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HEALTH CARE SYSTEM IN ARMENIA: PAST, PRESENT AND PROSPECTS

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Abstract

The paper describes the state and trends of health care, as well as the comprehensive reform program in Armenia. It presents previous, current situation and focuses on future development options. After demonstrating the logic of the investigation, the paper recapitulates the information about results of reform that do not appear to meet all the objectives of health care policy. The reform process has encountered resistance and there is now a serious risk that reformers may throw out the baby with the bath water.

The most challenging problem that must be faced involves the drastic decrease in access even to the most essential health care services, as unlike many other transition countries, social-economic factors have prevented the implementation of medical insurance and generated a decrease in subsidized health services and visits for medical aid. Funding shortages often mean that even vulnerable groups have to pay. This has led to an increase of the length of illness and chronic pathology. Thus, the principle of equity with respect to financing and access is undermined.

The paper indicates that disparity and polarization are quite high in the society. There are insufficient public funds and the highest share of informal payments prevents the poor to get adequate care. The paper describes the negative effects of widespread use of informal payments in health care and possible steps to reduce it. It analyzes topics such as, feasibility of state health insurance.

The paper proposes to implement many interchangeable opportunities for learning in transitional countries and brings to attention the necessity to develop a mechanism for shared learning at the international level. These are outlined briefly at the end of the paper. The paper concludes and summarizes the range of recommendations which are most relevant to developing countries.

Zusammenfassung

Die Arbeit beschreibt die aktuelle Lage und die Perspektiven des armenischen Gesundheitssystems sowie das umfassende Reformprogramm für das armenische Gesundheitswesen. Sie zeigt die Entwicklung und die aktuelle Situation auf und konzentriert sich auf Möglichkeiten der zukünftigen Ausgestaltung. Nach einem Überblick zum Gang der Untersuchung rekapituliert die Arbeit Informationen zu den Ergebnissen der Reform, die die Ziele der Gesundheitspolitik nicht zu erreichen scheinen. Der Reformprozess stieß auf Widerstände und es besteht nun die Gefahr, dass die Reformer das Kind mit dem Bade ausschütten.

Das größte Problem stellt der drastische Rückgang beim Zugang selbst zu den notwendigsten Gesundheitsleistungen dar. Im Gegensatz zu vielen anderen Transformationsländern haben sozioökonomische Faktoren die Implementierung eines Krankenversicherungssystems verhindert und einen Rückgang subventionierter Gesundheitsleistungen sowie von Arztbesuchen verursacht. Finanzierungsmängel haben zur Folge, dass selbst Personen in prekärsten Lagen für Gesundheitsleistungen selbst aufkommen müssen. Dies führte zu einer Verlängerung der durchschnittlichen Krankheitsdauer und zu einer Erhöhung bei chronischen Krankheiten. Somit wird das Gerechtigkeitsprinzip in Bezug auf die Finanzierung und den Zugang unterminiert.

Die Arbeit zeigt auf, dass Ungleichheit und Polarisierung in der armenischen Gesellschaft sehr groß sind. Öffentliche Finanzmittel sind unzureichend und der sehr hohe Anteil informeller Zahlungen hindert die Armen daran, adäquaten Zugang zu Gesundheitsleistungen zu erhalten. Die Arbeit beschreibt die negativen Effekte der verbreiteten informellen Bezahlung von Gesundheitsleistungen und zeigt mögliche Schritte zu deren Reduzierung. Es werden Themen wie die Machbarkeit einer staatlichen Krankenversicherung analysiert.

Es wird vorgeschlagen, eine Reihe von Austauschmöglichkeiten für das Lernen in Transformationsländern zu implementieren. Die Arbeit lenkt die Aufmerksamkeit auf die Notwendigkeit, einen „shared learning Mechanismus“ auf internationaler Ebene zu entwickeln. Dieser wird am Ende der Arbeit kurz dargestellt. Schließlich fasst die Arbeit die Bandbreite der Empfehlungen, die auch für Entwicklungsländer am wichtigsten sind, zusammen.

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Background

Under the Soviet-style economy, health care in the republics of the former USSR was essentially free. There was no fee involved in any type of medical procedures performed in inpatient or outpatient clinics. As a part of the health system of the Soviet Union, the Armenian health care system possessed both positive features (entitlement, burden of financing, access, full range of services) and negative ones. One of the main shortcomings of the former system was its centralized management, with authority over budgets, a vast number of hospitals and medical staff. Beside, it was characterized by a lack of both local incentive and opportunity for development. People had no choice over their doctor or medical institution. Furthermore, under such conditions the work of medical employees was not appreciated, leading to the deterioration of relations between society and the medical system.

In the republics of the former USSR, including the Republic of Armenia, tendencies of worsening of population health have been noticed even in 60s, when developed countries had a stable process for improving the indices of population health. However, during the period of transition to market relations population health became extremely severe in Armenia, as the situation is was getting complicated. Since the very beginning the transition towards a market-oriented economy, Armenia has faced a number of difficult challenges including the tragic and major earthquake of 1988, followed by the collapse of the Soviet Union, war in Nagorno-Karabakh and an economic blockade enforced by Azerbaijan and Turkey (in place now for over 16 years), an energy crisis, recession and economic collapse (as 60 percent fall of the real GDP), have all contributed to social crises in the republic. This combination of events has had severe consequences. Economic decline has placed Armenian health institutions in jeopardy, indirectly hindering the entire reform process. Poor economic and social situation was conditioned by general consequences of socio-economic instability in the country and combined with a high level of corruption in the government, have stifled any sense of national pride among the majority of the population and tarnished their hope for a better future, worsens already severe financial state of health care, hindering the implementation of progressive methods of management and market relations' mechanisms.

Because the previous system failed to produce many of the promised economic and social benefits, radical reformers during the transition have been quick to condemn, even tempted to discard, nearly everything established in the past. As a result, there is now a serious risk that reformers in Armenia as in some of other CIS countries may throw out the baby with the bath water. So gains in freedom have been accompanied by the losses of many basic economic and social services that the population had come to enjoy and expect. The level of public expenditures for health care was the lowest in the region and the quality and utilization of the health services had deteriorated. The level of medical care in Armenia declined rapidly specially in the late 1980s and early 1990s. In the 1990s, it ranked lowest among the union republics in the number of hospital beds per 1,000 persons, and ranked average for the number of doctors per 1,000 persons (Table 1).

Table 1. Some indices of medical care level in the Post Soviet Republics[1]

REPUBLICS	Indices per 1.000 people (1990-1997)	
	Physicians	Hospital beds
Armenia	**3.1**	**7.6**
Azerbaijan	3.9	9.9
Belarus	4.2	12.3
Estonia	3.0	8.1
Georgia	3.5	7.8
Kazakhstan	3.6	10.3
Kyrgyz Republic	3.3	8.8
Latvia	3.0	10.3
Lithuania	4.0	10.6
Moldova	3.6	12.1
Russian Federation	4.1	11.7
Tajikistan	2.0	8.8
Turkmenistan	3.2	11.5
Ukraine	4.5	9.9
Uzbekistan	3.2	8.3

* *Source*: World Bank technical paper 293, 1995.

[1] Market Mechanisms & the Health Sector in Central & Eastern Europe, Alexander S. Preker, Richard G. Feachem, Washington, DC., World Bank technical paper 293, 1995.

Prior to 1991 Armenia had acquired large stocks of medical supplies and equipment, thanks mostly to Western aid projects following the 1988 earthquake. By 1992, however, the trade blockade enforced by Turkey and Azerbaijan had made the supply of such basic items as surgical gloves, syringes, and chlorine for water purification unreliable. The resulting medical crisis put the elderly and newborns at great risk. In late 1992 and early 1993, healthy infants reportedly were dying in hospitals because of the cold and a lack of adequate equipment. The slow pace of economic development in Armenia led to decline in funding for the health care system. Armenia possesses very limited resources, and only a very small amount of government support is granted to certain groups in the form of free medical care.

The reform of the health care system in Armenia started some time after the break up of Soviet Union and gaining of unexpected independence in 1992-1993 and has witnessed many attempts to reform the organization, management and economics of health care system. The economic crisis of that year aggravated the problems caused by the centralized planning of the health care system. Transformation, although necessary and desirable, has not come without tears and sacrifice. Thus, to revitalize their services, government in Armenia is experimenting with a new curative drug called “market mechanisms.” This is somewhat similar to a scenario where a doctor gives a drug to a patient who has a known allergy to it but can not survive without it. It is necessary to understand the associated dangers so that appropriate preventive measures may be taken before the treatment can kill the patient. Therefore, there is a real risk that the transition to the market economy will make the status of wealth decline in some countries as poverty increases among some subgroups of the population.

In 1993-2004 several measures were undertaken towards structural, managerial and financial reforming of the health care system, which led to only partial improvements, but to unexpected results in some cases. For example the changing of the status of medical facilities /to economically independent state enterprises and to state closed joint-stock companies afterwards/ and the new administrative-territorial division of the republic resulted in substantial weakening of the mechanisms of quality control and management of the health care system. A major split

between different levels/republican, regional, rural/ of health care has been created. In the course of the reforms, the Ministry of Health experienced a change of five ministers, who in their turn changed their working groups, modified the direction of the reform and brought their own vision into the future health system. This explains a certain instability that has been felt in the sector. Several health policy/reform documents have been adopted by the government in the last few years, however due to frequent changes in governments of Armenia; these documents do not ensure sustainability of each reform direction and its implementation.

However, the Armenian national health system is subject to state control, and until recently has been deprived of any competitive forces. Almost every medical institution is state-owned and directly managed by health authorities. The promotion of primary /out-patient-polyclinic/ health care has not been prioritized sufficiently, and a modernized national system of health care standards and quality control has not been introduced yet.

Though it is true that 'health is priceless', it is also true that it is expensive. Privatization is well underway; health care is most available to those able to pay out-of-pocket. Along these lines, there has been a considerable decline in public demand for health services, owing to low purchasing power and the absence of state medical insurance. Now, the demand for medical services is four times less than the available supply, in spite of the fact that during the transition period the average number of medical staff including physicians has dropped and the number of beds has decreased as well. Some principal indicators for the Armenian health care system are shown in Table 2.

Table 2. Some General and Main Indices of Health Care System in Armenia*

Indices	1990	1995	2000	2001	2002
Number of physicians per 10.000 people	41	33.3	32.3	30.3	35.8
Number of beds per 10.000 people	86	76.2	54.7	42.5	43.5
Number of patients admitted to hospitals (thousands)	467	281	192	187	193
Number of visits to polyclinics (millions)	34.2	16.4	6.7	5.8	5.4

Average number of outpatients' visits per capita	9	4.8	2.1	1.8	1.7
Average number of medical staff per 10.000 people	98.6	81.4	59.5	53.8	59.9
Average annual occupancy of beds (days)	247	152	116	136	165
Average length of treatment per patient (days)	15.6	15.2	12.7	11.7	10.5

**Source*: *Data of National Statistical Service*

Serious problems have accumulated in the pharmaceutical and medical technology sector. The essential drug list affordability is not ensured; there are no state regulations on all pharmaceutical pricing and procurement. At present, many patients still do not access to proper pharmaceutical services. Public spending on pharmaceuticals is very low; it makes less than $2 per capita per year. Drug prices are high and are often unaffordable for the majority of population. In addition, introducing VAT for medicines since 2001 has lead to further prices increase[2] .The medical technology and equipment in health facilities have become outdated; part of the available equipment is used inefficiently and needs to be redistributed.

Accessibility and Health Status

Armenia has previously introduced radical reforms to the health care system, accepting that it was no longer possible to provide free on demand health care to the entire population. The reliance on direct out-of-pocket payments obviously undermines the principle of equity with respect to both financing and access. The government has ensured that a basic package of care is still available to the most vulnerable groups, although funding has usually fallen short of targets, thus requiring patient co-payments even in the case of these targeted groups. The result was that between 1996 and 1999 the free of charge health care provided by the government wasn't able to prevent 21% drop in the health care utilization rate among the largest vulnerable group, families

[2] Developing National Drug Policy in Armenia, Kazarian I., 2002, available from http://www.policy.hu/kazaryan/project.html.

with four or more children. Therefore, even the accessibility of the most essential services has become a very serious problem mainly for socially vulnerable groups in the population. Low purchasing power, absence of state medical insurance, the introduction of out-of-pocket payments and the increase in informal payments have resulted in sharp a decrease in timely referrals to doctors at a time of increased morbidity.

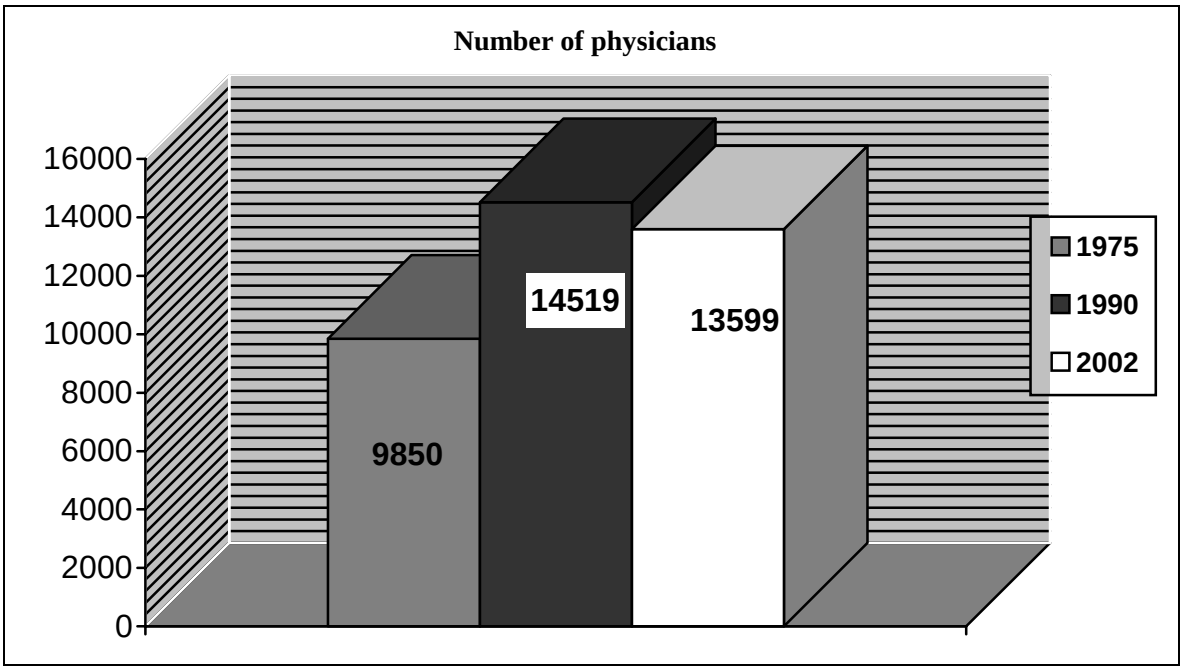
There is the excess capacity of hospital beds that reflects the fact that during the Soviet period the government payment to a hospital was based on the number of bed that the hospital maintains, which gave an incentive to build large hospitals with many beds. The average bed occupancy rate in the country is about 30% (in some regions it is even lower, about 10–15%).[3] This is very low compared to European standards, due both to the general social-economic status of the population and the low effectiveness of health care management and financing. Bed occupancy rates have fallen more than 200%, and visits by doctors to patients' homes have fallen more than for 30%. At the same time, others argue that the problem is not oversupply of hospitals, but lower demand of health services, under consumption, because about half of Armenia's population is extremely poor or poor and they can't afford to pay the hospital fees.

In spite of, the number of physicians per capita is twice as large in Armenia as it is in western countries; however, physicians are not distributed in a similar fashion. In the cities there are 65 physicians per 10.000 people while elsewhere it varies between 14–32 physicians per 10.000. It should be mentioned, that between 1990 and 2002 physician numbers fell and the average length of stay has declined, while at the same time, the number of outpatient visits per capita has dropped, and the number of inpatient admissions to hospital decreased.[4]
Figures 1, 2, 3, 4.

[3] Hovhannisyan S., Tragakes E, Lessof S, Aslanian H. Mkrtchyan. A. European Observatory on Health Care Systems. Health Care Systems in Transition: Armenia. Copenhagen: WHO Regional Office for Europe, 2000.

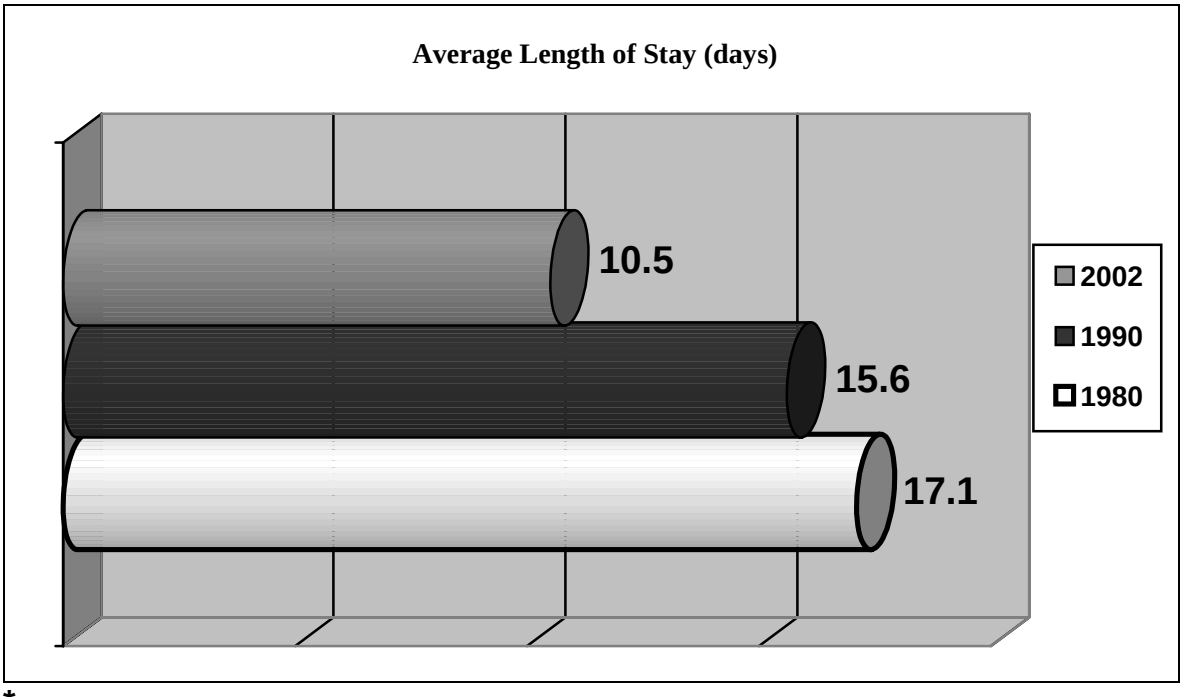
[4] National Statistical Service, Republic of Armenia. *Statistical collection, 2002.* Yerevan, 2002.

FIGURE 1



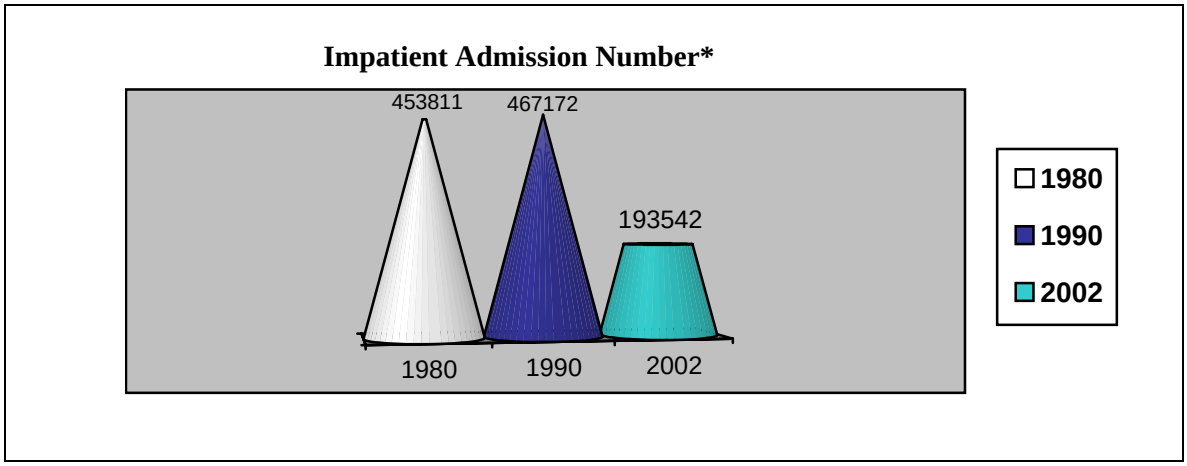
**Source*: *Data of National Statistical Service*

FIGURE 2



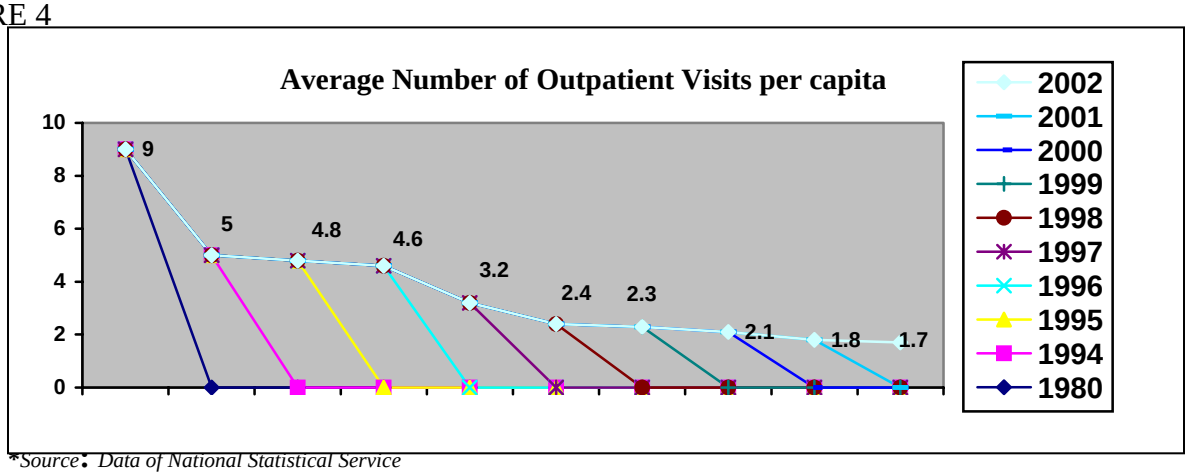
**Source*: *Data of National Statistical Service*

IGURE 3



* *Source*: *Data of National Statistical Service*

FIGURE 4



*Source: *Data of National Statistical Service*

Thus, unlike many other transition countries, social-economic factors have prevented the implementation of medical insurance and generated a decrease in subsidized health services and visits for medical aid. This has led to an increase of the length of illness and chronic pathology. Although there has been a sharp fall in timely referrals to physicians, this does not reflect situation, where population morbidity has been increasing. You can see the morbidity rate has increased according to several nosologies (neoplasm, hypertensive diseases, diabetes, endocrine diseases, etc). At the same time, the number morbidity of population and children at the age of 0 -14 years with the diagnosis set for the first time has increased, especially during 1999-2000. (See Table 3 and Figure 5).

Table 3. Morbidity of population per 100 000 population *

by diseases groups

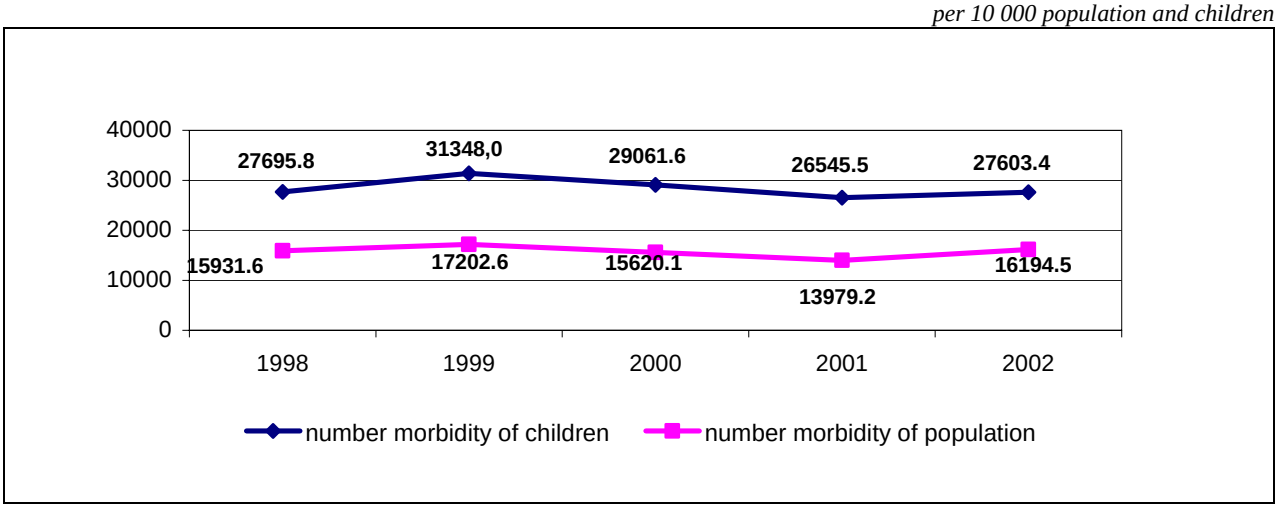
	1998	1999	2000	2001	2002	% of total
Number of registered diseases with the diagnosis set for the first time – total of which:	15931.6	17202.6	15620.1	13979.2	16194.5	100
Infection and parasitic diseases	1828.9	1814.2	1719.0	1608.1	1754.3	10.8
Neoplasms	140.0	145.7	155.9	159.3	190.2	1.1
Diseases of the endocrin system, digestion disorders, disorders metabolism and imminity	256.2	269.6	250.1	248.1	295.0	1.8
Blood diseases and other hematogenic disturbances	179.4	164.4	146.4	149.1	188.5	1.1
Psychic disfunctions	124.4	124.9	125.4	122.1	138.1	0.8
Nervous system disorders and organs of senses diseases	787.0	772.9	891.3	784.9	1006.0	6.2
Blood circulation diseases	504.3	525.9	529.8	522.7	699.3	4.3
Respiratory organs diseases	7155.0	8061.0	7012.0	6187.4	6990.0	43.1
Digestive organs disorders	1201.2	1291.3	1133.0	989.7	1146.0	7.1
Urogenital diseases	527.1	504.4	542.6	523.0	670.7	4.1

Complication of pregnancy, child birth and post-natal period	1003.5	1243.9	1230.9	932.3	1192.7	7.3
Skin infection and under skin fat diseases	632.1	602.4	566.5	538.2	562.9	3.4
Osteo-muscular and connective tissue Disorders	188.4	191.1	165.0	155.9	181.6	1.1
Congenital anomalies (developmental defects)	27.5	31.3	30.2	29.3	36.0	2.2
Symptoms, signs and inexactly identified States	38.4	44.8	48.3	40.7	50.6	0.3
Injures and poisonings	2002.6	1974.5	1865.6	1565.8	1854.7	11.4

**Source*: *Data of National Statistical Service*

FIGURE 5 Morbidity of population and children at the age of 0 -14 years with the diagnosis set for the first time*

per 10 000 population and children



**Source*: *Statistical Yearbook of Armenia -2003*

Meanwhile, the decrease in the number of diseases according to some nosologies can be explained mainly by the decrease in referrals, as population mortality caused by different reasons has not decreased. For example, in 2002 with comparison 2001 there was an increase in death cases attributed to blood circulation diseases, respiratory diseases, digestive diseases, but there was a slight decrease in mortality cases due to neoplasms, accidents, poisonings and injuries (Table 4).

Table 4. Mortality by reasons*

	2001	% of total	2002	% of total
Number of deaths –total of which – reasons:	24003	100	25554	100
Blood circulation diseases	13107	54,6	14,027	54,9
From accidents, poisonings and injures	1101	4,6	1071	4,2
Neoplasms	4136	17,3	4242	16,6
Respiratory diseases	1228	5,1	1462	5,7
Digestive diseases	900	3,7	1009	3,9
Infection and parasitic diseases	239	1,0	251	1,0
Other	3292	13,7	3492	13,7

***** *(On the basis of death certificates received from the CSAR local departments)*

Between 1990 and 2002, the birth rate sharply decreased while the overall death rate remained comparatively constant; however a certain increase can be noticed in the last few years. Thus, the overall rate of increase in the population has sharply fallen (see Table 5).

Table 5. Demographic change in population (per 1000 population) *

Indicators	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Birth rate	22.5	21.6	19.2	16.4	13.7	13.0	12.8	11.6	10.4	9.6	9.01	8.44
Death-rate	6.2	6.5	7.0	6.8	6.6	6.6	6.6	6.3	6.1	6.3	6.3	6.32
Natality	16.3	15.1	12.2	9.5	7.1	6.4	6.2	5.3	4.3	3.3	2.70	2.12

***** *Source: Data of National Statistical Service*

The health indicators in Armenia, especially those relating to mortality and male life expectancy, showed gradual improvement over the decade, and 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. The infant mortality rate (IMR) has increased slowly since 1995 while the maternal mortality rate (MMR) especially in 2000 has shot up to 52.5 per 100,000 live births compared with 34.7 in 1995 due to an increase in the number of unassisted home deliveries and abortions, however, since 2001 it has essentially decreased (see Table 6).

Life expectancy at birth has remained high, which was estimated at 71.0 for men and 75.9 for women during 2001.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.)

Table 6. Trends in selected health status indicator*

Indicators	1990	1995	1996	1997	1998	1999	2000	2001
Female life expectancy at birth (years)	75.2	75.9	76.2	77.3	78.1	75.5	75.7	75.9
Male life expectancy at birth (years)	68.4	68.9	69.3	70.3	70.8	70.7	70.9	71.0
MMR (per 100,000 live births)	40.1	34.7	20.8	38.7	25.4	32.9	52.5	18.8
IMR(per 100,000 live births)	18.5	14.2	15.5	15.4	14.7	15.4	15.6	15.4

***** *Source: UNICEF; Social Monitor 2002, Innocenti Research Center, Florence, Italy, 2002. Figures for the years 2000- 2002 are based on Statistical Yearbook of Armenia, 2002.*

Mortality indicators in Armenia should be treated with a degree of caution. There are significant differences between populations 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.

Health status indicators reflect significant differences between rural and urban areas. According to the ADHS 2000, during 1990's 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. These 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.

Health care financing

Health care reform looks a little different in Armenia. Refusing to take up the way of international practice and NIS countries, i.e. compulsory medical insurance (CMI), the managers of the health field provided financing for working out different projects in the last few years. However, it did not improve the critical state of Armenia's health system and caused a financial crisis within the system. The state of health care financing is quite precarious, and it is unlikely to improve essentially in the near future. The slow pace of economic development in Armenia led to decline in funding for the health care system. Resources are very limited, and there has been a loss of public and professional confidence in access to and funding of state guaranteed health care services. During this period, budgetary spending on health care plunged from about 2.7% of the GDP in 1990 to 1.3% in 1997. Since then the expenditures channeled from the state budget to the health sector are rather low (see Table 7).

Table 7. Public expenditures in the health sector*

	1998	1999	2000	2001	2002
Total, in million US Dollars	24.9	24.7	17.8	28.5	29.0
% of GDP	1.43	1.38	0.95	1.34	1.18
% of state budget expenditures	6.7	5.6	4.4	6.4	6.0
Per capita of population, in US Dollars	8.9	8.4	6.1	9.4	9.3

**Source*: Ministry of Finance and Economy, NSS

In the international practice, the determining index of the volume of financial means on health care is the share of resources spent from GDP of the country, which according to the recommendation of WHO should not be less than 6-9%. As you can see, during 1998-2002 the highest indicator of state health budget was 1.4% of GDP (for comparisons note that even in the years of collapse of the NIS this was 3–4% and in countries with an average income level, this indicator is 3%) and accounted for approximately 25% of total health care expenditure (total expenditure on health from all sources accounts for only $50–70 million), 15% of health care expenditure came from humanitarian aid contributions, with the remaining 60% financed through private out-of-pocket payments. The severity of the situation would not be eased; even if the significant role of humanitarian aid received to finance the health sector recently is taken into consideration.

The difference becomes more obvious if the basis for comparison were selected to be the per capita public expenditures in the sector. As to the health care financial resources per capita a year - minimal level should not be less than $15 a year. Health expenditures in Western Europe in average make 8-10% of GDP and per capita a year exceeds the recommended standard more than 100 times. Armenia does not provide this standard and spends twice less. In 1998-2002 Armenian government could only spend $6-9.5 per capita on health services (even in low-income countries it makes $12), compared with per capita spending of $2,000–$2,500 in Europe, $1,785 in Canada

and $4,235 in the USA.[5] Given the current social-economic situation, it is clear that an essential increase in the budget for health care cannot be expected in the near future.

Financing mechanisms have been the subject of change. Regarding hospital care, financing per patient per day was replaced with case based financing, while for ambulatory care a transition from a per visit to per capita mechanism was implemented. A global budget mechanism was introduced to the inpatient and outpatient emergency care system. Despite some positive results arising from the application of these changes, serious problems still were encountered in the process of medical care and services delivery because of the gradual reduction in the budget for healthcare during 1998-2000.

Since 1993 hospitals were 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 the 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 are for fee for those not included in the BBP. Since of January 2001, the Government of Armenia extended the free of charge BBP program eligibility to the beneficiaries of the poverty family benefit system. On behalf of the poor, the State Health Agency makes payments to the hospitals and polyclinics. However the amount of payments by the State Health Agency to the health institutions covers about 45% of the cost of the health services.[6]

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[5] Health Care in Transition, Armenia Hit Summary, WHO, Copenhagen, Denmark, 2002

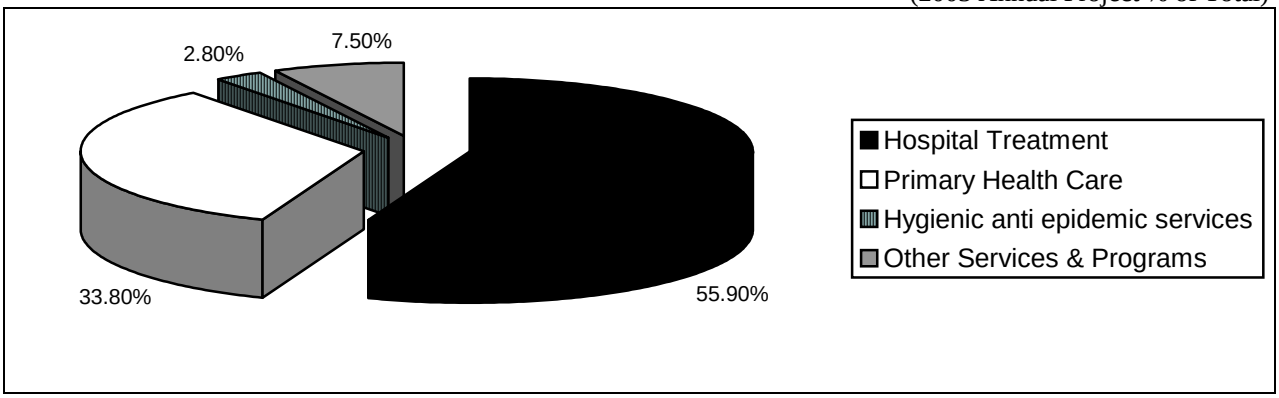
[6] World Bank, 2003, *Armenia Public Expenditure Review*, Poverty Reduction and Economic Management Unit, Europe and Central Asia Region, Washington D.C.

This implies that the health institutions should generate revenues indirectly. One method is to collect informal payments from patients including the poor and the vulnerable groups. In this case hospitals and polyclinics would collect payments for the services provided to the poor and the vulnerable groups from both the patients and the government.

At the same time, a major part of budget allocations were channeled to hospital services instead of redistributing them to primary health care, which is more accessible for the poor. Recently this situation has slightly improved as in 2003 the state health budget was 1.4% of GDP and the expenditures from the state budget for health care were around $37 million (around 21.0 billion drams AMD) with the following structure (55.9% of which was distributed to inpatient care, 33.8% to primary care, 2.8% to hygienic and anti-epidemic services and 7.5% to other services and programs).[7] Figure 6

FIGURE 6. Structure of Health Care Expenditures *

(2003 Annual Project % of Total)



**Source*: Simplified Public Health Budget for 2003

However, it is programmed to increase the share of primary health care in total health expenditures to 40% in 2006, 45% in 2008, and channel 50% of the sector expenditures in 2015. Increase in budget allocations is mainly targeted to increase the wages of doctors and other medical personnel, to supply medicines and medical materials, to improve buildings, and to supply modern equipment. Both in terms of wages and capital expenditures, the improvement of

[7] *Simplified Public Health Budget for 2003*,Budget Analysis of Republic of Armenia Project, Yerevan, 2003

conditions in primary health care institutions is prioritized (especially in rural areas). So as to meet these targets, the state will control salaries for primary health care system employees and allocations for capital spending, while other funds will be assigned on a per capita normative basis.

Additionally, in order 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 Poverty Reduction Strategy recently adopted by the government, for the period of 2004-2015 the public expenditures will display growth, with an average of 14% per annum. In 2015, compared to 2003, public expenditures in the health sector as a percentage of the GDP will increase by 1.1 percentage points to reach the program target of 2.5% of GDP in 2015 (Table 8.) 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 from foreign sources.

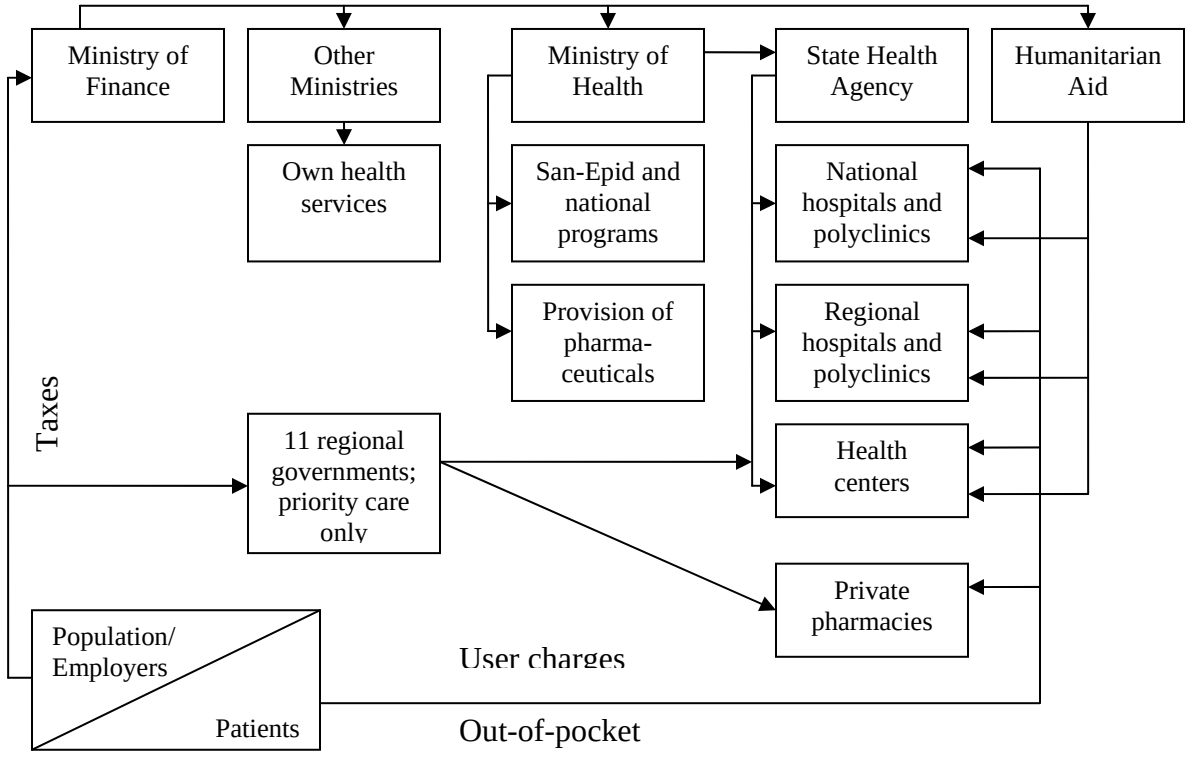
Table 8. Program indicators of state budget expenditures in the health sector*

	2003	2004	2005	2006	2009	2012	2015
Total, in million US Dollars	38.1	45.3	56.0	64.5	95.8	133.3	183.8
% of GDP	1.4	1.5	1.8	1.9	2.1	2.3	2.5
% of state budget expenditures	6.5	7.6	8.6	9.2	10.2	10.9	11.9
Year-on-year % change	31.2	18.6	23.5	15.4	12.4	11.5	11.2

**Source*: Ministry of Finance and Economy, NSS

Along with the decrease of government's possibilities to socially protect the population an active development of shadow market of paid medical services has been observed. An important source of funding in the health care system continues to be direct payments by the population. Investigations undertaken with the support of the World Bank demonstrate that the real financial flows to the hospital sector including direct payments for drugs, food, medical personnel services etc, are 3.5 to 4 times greater than funds allocated from the state budget alone (Figure 7).

FIGURE 7. Financial flow chart



The growing informal sector of the economy has caused a near collapse of the old social insurance and safety nets mechanisms. According to World Bank estimates, the share of patients making 'informal' payments in the health sector in Armenia is the highest among CIS countries, and equals 91%, as compared, for example, to 74% in Russia.[8] As to population 'direct' payments, according to some experts, they are about twice more than budget funding - around 60%, as compared to European countries, where 'direct' payments make only 5-7% of the financial systems. In this situation "the shadow market" offers more valuable incentives and simple financing methods in realization of a mechanism for receiving compensation "from pocket to pocket," which are widely used in Armenia for providing medical care to the population. With the

[8] Lewis, Maureen, 2000, *Who is Paying for Health Care in Eastern Europe and Central Asia?* Human Development Sector Unit, World Bank, Washington, DC.

introduction of paid services, health care became unaffordable to most Armenians. Access to health care services has become increasingly dependant on whether a household can afford the 'informal' payments to doctors. Thus, more than half of hospital beds have not been used for years and self-sustaining medical institutions have been unable even to pay wages to the staff. Another negative impact of informal payments is a lack of funds for physical investment and run down hospitals and polyclinics because informal payments are made to the medical personnel and not the institutions.

The incorporation of direct out-of-pocket payments into the funding system obviously undermines the principle of equity with respect to both financing and access. The document "National Policy on Population Health Protection of RA," adopted by RA Ministry of Health, states that the level of access, fairness and equality in health is insufficient in Armenia and the government intends to raise the access to health care for the poor and vulnerable groups only by 2004-2009.[9]

In fact, poverty virtually did not exist during the Soviet area. However, in 1989 about 20 percent of the population in Armenia lived below the poverty as a consequence of the December 1988 earthquake and the inflow of about 360,000 refugees from Azerbaijan into Armenia due to the Karabakh conflict. Like other countries of the former Soviet Union, Armenia has had a dramatic rise in both poverty and inequality after the breakdown of the Soviet Union in 1989/90. However, poverty reduction is a very long process and is achieved in small steps. It is impossible to make substantial changes in this issue in a single year. Over the past years the poverty level was slightly reduced. While poverty remained stable over 1996-1999, it has declined by about 10 percentage points from 1999 to 2003. Extreme poverty declined by about 12 percentage points from 1996 to 2001. There have also been improvements in terms of reduced depth and severity of poverty. In spite of in 2003 46.2% of Armenia's population lived on less than US$1 a day, as compared to 20% in 1989. The following table and figure show the dynamics of the main poverty indicators in the Republic. (See Table 9 and Figure 8).

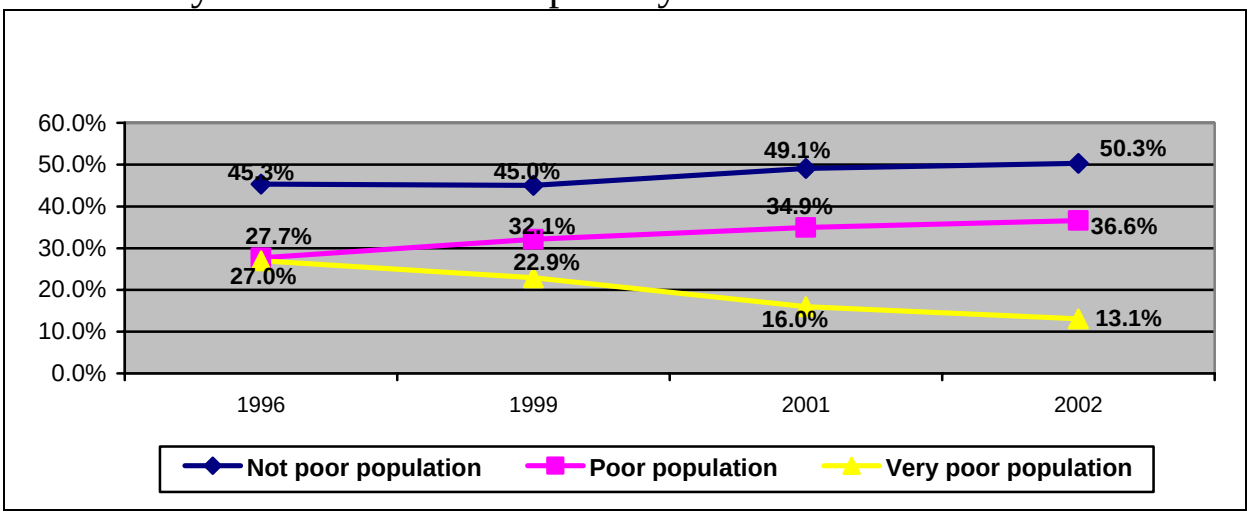
[9] *National Policy on Population Health Protection of RA,* Document Ministry of Health RA, 02.08.2002 N502

Table 9. PRSP Main Benchmark Indicators*

Indicators	2001	2003	2004	2005	2006	2009	2012
GDP per capita, US $	704.8	834.2	904.2	1061.0	1338.0	1639.9	1998.6
GDP per capita, PPP US $	2382.1	2819.5	3056.2	3586.1	4522.3	5542.8	6755.4
Number of the poor, % of the total population	50.9	46.2	43.7	37.9	30.8	26.3	19.7
including number of the very poor population, % of the total population	16.0	15.2	14.7	13.5	11.4	8.6	4.1
Number of the population having less than 1 USD income per day, % of the total population	29.4	23.7	17.9	10.0	4.3	3.4	2.7
Number of the population having less than 2 USD income per day, % of the total population	58.6	52.0	43.4	31.9	24.3	14.1	6.8
Number of the population having less than 4 USD income per day, % of the total population	81.5	76.6	72.8	64.0	52.5	33.5	27.6
Number of underweight children, % of the total number of children below 5 years of age	3.0	2.9	2.8	2.7	2.3	1.8	1.4
Number of under-height children, % of the total number of children below 5 years of age	13.0	12.5	12.0	11.5	9.5	8.0	6.0

**Source*: Social Snapshot and poverty in the republic of Armenia

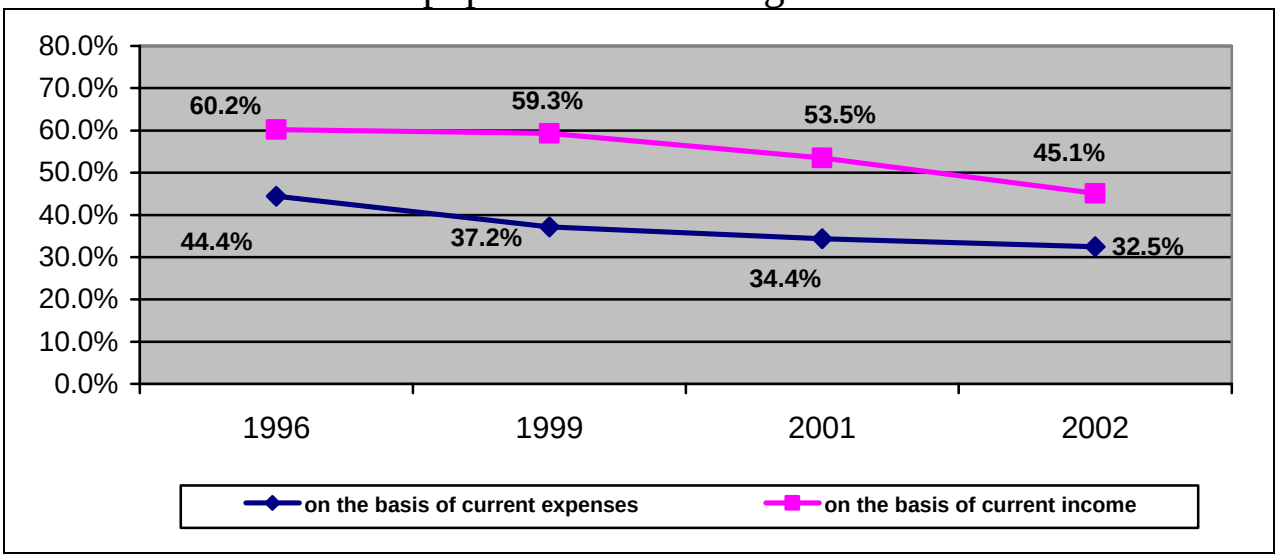
FIGURE 8. Dynamics of the main poverty indicators*



* *Source*: *Data of National Statistical Service*

Income inequality increased dramatically. The Gini coefficient for per capita income than doubled rising from 0.25 in 1988 to about 0.59 in 1998, and then declined to 0.54 in 2001. The level of inequality of population income and wealth distribution, which leads to an increasing gap in the quality of medical care between the rich and the poor in Armenia is the highest amongst all the 27 transition countries".[10] In spite of there is a slight reduction in the Gini coefficient both by consolidated and current incomes: however even these indicators prove that disparity and polarization are quite high in the society. The very poor, who represented 23% of the population, received only 5% of the total income, and shared 10 percent of the total expenditures. While the richest 10% earned 45% of the total income, they consume 30 % of the total expenditure. Distribution of income and expenditures by deciles shows that extreme polarization is the main determinant of poverty (Figure 9).

FIGURE 9. Polarization of population according to Gini coefficient*



* *Source*: Social Snapshot and poverty in the republic of Armenia

There is low living standard indicators and value of the consumption basket that does not provide an appropriate level of living standards. The data presented above show that the population

[10] Making Transition Work for Everyone, Poverty and Inequality in Europe and Central Asia, WB 2000.

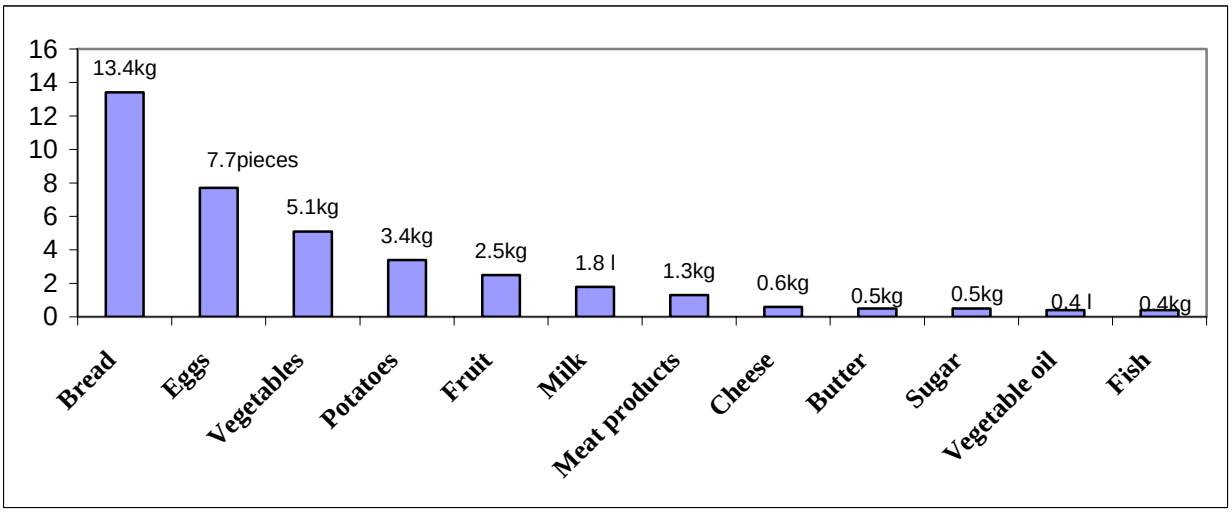
of the Republic consumed high-priced food products, such as meat products, milk products, fruits and eggs in small quantities. (See Table 10 and Figure 10).

Table 10. Living standart indicators*

	1996	2001	2003
GDP per capita, US $	491	705	835
Average monthly salary, US $	23.1	43.1	53.6
Average monthly pension, US $	7.7	8.3	11.2
Pension as % of average salary	33	19	21

***** *Source*: *Data of National Statistical Service*

FIGURE 10. Average monthly per capita consumption of Basic Food Products 2002*



* *Source*: Social Snapshot and poverty in the republic of Armenia

Moreover, the number of people who can afford the minimal consumer basket is low. According to a World Bank survey, the minimal consumer basket needed in Armenia in 2002 cost $20 per person or $0.7 a day (64.1% of the employed receive less than the minimal consumer

basket).[11] The majority of the population, however, received less than the average wage, especially retired people (pensions average is between $7 and $11 per month). About 70% of the Armenian population should be considered vulnerable. Due to the migration of the economically active population, the percentage of children, unemployed and elderly people, refugees and other vulnerable groups rose. Therefore, the burden of the state, which is obliged to take care of the vulnerable groups, increased, creating additional obstacles for the market economy.

The continuing social-economic disequilibrium and widening gap between rich and poor foster inequality in health and accentuate the existing public health problem. All the above mentioned shows that leaving health system mainly on budget financing means to bring this sphere to the state of regress. If in the nearest future, Armenia does not get oriented on physical, spiritual and social health of people, an irreversible emaciation of "live force", as well as further worsening of population reproduction, increasing deficit of fully fledged workers, and deformation of public development will be observed.

Thus, Health Care system in Armenia is in a precarious state and the government pursues the objective of turning back the negative trends observed in the development of the health sector. It seeks to enforce the constitutional right of the people to maintain health through a substantial increase in accessibility and quality of health care services guaranteed by the state.

Hence, there is an urgent need to look for additional sources and methods of financing as well as to introduce multiple types of funding mechanisms, which need to be complemented by optimal models for reimbursement. Armenia has to search for better ways to regulate, finance, and deliver health services and must insure that funds allocated to health system are used in the best way. Only scientifically grounded approach to reformation of health care financing system with exposure of internal reserves of economy and work out of new financial flows will help preserve the health care as public system.

[11] Ter-Grigoryan A. Financing of the Health Care System in the Republic of Armenia. Yerevan, 2001.

Health Policy

The comprehensive reform programs now 'in the works' focus on securing the stable financing of the health care system, which would make regulation and management more efficient and cost effective, as well as protecting access to basic services for the entire population. Generally, the government is seeking for diverse sources of financing while increasing the emphasis on primary health care and introducing efficiency-enhancing measures.

The purpose of primary health care, PHC, is to detect, diagnose and prevent sicknesses 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% of illnesses could be cured through primary health care which are mainly provided through polyclinics, where specialized physicians work and through small clinics called ambulatories usually located in the provinces. Polyclinics are owned by local governments 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, Primary Health Care shows a mixed picture. Most urban polyclinics continue to operate based on 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. On the other hand, 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, is emphasizing the important role of primary health care and polyclinics, and therefore, is allocating more funds to them (See Table 11).

Table 11. Government expenditure on polyclinics and hospitals*

in millions US Dollars

	1999	2000	2001	2002	2003	2004	2005	2006
POLYCLINICS	5.5	3.1	5.6	6.2	7.3	14.5	19.8	24.4
HOSPITALS	16.9	17.1	17.3	16.2	19.3	22.0	24.5	26.0

**Source*: Ministry of Health, 2003

Table 11 shows that government is planning to increase the role of polyclinics relative to hospitals. The government is planning to increase the funding of polyclinics much faster than to hospitals. This trend would continue and after year 2006 government funding to polyclinics will exceed the funding of hospitals. This is remarkable, when we realize that during 1999 government spending on hospitals was three times more than government spending on polyclinics.

While alternative forms of health care financing, such as user fees, have been heavily criticized, the option of insurance seems to be a promising alternative as it is a possibility to pool risk transferring. The experience of health care organizations in different countries shows that the only system that can maintain health care during the period of transformation to market relations, is a public regulated health insurance system, based on principles of statutory or compulsory medical insurances. As can be seen from experience of different countries, in conditions of socio-economic crisis, state medical insurance is the only guarantee for providing the population with medical aid on equal conditions, as health insurance has a special role in the system of social protection of the population. State health insurance is considered as an effective mechanism for redistributing the material welfare from comparatively rich part of the population to the poor and it is also considered to be an effective method for increasing the purchasing power of the population, which is especially important in terms of economic crisis.

State medical health insurances have high economic effectiveness, as they allow to reach qualitative medical services by comparatively minimal expenses. Thus, in European countries having statutory and compulsory medical insurances, the health spending makes 6-8% of GDP,

while in the USA, which has a private insurance system, it makes 14%. Yet, in European countries health insurance, in average, covers 91% (out-patient) and 93% (in-patient) of population and accordingly, in the USA - only 25% and 40%[12].

Nevertheless, for most people living in developing countries "health insurance" is an unknown world, as widespread absolute poverty is a serious obstacle to the implementation of insurance. If people are struggling for survival every day, they are less willing to pay insurance premiums in advance in order to use services at a later point in time. It concerns also to Armenia, where, as above mentioned, around 50% of population by official data is poor.

In Armenia insurance industries are not developed yet. Republic of Armenia is only on the threshold of implementing health insurance; it is now the major problem of public health thinking. However, today Armenia has only a few private health insurance companies, which are mainly used by people leaving abroad, as some countries, require medical insurance. In the private health insurance market, insurance providers have less information about the health conditions and the life style of insurance buyers than the buyers.

The significant portion of the population couldn't afford to buy private health insurance, and current tax laws do not give incentives to the employers to provide health insurance to its employees. The government has been trying to implement HIS for 3 years. The Ministry of Health prepared a proposal to introduce public health insurance in Armenia. The report indicates that the existing state of health care in Armenia does not satisfies 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". 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. Two thirds of the tax would be paid by the employer and one third by the employee. The

[12] Health Care Management, Economics and Financing in Conditions of Market Relations, T.Khachatryan, T.Tonoyan, Yerevan, Armenia, 2002

estimated tax is 9% of wages. It is suggested that initially the tax should be only 3% and in the future it should be raised to 9%. However, beside the social security taxes that employers currently pay for their employees' wages and income taxes that employees pay, an additional 9% or even 3% tax on wages is not politically feasible. At this stage, given the government's relatively low revenues, public health insurance seems to be expensive. The low income of the population and the existence of a shadow economy make the development of public and private health insurance very difficult.

Thus, currently Compulsory Medical Insurance is not being considered and establishing public health insurance is not a short-range goal of the government. In general low-income countries instead of adopting public health insurance, focus on public hospitals and clinics. At the same time, 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 (See Table 12).

A priority direction in enhancing efficiency is optimization, because in order to increase the accessibility of health care by the poor, optimization of the health system should occur. As a result of sector optimization, services should shift towards a more accessible and relatively cheap primary health care network and away from relatively expensive hospital care.

One of the main directions to enhance the effectiveness of hospital healthcare would be to concentrate the limited public resources as much as possible in the fewest healthcare facilities. So, this will be achieved first by closing a few hospitals through consolidation. During Fall 2003 the government of Armenia began to take measures to consolidate health institutions. Among the measures to be implemented, the consolidation and merger of healthcare facilities in Yerevan is very important. At the same time, the government should find ways to provide opportunity to the poor to be able to use hospital care when they need it.

Table 12. Main Indicators of Transition Countries in 2002*

Indicators	Armenia	CIS	Central Eastern Europe and the Baltic States	South-Eastern Europe
Growth in Real GDP *(%)*	12.9	4.8	2.5	4.4
GDP per capita *(USD)*	790	1,605	5,293	1,811
Inflation, median for the region *(annual average,%)*	1.2	5.8	2.4	5.9
Inflation, mean for the region *(annual average,%)*	1.2	11.0	3.0	11.5
General Government Balance / GDP *(%)*	-0.6	-0.8	-4.4	-4.1

* Source: EBRD "Transition report update. May 2003. Economic transition in central and eastern Europe and the CIS". EDRC calculations.
Note: Data for 1991-2001 represent the most recent official estimates of outturns as reflected in publications from the national authorities, the IMF, the World Bank and the OECD. Data for 2002 are preliminary actual, mostly official government estimates.

The government started the process of optimization by reducing the supply of health institutions and increasing the demand. This implies that the Ministry of Health has the difficult task to reduce the number of hospitals to an optimum level. 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 (See Table 13).

Table 13. Trends in reducing the number of health institutions*

	1998	1999	2000	2001	2002
Number of hospitals	179	174	146	142	135
Number of medical institutions rendering out-patient and dispensary aid to population	497	504	503	460	446
Number of antenatal clinics, children's polyclinics and independent dispensaries; number of institutions with antenatal clinics and children's polyclinics	366	438	393	391	325

**Source*: Ministry of Health, 2003

Another aspect of the optimization of health institutions is the privatization process, which happened mostly in the hospital sector in Yerevan and pharmacies all over the country. In addition, the privatization of hospitals through direct sale to the staff at heavily discounted prices (75%) was not transparent and was not organized efficiently. With the consultation of the World Bank, the government decided to postpone the privatization process. Once the numbers of hospitals, doctors and nurses are reduced and consolidation of hospitals occurs, and at the same time government budget allocation to the health sector increases, then the salaries of physicians, nurses, and medical staff will increase and 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 pressure on hospitals and polyclinics to collect informal payments from the patients including the poor.

Conclusion

The success of reforms applied in health care system in Armenia is often evaluated against improvements in the health status of the population. Although one of the primary aims of the reforms has been to bring tangible health benefits to the whole population, their results so far do not meet all the main objectives of national health care policy. Some slight improvements in certain areas mainly depend on the stabilization of the economy and its sustained growth, which will allow generating additional funding for health care system.

Health Reform in Armenia should be promoted through improvement of health care financing system especially by raising the public funds for the health sector. There is a need to introduce multiple types of funding mechanisms, augmented by additional sources of financing. (medical insurance funds, co-payments, etc.). These need to be complemented by optimal models for reimbursement.

Taking into account the present situation of health financing in Armenia and the fact that the government is planning to introduce health insurance system, at present special attention

should be paid to the basics of health insurance schemes, which are increasingly recognized as a tool to finance health care provision. Ministry of Health should be precipitate with development and implementation of the effective and socialized model of health insurance which will successfully combine consumer choice and access for everyone. The model should be based on comparative assessment of different health insurance schemes, as well as be designed according to appropriate evidence-based strategies and consider some particularities of Armenian health system. The continuity of positive developments of economy would improve the quality and availability of health services in Armenia and provide a better opportunity to the poor to get adequate health care.

It is necessary to ensure the active participation and direct involvement of public and private sector, communities and civil institutions, including non-governmental organizations and to coordinate their activities for the purpose of improving the health of population in implementation and supervision of current programs. The role of the private sector in the supply and financing of health services can be strengthened, while also increasing earmarked health taxes and reducing the tax burden falling on medical institutions. But for all that, the regulatory and supervisory functions of the state in the health care system should be strengthened within the authority of the legislation. In particular, it is necessary to elaborate and implement quality control standards and review sanitary norms and regulations. Besides, social and market values should be balanced in health care system.

Furthermore medical institutions need reorganization, in order to harmonize them with international standards. The government should continue to emphasize the role of primary health care, continue to increase the funding of PHC service providers. For achieving this, the share of accessible primary care with respect to expensive hospital care should be increased through further optimization. The average duration of inpatient treatments needs to be reduced. Henceforward, special measures should be taken to improve the efficiency of the planning, budgeting, and monitoring functions of medical institutions. Realistic annual state health care programs and budgets need to be developed and approved, taking account of distributional issues. Methods of redirecting resources, currently diverted to the informal economy, to the health care sector need to be examined.

Finally, there is necessity to encourage the development of insurance companies, pension funds, and funds for public health care education, which have not yet been properly undertaken, as well as implement many interchangeable opportunities for learning in transitional countries and bring to attention the necessity to develop a mechanism for shared learning at the international level.

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