of public spending towards health. In the Abuja Declaration, African nations recognized that they were not spending enough on health care to meet pressing needs, and committed themselves to raise health spending to 15% of Government revenues. Although few have met this target, it is still a valid goal, and one used by the World Bank in determining if a country is determined to contribute to the improvement of citizen health.

In the United Kingdom, the Labor Government under Tony Blair made a deliberate decision to increase the proportion of GDP flowing to the National Health Service, budgeting for a multi-year shift in the proportion of public spending going to health. The goal was to raise total health spending to 9% or more of the GDP through this shift in public budgets. The policy was in response to two factors:

- Dissatisfaction in the electorate about the quality of health services, particularly the condition of hospitals and the waiting time for elective admissions.
- The realization that most European countries, perceived to have readier access to hospital and specialist services, were spending 9% or more of their GDP on health.

Is Armenia ready for an Abuja Declaration, or a "Blair policy?" Clearly there are powerful forces opposing an increased allocation to health----the military, the educational establishment, subsidized industries. However, these forces exist in all countries, and many no richer than Armenia have managed to allocate a larger percentage of tax revenue to health.

The alternative of new or increased taxes may be equally unpopular. If such taxes are broad based (VAT, income), they can hurt international competitiveness by raising labor costs and reducing purchasing power for the general population. But out-of-pocket health care costs are reducing the discretionary purchasing power of the people as well. Taxes targeted at the wealthy (particularly sources of income currently untaxed) would be one route to greater Government revenue. Another is to significantly increase taxes on the sale of items that result in increased rates of illness. The most obvious strategy is to raise taxes on tobacco products and dedicate the increased revenues to health. This not only provides increased health funding, but the higher prices will reduce the number of smokers, and, as a result, reduce the risk of tobacco related disease, including lung cancer, emphysema, and cardiac conditions. A number of US states and countries in Europe have raised tobacco taxes and dedicated some or all of the increased revenue to health services. Other targets could include liquor, sales of high powered automobiles (which increase the risk of traffic accidents), and soft drinks and snack foods with low nutritional value. As the US Congress considers reforms to move the US towards a universal health insurance policy, such taxes are under active debate.

Selectively Formalizing Co-Payments

One way to reduce the most catastrophic costs is to broaden the base of formal copayments for services, but set and enforce a maximum on out of pocket payment for a particular course of disease. This maximum can be varied by income group. By applying the copayment to some services that would nominally be free, the provider can realize an amount of money equal to what they would obtain from charging "full costs" on a narrower set of services or to a smaller proportion of its patients. For example, maternity services might have a fixed copayment for those over the poverty level. The poor would have no copayment. But the copayment would be capped, so if a woman needs a C-section, or the child is premature, she would pay no more than women who has a normal delivery. This would also reduce the incentive to do "unnecessary" C-sections because of the additional revenue generated. Most importantly, the amount of money required would be known in advance, so the patient does not avoid the service because s/he is afraid the final bill will exceed their ability to pay.

Data from the 2007 Household Health Expenditure Survey shows that the wealthy actually spend less on hospital services than the poor. This suggests that through connections or other means, the wealthy may be having some of their hospital costs capped. Poor people without connections may not be so fortunate. Establishing capped, income linked copayments is one way to limit some of these very high costs incurred by the poor. Furthermore, a reformed copayment scheme could be combined with a social insurance program. Those who obtain social insurance would have lower copayments, or have copayments waived. This provides an incentive to join the program, particularly for those in the informal sector who might not take up the offer to "buy in" to the social insurance program.

While the concept is straightforward, it is not easy to implement. As with the maternity voucher, the State Health Agency or MOH must enforce the approved schedule of copayments. Some facilities may lose their right to accept vouchers, insurance or SHA payments if they violate copayment policies. Patients will likely require assistance in asserting their right to limit copayments.

WHO has provided some assistance to Armenia in evaluating this option. Extensive analysis of the revenue potential of copayments has been done in Russia. In Kyrgyzstan, a formalized copayment scheme such as that described here was implemented for hospital care seems to have helped to reduce some of the most catastrophic out of pocket payments.[15]

[15] For a description of Kyrgyz reforms and their impact, see Kutzin J, Ibrimova A, Jakab M and O"Dougherty S "Bismarck meets Beveridge on the Silk Road; coordinating funding sources to create a universal health financing system in Kyrgyzstan" Bulletin of the World Health Organization. Published n-line 5 May 2009.

Insurance

Voluntary

Voluntary health insurance is available in Armenia, but it pays only a small portion of health care costs. It is only purchased by high income individuals or their employers. Such insurance does provide protection against catastrophic health care costs for those who are wealthy but not healthy. But such insurance is voluntary, and thus subject to severe adverse selection by those with medical conditions. This raises the cost, and further reduces the market. Nevertheless, there are countries, like South Africa, where such insurance does reduce the demand that higher income individuals place on the publicly funded health care system.

Employment Based

Insuring an entire group of employees, instead of insuring only individuals or families, reduces the risk of adverse selection. Employment related insurance was the starting point for the universal health insurance systems of many Western European countries. But if the employer is not mandated to provide insurance cover for his workers, some employers will cut costs by not offering the benefit. Where unions and collective bargaining are strong, and workers place a high value on health care, employment based insurance can become an important part of the benefit package. Employers are also likely to insure their workers if the labor market is highly competitive, and job candidates value health care access highly. This is particularly true if the Government grants a tax benefit, not treating some, or all, of the insurance premium as taxable income to the employee.

Armenia cannot wait for the gradual development of employment based insurance. Because of the availability of free health care, there is not a tradition that health care must be purchased, and insurance acquired to pool the risks. Of course, Armenians purchase health care now, but the insurance tradition has yet to develop in a wider population.

Social

Social insurance, where all workers and their employers pay a percentage of salary into a dedicated pool for health costs, is the most plausible route for risk pooling in Armenia. The infrastructure for collecting payroll taxes already exists. Formal sector employment should grow as the economy expands. And a social insurance scheme could always extend “voluntary” enrollment to those in the informal sector who want to protect themselves against medical costs. The social insurance system in Turkey has such an arrangement.

One key condition for social health insurance is that it provides a clear benefit to those who are required to contribute. Thus, social insurance must be matched with a formal system of copayments or that which are waived or reduced for those who hold a social health insurance policy. Such a benefit can also be extended to the poor, either through the existing State Order, or by "buying" them into the social insurance system with tax funds. But those with a reasonable income and no social insurance must be required to pay for curative services, or join the "voluntary" segment of the social insurance pool at specified annual enrollment dates.

Because Armenia does not yet have a social health insurance system, it should avoid a mistake made in Russia. Social health insurance premiums should be supported by a payroll deduction for workers, as well as a payroll tax on employers. Russia did not require this, which limits the amount of revenue available from social health insurance. In Germany, in the US Medicare system, and most social health insurance systems, both employers and employees contribute. This increases the money available. That also presents the opportunity to clearly "risk pool" some of the expenditures that formal sector workers are making out of pocket today. The challenge will be to design and enforce the benefit structure so that enrollees see that they are getting services for which they formerly paid. Public education must be a big part of any social insurance effort----not just to understand and realize the benefits, but to persuade enrollees that they should not always expect to get a certain benefit. Insured must learn that antibiotics are not required to treat viruses, or that annual screening exams are only beneficial for certain conditions and certain age groups.

The final pre-requisite for social health insurance is a combination of adequate payment and stern enforcement. Payments from the social health insurer must be sufficient to fully cover costs, including ancillaries, except for well defined copayments. Because out of pocket payments have become so ingrained in the Armenian health care system, some draconian enforcement measures will be necessary against those who try to collect more than the authorized copayaments. At a minimum, they must lose their status as providers within the insurance system.

Supplementing Tax Funding; Russia, Kyrgyzstan

Social insurance is rarely the sole source of health financing. In Kyrgyzstan and Russia, mandatory insurance revenues supplement traditional tax funding. The best results are received when both flows of funds go through a single purchasing agency clearly separate from an operator of medical institutions such as a Ministry of Health. The combined funds should be paid in some relation to the number of patients served and services provided, not as a function of the historical spending of a particular institution, and generally not on a fee for service basis. Capitation or case based payment is preferable to fee for service. The insured should receive some benefits, such as lower copayments, that are not available to those who are not insured.

Insuring those who work in the informal sector is difficult, but that is not a reason to forego social insurance for formal sector workers. Over time, the formal sector should grow as a proportion of the developing economy. And even if only 20% of GDP goes through formal sector payrolls, a premium amounting to 4% of salary would generate 0.8% of GDP for the health sector----a major increase in the 1.6%-1.9% now allocated from Government funds in Armenia.

Kyrgyzstan, poorer than Armenia and also inheriting a Semashko system, has implemented this combination of tax and social insurance funding. Outside observers generally find the reforms to have been reasonably effective. Hospital utilization is much higher than in Armenia. Forty percent of health funding comes from social insurance and tax revenue, raising public health spending to 2.4% of GDP, probably 40% more than in Armenia.

Targeting the Poor: Mexico

Mexico provides another example of a system in which insurance reforms were integrated into a larger system. The country had a well established social security health system for the formal sector, but found that the poor were dependent on underfunded and often unavailable health services provided by the Government. The Government specifically targeted the poorest in its health reforms, rather than trying to reform the health system for the entire population. Poor individuals who enrolled received a policy that explicitly provided primary care and basic hospital services for free. In addition, the insurance benefit extended to a limited list of high cost procedures that were medically very cost effective-----such procedures generally assured a significant increase in life expectancy or reduction in disability for the patient. The poor rarely had access to such services in the past, but this new approach gives them access to benefits such as treatment of childhood leukemia---which is costly, but has a high rate of complete cure that enables the child to live a normal life. There are political and analytic difficulties in singling out only a few costly procedures for coverage, but it does permit the targeting of a limited amount of money available for referral services.

Other Insurance

Traffic accidents take a high toll of life in the former Soviet Union, and cause a significant portion of medical expenditures. They are one reason that ambulance systems are so extensive. The cost of emergency medical care for each victim of a vehicle accident should be paid by the drivers and vehicles that create the risk, not by general funds in the medical care system.

Looking at the current system of vehicle insurance in Armenia was not within the scope of this assignment. Unless the Government is confident that vehicle insurance is paying the full cost of medical care resulting from traffic accidents, such a study could be useful. This is particularly true as the country considers initiatives to make emergency medical care truly free. If there is a major gap between the cost of medical services for accident victims and what is recovered from vehicle insurance, the Government could move to force full payment by such insurers. This may result in a rise in insurance premiums, or even in insurers refusing to cover some high risk drivers. But this would allocate certain medical care costs to the activity that creates the risk. In countries with experience rating systems for determining vehicle insurance premiums, high insurance costs keep some high risk drivers off the roads----if a mandatory insurance requirement is enforced. So these reforms could even reduce the accident rate.

Workmen's compensation insurance is another way to shift some medical care costs away from general subsidies or the social insurance system. Employers are required to carry insurance that pays the costs of medical care for workers injured on the job. Premiums for such policies very according to the risk in the industry----more for truck drivers and miners, less for computer operators. A review of the adequacy of employer or insurance payments for workplace injuries would be a first step in evaluating this funding option.

Targeted "Demand Side" Payments—Vouchers for Critical Interventions

The initial apparent success of the maternity voucher suggests the possible impact of "demand side" payments for priority medical procedures. The patient with the condition needing treatment is given a voucher that s/he can take to a qualified facility of their choice to obtain a well-defined package of care. The network of qualifying facilities can be limited, thus applying pressure for the upgrading of services. Additional funds need not be spread widely across the general health system, but can be targeted on those conditions and treatments that are highly effective.

For example, rather than generally subsidizing oncology centers, the Government could give treatment vouchers to individuals diagnosed with cancers for which a particularly effective treatment is available----childhood leukemia, early stage breast and cervical cancer. Cancers with a low treatment success rate (pancreatic cancer) would not receive vouchers, but only access to palliative care. The vouchers could also be given for tests, or follow up on screening tests. Women over 50 could be given a voucher for a mammogram every five years. Women with positive Pap smears could be given vouchers for biopsy and treatment.

The voucher approach differs from the broader based insurance approach, because it can be limited to a small list of procedures, and potentially to a smaller list of high quality providers. The conditions and need for the voucher must be well defined (as is the case with maternity). And the payment must be adequate to cover the full cost of the service—including reasonable compensation for the medical professionals involved. Patients must be fully educated about their rights under the voucher, and the Government must really enforce requirements against any patient payments in addition to stipulated co-payments (which might be varied according to income level).

Vouchers may seem like a complicated scheme. But they may be more effective than simply increasing payment rates under a broad based insurance scheme or state order. Pressure for such increases in SHA payments to hospitals will surely increase if catastrophic household health expenditure remains high.

V. CONCLUSION

What is the right course for Armenia? All options for increasing health care spending will meet opposition. Selection of a strategy requires a comparison of the political difficulties and the potential increase in health care funding. The right answer might include a combination of actions, including:

- A shift in the portion of current Government revenues going to health care
- Targeted taxes on products (like cigarettes) that reduce health status and increase health care costs
- A program of social insurance in the formal sector, preferably including payroll contributions by both employer and employee
- A rational scheme of copayments with income related caps on total payment.
- Vouchers or other demand side interventions that provide more adequate funding for the most pressing health needs without distributing that funding widely over the entire health care network

All of these strategies have been used in at least some other countries. They could be applied in Armenia to push public and risk pooled health care spending toward 3% of the GDP, which is probably the minimum needed to match health systems in other Former Soviet Countries. Combined with improvements in provider efficiency and quality, health system performance could improve substantially. Without at least some of these interventions, it is unlikely that public spending on health care will rise sufficiently to reduce out of pocket spending, catastrophic health expenses, or the apparent economic inability to obtain some beneficial services.