HEALTH CARE IN ARMENIA: CHALLENGES AND PROSPECTS

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Abstract: *This article discusses the state of health care in the Republic of Armenia, which is facing the challenge of improving the access and the quality of the basic medical services to its poorest population. Officially the poor are eligible to receive health care; however, insufficient public funds and widespread informal payments prevent them from getting adequate care. The paper presents health care policy guidelines, which could make health care affordable to the lower middle class and the poor. It discusses the health care priorities of Armenian authorities, such as reducing the level of informal payments and increasing the role of primary health care, which implies providing more resources to outpatient care and establishing Family Medicine at the primary health care level.*

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I. INTRODUCTION

An important challenge that the Republic of Armenia faces is adoption of a universal health care system in which everyone in the society, including the poor, has access to health services. One aspect of this challenge is the declining trend of in the use of health services. An explanation for this decline is the increasing amounts of formal and informal payments that sick individuals must make to health institutions given the continuing high rate of poverty in Armenia. As a result, the health care system has deteriorated during the past decade. If current trends continue, health care in Armenia will increasingly become a privilege for the rich.

The purpose of this article is to develop government health care policy guidelines, which would make health care accessible to the lower middle class and the poor. The first part of this article presents the conditions of health care in Armenia. Health status indicators generate a confusing picture. For example, on the one hand, life expectancy at birth has remained high. On the other hand, the number of documented tuberculosis cases has increased. Part two discusses health care policy in Armenia. A major goal of health care policy is to reverse the drop in utilization rate of health services. To achieve this goal, health care policy must prioritize: increasing public funds allocated to the health care sector, reduction of the extent of informal payments, optimization of the health institutions, such as hospitals and polyclinics and promotion of primary health care. Part three deals with the effects of market failures in the health care sector and the possibility of adopting national public health insurance. The last part concludes the article and, based on the issues discussed in the paper, provides a health care policy roadmap for Armenia that would eventually make health care available and affordable to everyone.

II. THE STATE OF HEALTH CARE IN ARMENIA

Despite severe economic shocks, such as the 60 percent decrease in real GDP from 1991-93 and pervasive poverty during the transition period--and despite the fact that the level of public expenditures for health care was and still is the lowest in the region and that the quality and utilization of the health services had deteriorated--the health indicators in Armenia, especially those relating to mortality and male life expectancy, showed gradually improved over the decade. In some instances, they compare favorably to other countries with similar or even higher levels of income.

Mortality has remained stable, except for maternal mortality. Early childhood mortality has declined over the past decade and compares well with other transition countries. Life expectancy at birth has remained high, at an estimated 70.9 years for men and 75.7 years for women during 2000 **(**see Table 3.1). While male life expectancy compares favorably with the European and Central Asia (ECA) countries' average of 66.7 years, female life expectancy is similar to the regional average of 75.3 years (UNICEF, 2002).

Mortality indicators in Armenia should be treated with a degree of caution. There are significant differences between population based surveys and official estimates. Mortality estimates from Armenia Demographic and Health Survey 2000 (ADHS, 2000) for five-year averages (1996-2000) for infant mortality rates is 36 per 1,000 live births, which is more than twice the official figures during the same period (See Table 3.1). The discrepancies between the two sets of data could be explained by different approaches used in measuring

the outcomes. The methodology in measuring infant mortality used by health providers in Armenia differs from foreign agencies such as UNICEF. Though Armenia has officially adopted the World Health Organization definition and procedures related to calculation of infant mortality rate, in real life health providers still have not fully adopt them and have used Soviet measurements. The Ministry of Health is planning to train and monitor health care personnel on the classification and registration of stillbirths and infant deaths. It also plans to introduce changes in the regulations that govern the registration of infant deaths to make the infant death registration process easier.

Table 3.1. Armenia: Selected Health Status Indicators

	1990	1995	1999	2000	2001	2002*	2003*	2004*
Female life expectancy at birth (years)	75.2	75.9	75.5	75.7	75.9	76.1	76.0	
Male life expectancy at birth (years)	68.4	68.9	70.7	70.9	71.0	70.0	70.0	
Maternal mortality (per 100,000 live births)	40.1	34.7	32.9	52.7	18.8	18.6	19.2	37.2
Infant mortality (per 1,000 live births)	18.5	14.2	15.4	15.6	15.4	13.98	11.96	11.55

Source: UNICEF, Social Monitor 2002, Innocenti Research Center; Statistical Yearbook of Armenia, 2002.

** Source – Report on Health Care System, State Statistical Service, 2004.*

Health status indicators reflect significant differences between rural and urban areas. According to the ADHS 2000, during 1990s the urban infant mortality rate was 35.9 per 1000 live birth, while the rural rate was 52.7, which reflects reduced access in rural areas to adequate antenatal care and supervised delivery. In rural areas, about 11 percent did not receive any antenatal care, compared to only 4 percent in urban areas. While almost all births in urban areas occur in health care settings, 15 percent of births in rural areas occur at home, of which about 30 percent were unassisted by health professionals. The differences in child mortality might be explained by the impact of three major factors linked to poverty: access to affordable health care, mother's education, and nutrition.

From an epidemiological standpoint, Armenia has a disadvantageous disease burden with features of both developed and developing countries. Major adult diseases are similar to those in industrial countries: cardiovascular disease, hypertension, and accidents. At the same time, infectious and parasitic diseases are increasing, especially after 1995. The increased incidence of malaria and tuberculosis in Armenia reflects the deterioration of preventive care. The number of documented tuberculosis cases increased from 600 in 1989 to 1350 in 2000.

III. HEALTH CARE POLICY IN ARMENIA

The main components of developing health care policy in Armenia are: increasing public expenditures in the health sector, reducing informal payments, promoting primary health care, optimization and privatization of health institutions.

A. Increasing Public Expenditures in the Health Sector

The economic crisis that Armenia faced after independence had a significant impact on the health sector resulting in a dramatic decrease in the level of health expenditures and a

deterioration of the health system. During this period, budgetary spending on health care plunged from about 2.7 percent of the GDP in 1990 to 1.3 percent in 1997 (Netherlands Organization for Applied Scientific Research, 2000).

To improve health care in Armenia, one of the priorities of the government's health policy is to increase public funds allocated to the health sector. As envisaged in the government's recently adopted Poverty Reduction Strategy, public expenditures from 2004 to 2015 will grow at an average of 14 percent per annum. In 2015, compared to 2003, public expenditures in the health sector as a percentage of the GDP should increase by 1.1 percent to reach the program target of 2.5 percent of GDP in 2015 (See Table 3.2). The main sources of such growth in public expenditures in the health sector will be the collection of revenues from domestic sources and projects financed by foreign sources.

Table 3.2. Program Indicators of State Budget Expenditures in the Health Sector

	2003	2004	2005	2006	2007*	2009	2012	2015
Total, billion drams	21.0	24.9	30.8	35.5	40.9	52.7	73.3	101.1
Percent of GDP	1.4	1.5	1.8	1.9	2.0	2.1	2.3	2.5
Percent of state budget expenditures	6.5	7.6	8.6	9.2	9.5	10.2	10.9	11.9
Year-on-year percent change	31.2	18.6	23.5	15.4	15.1	12.4	11.5	11.2

Source: Government of Armenia, 2003.

**Source – PRSP Progress Report (August 2003 – December, 2004), Table 19. State budget social expenditures: PRSP and 2005-2007 MTEF projections.*

Taking into consideration the higher rate of accessibility of primary health care (out-patient and polyclinic) and its physical proximity to the population, the intra-sectoral redistribution of public expenditures will be carried out with the increase of state budget financing of primary health care. Both hospital and primary health care systems, including family doctors, will prioritize the health of mothers and children, and the mitigation of socially significant diseases.

B. Reducing Informal Payments

Since 1993 hospitals have been allowed to sell health services to the public and generate revenues. To provide support to the poor, the government created a program called Basic Benefit Package (BBP), which identified health services that should be provided without charge to a list of vulnerable groups or categories, such as, disabled, orphans under 18, veterans and families of war victims, families with more than three children, and children under 18 with one parent. Members of these vulnerable groups, in principle, were allowed to get free health care at hospitals, while the rest of the public paid fees, except for treatment of emergency cases and diseases of social significance, like Sexually Transmitted Diseases (STDs), tuberculosis, and malaria. Basic health services at polyclinics were and still are free for everyone, poor and non-poor, while the lab tests require payment of fees for those not included in the BBP.

As of January 2001, the Government of Armenia extended the free-of-charge BBP program eligibility to the beneficiaries of the poverty family benefit system, which is a government adopted, means-tested benefit program. Preliminary analysis of the 2001 Integrated Leaving Conditions Survey (ILCS) in Armenia shows that this policy change might have improved access to health care among the poor; however, it is not possible to judge the effects until the final results become available (Murrugara and Posarac, 2002).

In general, countries with higher per capita income tend to adopt national health insurance, while poorer countries adopt programs that target the poor. Targeting the poor and excluding those who are outside the targeted group increases the cost of administering the program; however, targeting the poor, instead of providing public health care to all individuals, decreases the overall cost of reducing poverty (Van the Walle, 1995). A disadvantage of adopting health programs that target just the poor is the possible resentment of the excluded middle-class taxpayers, which could reduce the political support for the poverty reduction programs.

The State Health Agency makes payments to hospitals and polyclinics for the services included in the BBP, but the amount of payments by the State Health Agency to the health institutions covers about 45 percent of the cost of the health services (World Bank, 2003). This implies that health institutions should generate revenues indirectly. One method is to collect informal payments from patients, including the poor and the vulnerable groups. In this way, hospitals and polyclinics would collect payments for their services from both the poor and vulnerable patients and the government. During 1999 about 91 percent of hospital patients made informal payments (Lewis, 2000). The result was that between 1996 and 1999 the free-of-charge health care provided by the government could not prevent the 21 percent drop in the health care utilization rate among the largest vulnerable group, families with four or more children. The fee-waiver program, free healthcare for poor, had, however, a small but statistically significant positive impact on the access to health care by the vulnerable groups (Chaudhury, 2003). Since informal payments are made to the medical personnel and not to the institutions, another aspect of their negative impact is a lack of funds for physical investment and run down hospitals and polyclinics.

The government plans to introduce a co-payment system for hospital services, which would requires a patient to pay ten percent of his or her medical bill based on the State Health Agency price schedule. The government views the introduction of the co-payment system as a way of legalizing and reducing informal payments. Co-payments may differ based on disease groups, socioeconomic status of patients, and different regions. Co-payments also need to be integrated within the legal framework of health care services in the country.

There are concerns that the co-payment system could increase patients' payments, which will put an additional burden on patients and raise the real cost of health services, because unless significant portion of the co-payment is allocated to increase the official income of medical staff, they will still require patients to make informal payments. To address these concerns, the government could introduce a simple flat-fee co-payment per hospital day, instead of a co-payment based on a percentage of prices. It could also establish a link between co-payments and improvement in the quality of health care by increasing the availability of drugs to the patients and by using part of co-payments as a performance-related remuneration to medical staff and physicians. Finally, exemptions from co-payments should be considered carefully for patients who genuinely cannot afford such expenses. The challenge is in identifying these patients. Admissions to hospitals, specialist outpatient visits and diagnostic and therapeutic outpatient procedures for socially vulnerable patients should be paid 100 percent by the program designed for them. The Government might consider introducing a modest co-payment for the group entitled to free-of-charge services to prevent their overuse of the health services. Other patients would pay an official co-payment per hospital admission-day. The co-payment will help to fill the gap between the real cost of admission-day and reimbursement by the state. It is critical

that the government recognize the need to adopt a public awareness campaign that explains to people the reasons for co-payments and the related costs and benefits.

C. Promoting Primary Health Care

Primary Health Care in Armenia

The purpose of primary health care (PHC) is to detect, diagnose, and prevent illness as early as possible. Primary health care involves education of the public about health issues, securing maternal and child health care, immunization and treatment of common and infectious diseases, providing necessary drugs and basic curative care. It is estimated that in Armenia 80 percent of illnesses could be cured through primary health care, provided mainly through polyclinics where specialized physicians work and through small clinics called ambulatories usually located in the provinces (MOH, 2002a). Local governments own policlinics and only few in Yerevan are owned by the Ministry of Health. At polyclinics the service is free to everyone, rich or poor.

Currently, in Armenia, PHC demonstrates a mixed picture. Most urban polyclinics continue to operate in the former Soviet tradition, where there are no family physicians. Instead each doctor is specialized in the health care needs of different age groups and for various specific health problems, including separate medical specialties for women. Nevertheless, family medicine has been introduced in Armenia and is planned to be the main vehicle of preventive health care. Already active family medicine departments function in the Ministry of Health and in the three relevant health educational establishments. There are pilot projects for population enrollment in family medicine and hundreds of trained and retrained health professionals in family health care.

The Ministry of Health, MOH, has emphasized the important role of primary health care and polyclinics and has, therefore, increased their funding faster than hospitals' (see Table 3.3). Table 3.3 indicates that the government plans to continue this trend and to increase the role of polyclinics relative to hospitals. By 2007, government funding to polyclinics will exceed the funding of hospitals. This is remarkable, when we realize that during 2001 government spending on hospitals was three times more than government spending on polyclinics.

Table 3.3. Government Expenditures on Polyclinics and Hospitals in Billions of Dram

	2001	2002	2003	2004	2005*	2006**	2007**	2008**
Polyclinics	3.1	3.2	4.0	8.6	12.4	13.6	18.6	21.5
Hospitals	9.5	8.9	10.3	12.1	14.0	14.3	18.3	19.7

Source: Ministry of Health, 2003, 2005.

* Expenditures approved by the Ministry of Finance and Economics for 2005.

** Projected expenditures for 2006-2008 approved by the Ministry of Finance and Economics.

The policy of emphasizing primary health care has generated mixed results in different countries; therefore, the success of PHC policy depends on the circumstances of a specific country (Filmer, 2000). Public expenditure on PHC could generate poor results for two reasons. First government health expenditures might not translate into adequate health care. The main concern is the incentive of health care personnel, who receive public funding for their work, to provide good quality health services. Health care personnel, such as doctors

and nurses, are alone with patients and it is difficult to monitor their work. This concern could be addressed in Armenia if the compensation of physicians is based on their performance and the patients have the right to choose their own doctors. Consequently, physicians that do not provide quality health care would have fewer patients and less income, which would create an incentive to provide quality care.

Second, public expenditures on publicly provided health care could crowd out private primary health care providers. This implies that when the government starts to provide health care some existing private health care providers might be displaced. In Armenia, this is not a significant concern, because there are hardly any private family physicians providing primary health care. Therefore, government financing of primary health care would not generate a tangible amount of crowding out.

Primary Health Care and the Poor

A study based on ten countries demonstrates that, in 7 of these 10 countries, the poorest quintile of the population benefits proportionately more from primary health care than from hospitals, while the richest quintile benefits proportionately more from hospitals than from primary care (Filmer, 2002). Hospital care nearly always benefits the rich, which means that government expenditure on PHC will benefit the poor more than expenditure on hospitals. These trends may reflect the following factors: the increasing cost of care to individuals; decline in the quality of primary care; and better services in urban hospitals as a result of larger budget allocations to hospitals. Inequalities in health care provision need to be reduced. In particular, the primary service network needs to be strengthened to deliver adequate basic health care that can have an impact on key health care indicators. In other words, the non-poor could benefit more than the poor from overall public health expenditures, especially public expenditure on hospitals rather than on PHC.

In Armenia, during 1998-99, 64.4 percent of patients from the lowest quintile of patients were treated at polyclinics, while only 47.4 percent of patients from the highest quintile were treated at polyclinics (World Bank, 2003). Thus, most of the poor patients went to polyclinics, but most of the patients of polyclinics were non-poor and the highest quintile used polyclinics more than the lowest quintile. The poor tend to use polyclinic services more often than hospitals, because informal payments at polyclinics are much lower than at the hospitals (UNDP Report, 2005).

Table 3.4. Distribution of Public Expenditures in Health, 1999, in Millions Dram

	Consumption quintiles					Total
	1	2	3	4	5	
Hospital	1,699	1,548	1,699	2,340	5,435	12,720
Polyclinic	780	901	894	1,000	1,424	4,999
Diagnostic Centers and other	192	527	336	288	1,007	2,349
Total	2671	2976	2929	3628	7866	20070

Source: World Bank 2003, p. 125

Of the AMD 5,000 million spent by the government during 1999 on polyclinics, the lowest quintile received AMD 780 million while the highest quintile captured AMD 1,424 million (Table 3.4). Government expenditure on health care is regressive because the wealthy benefit from health services more than the poor. Only 13 percent of public health expenditures, AMD 2,671 out of 20,070 million, were used by the poorest quintile, while

the highest quintile used 40 percent. The poor apparently avoid seeking health care because they cannot afford formal and informal payments. Only 26 percent of the sick from lowest quintile saw a physician compared to 51 percent of the highest quintile. It is true that mostly the non-poor use polyclinics; however, public expenditure on polyclinics is the least regressive (World Bank, 2003).

Increasing Role of Family Physicians

International and foreign organizations, such as the World Bank and USAID, provide funds for specific projects aimed at improving PHC in Armenia. These programs upgrade the primary health care skills of doctors and nurses working in polyclinics. They improve the availability of PHC in every region including remote villages and improve the quality of PHC to every individual and family.

Currently when patients need care, most of them go to a hospital. In the future, most patients will go first to a polyclinic and a family practitioner will treat them. If the patient needs to see a specialist or needs surgery, then the family practitioner will send the patient to a specialist or a hospital. Primary health care will be provided through family physicians' group practices, while secondary and tertiary health care will be provided at the hospitals. The family doctors will play the role of gatekeepers for the secondary care (Europe, p. 42).

In the view of Armenian patients, hospitals have more prestige, and the perception is that doctors who work at the hospitals are better than doctors who work at the polyclinics. The health ministry is promoting the use of family doctors to provide PHC and, to improve their quality and increase their credibility, is providing training to doctors in the primary health sector (MOH, 2000). This effort could change the perception that doctors at polyclinics are less qualified than doctors who work at hospitals. A World Bank project provides a one-year education program for 200 doctors from polyclinics. The project's goal is to train approximately 1,500 doctors to become efficient family practitioners; however, training 1,500 for one year and taking them away from their work is difficult. Therefore, the expectation is that the one-year educational program will be broken down into modules and the doctors will receive training in the regional training centers close to their residence.

The number of cases that hospitals treat determines governmental compensation to hospitals. Before 2002, there was no upper limit for the number of patients that hospitals could treat. This caused an increase in public expenditures for hospitals and polyclinics because they had incentive to treat as many patients as possible. In 2002 the rule of funding was changed and an upper limit or cap was introduced on the level of government funds allocated to each hospital and clinic.

Under the Soviet Union, polyclinics were financed based on attendance. They tended to over-report attendance to get more financing. In the mid 1990s a per capita financing scheme was introduced. These new guidelines for polyclinics indicate that doctors can not serve more than 2,500 people, to discourage them from the practice of seeing more people, which led to spending less time with each patient and reduced the quality of medical care. The guidelines provide that when physicians attend to 1,500 to 2,000 patients, they will get paid the full rate. If they serve less than 1,500, then they will get paid per patient and their income will decrease. If they attend to more than 2,000 patients, their salary will increase for each additional patient, up to 2,500 patients. The ministry of health expects that linking

the compensation of physicians with the number of their patients will reward doctors who have good reputations and whose patients are eager to see them, as well as improve the quality of health care that physicians provide. The idea that patients have the right to choose their own family doctor is an important part of health care reform (European Observatory on Health Care Systems, 2001).

Health Care Through Community Participation

Donor organizations, such as World Bank and USAID, emphasize the concept of community involvement in the provision of health services. Many projects geared to improve PHC also promote active community participation in determining local health care priorities, supervising the implementation of the projects and providing basic health services. One USAID project required that the target community form a Civic Action Group of 9-12 community members to determine what project to adopt and to supervise the implementation of this project. From 1995 to 2000, Civic Action Groups all over Armenia implemented 317 micro-projects. About 7 percent of these projects were health related, while 60 percent were related to drinking water and irrigation network construction (USAID, 2002) Experiences in other countries indicate that forming a village health committee or community health volunteers could make health care more responsive to patients' needs, especially the poor. Implementing participatory approaches on small-scale projects is easier to achieve than reform on large scale (ADB, 1999).

Decentralization of health care services increases the possibility of community participation. While the provision of health services is in some cases privatized and in other cases delegated to local authorities, since the fall of Soviet Union, central governments still control the design of health care policies in transition economies. .

Under Soviet Union, the public expected that the state would find solutions to their problems. Armenia, similar to other former Soviet Republics, is experiencing a transition period, during which the public is beginning to take responsibility for organizing their communities and participate in solving their local difficulties. With this increasing participation of community members in decisions regarding local concerns, comes increased democracy. Community participation and democratic decision-making reduces the level of corruption, because community involvement in and supervision of projects makes it more difficult for health care officials to demand informal payments or otherwise to behave corruptly.

D. Optimization of Health Institutions

Armenia uses only a fraction of the capacity of a large number of hospitals, hospital beds, nurses, and doctors. During 1999, the occupancy rate of the 171 hospitals in the country with 23,169 beds was about 40 percent (Ministry of Health, 2002a). Table 3.5 shows the significant drop in the number of patients admitted to the hospitals, while Table 3.6 shows the drastic reduction in the use of polyclinics. From 1992-2003, visits to polyclinics dropped by 72 percent.

These numbers could imply that there is an oversupply of hospitals in Armenia and that some hospitals should be closed. The number of hospital beds per 1000 population in Armenia is above the average of the European Union, but it is lower than the average in Newly Independent States (NIS) (European Observatory on Health Care Systems, 2001).

The excess capacity of hospital beds reflects the fact that during the Soviet period the government payment to a hospital was based on the number of beds that the hospital maintained. This gave an incentive to build large hospitals with many beds. Another factor in the decrease of patients admitted to the health care institutions was the significant migration of the population of Armenia during the past decade. According to the General Department of Civil Aviation of Armenia, the net loss of people from 1992-2000 was about 644,000 (National Statistical Service, MOH, ORC Macro, 2003).

Table 3.5. Number of Patients admitted to Hospitals (thousands)

1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002*	2003*
354	305	285	281	284	252	235	221	192	187	197*	219*

Source: Ministry of Health, 2003.

** Source – Report on Health Care System, State Statistical Service, 2003.*

Table 3.6. Number of Visits to Polyclinics (millions)

1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003*
20.2	18.5	17.2	16.4	15.8	10.8	7.9	7.5	6.7	5.8	5.4	5.6*

Source: Ministry of Health, 2003.

** Source – Report on Health Care System, State Statistical Service, 2003.*

Another argument is that the problem might be not oversupply of hospitals, but lower demand of health services, *i.e.* underconsumption, because about half of Armenia's population is extremely poor or poor and, thus, they cannot afford to pay hospital fees (European, 2001). If the cause of hospital overcapacity is unaffordability and low demand, then hospitals should not be closed. Instead, the government should find ways to provide opportunity to the poor to use hospital care when they need it. It may be that if Armenia's rapid economic growth rate continues and the benefits of this rapid growth trickle down to the poor, then affordability will increase and the hospital occupancy rate would increase. Critics of this argument emphasize that keeping underutilized hospitals open causes a large financial burden to the government and taxpayers.

The reality is more likely to lie between these two extremes of oversupply and underconsumption; therefore, the government should take measures both to reduce the supply of health institutions and to increase demand. The Ministry of Health thus has the difficult task of reducing the number of hospitals to optimum levels. One way of achieving optimization is through consolidation of hospitals that are assigned to perform one specific task, such as consolidating pediatric and maternity hospitals (MOH, 2002a). During fall 2003, the government of Armenia began to take such measures to consolidate health institutions.

There is an oversupply of physicians in Armenia, and their official pay is very low. There is one medical school, which is accredited by the Ministry of Health, and this school is public. There are seven accredited nursing schools. To reduce the quantity of physicians the Ministry of Health decreased the number of medical students who do not pay tuition, called "state order places" in medical school, from 700 students in 1992 to 250 in 1995 (European, 2001).

E. Privatization of Health Institutions

Another aspect of the optimization of health institutions is the privatization process, which happened mostly in Yerevan's hospital sector and Armenian pharmacies. The privatization process did not address the problem of overcapacity of hospitals. It appeared that the privatization of individual hospitals with legal requirements to continue to provide health care services went unchecked and counter to hospital sector optimization policy.

In addition, the privatization of hospitals through direct sale to hospital staff at heavily discounted prices was not transparent and was not organized efficiently. It failed to motivate insiders, such as directors, to develop a sound business plan. The process was neither structured to mobilize competition and generate resources for investment needs, nor to bring to the sector credible private owners.

With the advice of the World Bank, the government decided to postpone the privatization process and review the health sector privatization strategy to address current gaps such as: lack of links between privatization and hospital rationalization, lack of regulatory functions of the government in health sector with significant autonomy and private participation, lack of transparency of privatization transactions, and lack of clarifications of State Health Agency service contract guarantees to privatized institutions.

Once the numbers of hospitals, doctors and nurses are reduced and consolidation of hospitals occurs at the same time as increased government budget allocation to the health care sector, then the salaries of physicians, nurses, and medical staff will increase. Government expenditures on health care will be divided among a smaller number of hospitals and medical personnel, covering a larger percentage of health care expenses per patient. This will reduce the incentive to collect informal payments from the patients, including the poor.

We could conclude that optimization of the health system is necessary to increase the poor's access to health care. Optimization would be achieved, first, by closing a few hospitals through consolidation. Second, government expenditures on health care should increase and, finally, salaries of medical personnel should increase.

IV. Private and Public Health Insurance

In the health care sector, there are cases when the market fails to provide services or provides insufficient amounts of them, generating justifications for government involvement. In Armenia, where the economy is in transition from centrally commanded economy to a market economy, markets and appropriate institutions, such as legal and financial, are not yet fully developed; therefore, market failures are more common. The result is a heavy burden on the government to correct market failures and adopt policies that will make health care more affordable to the poor. Correcting market failures in the health care sector improves the efficiency of the economy and promotes equity. At the same time, the government should contribute to the development of legal and financial institutions necessary to a market economy.

Beside the market failures, another difficulty that Armenia faces is the existence of an elaborate shadow economy and a large amount of government failure. Therefore, a well-

intentioned government policy might fail because it ignores government failure and the conditions in the real world. In many situations both the market and the government would generate inefficiency and unfairness. Therefore, the question should not turn on which system is fair or efficient; instead we should discuss and determine if efficiency and fairness could be improved more through imperfect markets or an imperfect government.

We shall focus on three areas where the market fails.

A. Positive Externalities

First there is large positive externality in providing immunization, fighting infectious diseases, maintaining clean air, providing clean water, adequate sewage disposal, urban sanitation, hospital care for catastrophic illnesses, and education about basic public health issues. In Armenia during the past decade the government tried to address the existence of positive externalities in the health care sector. For example, through specific programs most of the children received vaccines for basic health diseases. During the 1990s, the incidence of certain infectious diseases increased drastically, such malaria, diphtheria, and tuberculosis. Government efforts succeeded to improve epidemic control measures and reduce incidences of diphtheria (Balasanian, McNabb 2000) and malaria (World Bank 2003). In 1998, Analysis Research and Planning for Armenia (ARPA) and the Education Ministry of Armenia began to implement Health Education and Lifestyle Program (HELP) in certain junior high schools. The students learn the negative effects of alcohol and tobacco consumption. They also learn the positive effects of healthy food selection and proper diet (ARPA 2005). The World Bank supports the improvement of Armenian living conditions through various loan projects, particularly improving the drinking water supply, addressing environmental issues, replacing outdated waste management systems at the hospitals, etc. Health education and public health modules are included in the curriculum for training/retraining family physicians at the National Institute of Health and the State Medical University.

B. Imperfect Information

The second type of market failure in the health care sector is imperfect information. Patients have a limited amount of information about their illnesses, the cost of curing their illnesses, and the competence of physicians. For this reason, the government in Armenia determines prices of basic health services and provides licenses to competent physicians and makes sure that incompetent physicians are not practicing medicine. Physicians are supposed to act in the interest of their patients. In a sense, physicians are the agents of the patients; however, if the interests of physicians are different from the interests of their patients, then a problem arises, as between all principals and agents who face conflicts of interest. The source of the conflict is the fact that physicians are advisors to patients and at the same time are providers of health care. Instead of protecting the interests of patients, physicians might try to increase their revenue by providing medical care that patients do not need.

In Armenia, to increase their revenues, some doctors are aggressively looking for patients and acting like “patient hunters.” This behavior is the result of the drastic reduction of patients at health institutions and the oversupply of physicians. Physicians may recommend unnecessary procedures or fail to disclose the full cost of procedures before treatment and then refuse to complete it without additional payments. Clearly, there is significant amount

of market failure and need for government regulations. The Government should put in place a health care quality assurance system, establish the performance based reimbursement scheme for health care providers, as well as introducing standard treatment protocols, licensing, and accreditation systems through involvement of independent professional associations and agencies. In addition, the Government should strengthen its oversight function on execution of the state program for vulnerable groups. A positive result the increased role of the market in the health care sector is that some physicians are trying to raise their revenue by building a good reputation to attract more patients. They are providing good medical advice and good care with the expectation that satisfied patients will bring more patients (Lewis, 2000).

C. Health Insurance

The third market failure occurs in the health insurance sector. Armenia has not yet developed an insurance industry, so that the market fails to provide adequate amounts of health insurance. In the private health insurance market, insurance providers have less information about the health conditions and the lifestyle of insurance buyers than the buyers. This asymmetric information generates the problems of adverse selection and moral hazard, which increases the cost of insurance. In the case of adverse selection, individuals with health problems could hide their true risk level and cause premiums of the group to rise, which would induce low risk individuals to drop out of health insurance market. In terms of moral hazard, once individuals buy health insurance, they face the temptation to overuse health services, causing overconsumption and higher costs for the insurance companies.

In a transition economy, such as Armenia, where the markets and corresponding institutions are not yet fully developed, and where there are extensive amount of corruption, problems of adverse selection and moral hazard would be significant. Adverse selection occurs because it is very difficult for insurance companies in Armenia to acquire information about the health of insurance customers and to identify high risk individuals; therefore, when they sell insurance they face significant amount of risk. To address the high risk that they face, insurance companies must charge a high premium, which, in turn, discourages low risk individuals from buying insurance.

Moral hazard occurs because it is very difficult for insurance companies to monitor the activities of costumers and to find out when costumers abuse their insurance and overuse it. It is difficult for insurance companies to find out if costumers collude with corrupt doctors and claim medical operations that do not take place. This implies that moral hazard similar to adverse selection would increase the level of risk that insurance companies face, once again causing them to raise their premiums and discouraging buying insurance.

The market thus fails to provide adequate amount of insurance. In any case, the large scale of poverty in Armenia means that a significant portion of the population can not afford to pay high premiums and buy private health insurance. Furthermore, current tax laws do not give incentives to the employers to provide health insurance to its employees (European, 2001).

A solution to this market failure is public health insurance. The Ministry of Health prepared a proposal to introduce public health insurance in Armenia. The proposal report indicates that the existing state of health care in Armenia does not satisfy the medical needs

of the poor, "The present system of free medical care is mainly declarative and not trusted by the population and health care workers" (MOH, 2002b). The report advocates the adoption of a compulsory medical insurance system, which would be funded mainly through a tax or a premium based on each employee's income. The employer would pay two thirds of the tax and the employee one third. The estimated tax is 9 percent of wages. It is suggested that initially the tax should be only 3 percent and in the future it should be raised to 9 percent.

Given the income taxes that employees pay and the social security taxes that both employers and employees pay, an additional 9 percent or even 3 percent tax on wages is not politically feasible, because it would impose a significant burden on the employees, whose income is low and would affect the profits of employers, which could have an adverse effect on national employment levels. The low income of the population, the government's relatively low revenues, and the existence of a shadow economy make the development of public and private health insurance expensive and very difficult. Currently compulsory medical insurance is not being considered and establishing public health insurance is just a long-range goal of the government. This corresponds with the trend in other low-income countries, where, instead of adopting public health insurance, health care policy focuses on public hospitals and clinics (Jack, 2002).

IV. CONCLUSION

The poor in Armenia could have better access to health care if the government is successful in increasing public expenditure on health care. The goal is to increase public health expenditure, so that by 2015, it is 2.5 percent of the GDP. At the same time, some consolidation of hospitals should occur. The result of these two changes could raise the salaries of medical personnel, which would reduce the need for informal payment by patients, especially the poor. Reduction of informal payments would induce the poor to use health care institutions and improve their health. Meanwhile the government should continue to emphasize the role of primary health care, to increase the funding of PHC service providers, and to encourage communities to participate in designing and implementing health projects. If the economy of Armenia continues to grow rapidly and per capita income increases, then eventually adopting an appropriate version of public health insurance will become feasible. The result of all these positive developments would improve the quality and availability of health services in Armenia and provide a better opportunity for provision of adequate health care to the poor.

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