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## **Islamic Republic of Iran**

### *Health Financing Reform in Iran : Principles and Possible Next Steps*

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This paper was prepared by George Schieber, Health Sector Manager, and Nicole Klingen, Health Economist, in the Middle East & North Africa Region of the World Bank.

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## **I. INTRODUCTION**

The Constitution of the Islamic Republic of Iran (Article 29) guarantees all citizens the right to health care. The Government's focus on primary care has resulted in access to primary care services for almost the entire population and health outcomes that are among the best in the region. However, with health spending currently accounting for almost 6 percent of the economy, with 10 percent of the population lacking formal insurance coverage, with significant near-term cost pressures from the health transition and advances in medical technology, with ever growing consumer expectations, with serious problems of efficiency, quality, and access for certain groups, and with the lack of transparency, solvency and sustainability of current health financing arrangements, reform is essential. The purpose of this paper is to provide a policy-analytic basis for reforming Iran's health care financing system. The first part of the paper contains a detailed description and analysis of Iran's health care financing and delivery system. The second half of the paper discusses the basic issues that need to be addressed in reforming the country's health financing structures.

The paper contains eight Sections. The description and analysis of the health care system is divided into 4 sections. Section 2 describes the underlying socio-economic and health situation in Iran. Section 3 describes the health system in terms of specific system characteristics: eligibility for benefits, benefits covered, financing arrangements, payment of medical care providers, and delivery system characteristics including public health programs, human and physical resources, and pharmaceuticals. Section 4 compares Iran's health outcomes, inputs, and expenditures to other countries in the region and world. Section 5 describes the strengths and weaknesses of the system.

The basic issues concerning reforming health financing are addressed in Sections 6-8. Section 6 provides an overview of the plethora of revenue sources, management arrangements, and service provision modalities that provide the universe of policy choices for the reformer. The importance of insurance (as opposed to individual purchase) as a mechanism for financing personal health services as well as the public finance rationales for public sector involvement in the financing of health care are also presented. Section 7 analyzes the various public and private revenue sources available for financing health systems. Section 8 summarizes the types of policy analyses and implementation issues that will need to be addressed to inform policy-makers and politicians and posits some observations concerning possible next steps for the reform effort.

## **II. UNDERLYING SOCIO-ECONOMIC AND HEALTH SITUATION**

### **1. KEY ECONOMIC INDICATORS**

- Iran is a lower middle income country with a 1998 per capita GDP of US\$1,612.
- Government revenues are 25 percent of GDP, over 54 percent from oil and gas, 24 percent from taxes, and the remainder from other sources.
- The external debt to GDP ratio is 13 percent and gross official reserves account for almost 4 months of imports.
- The unemployment rate is 13 percent.
- 18 percent of the population is poor.
- The country is divided into 28 provinces, 282 districts, 718 cities, 741 Bakhshes, and 2258 Dehestans, and 68112 Abadies.

### **2. HUMAN DEVELOPMENT INDICATORS**

- The population is 61.9 million, 38 percent of which is rural.
- The annual rate of population growth is approaching 1.5 percent.
- 40 percent of the population is below age 15, and 7 percent is age 60 and above.
- 80 percent of the population over age six is literate.
- 93 percent of the population has access to safe drinking water and 81 percent to sanitation.
- 95 percent of children reaching their first birthday are fully immunized.
- The percent of low weight births (less than 2500 grams) is 7 percent in urban and 8 percent in rural areas.
- 16 percent of the children suffer from malnutrition, 19 percent are stunted and 7 percent show signs of wasting.

### **3. HEALTH INDICATORS**

- Life expectancy at birth is 68 years for men and 71 for women.
- The crude birth rate is 17.7 per 1,000.
- The crude death rate is 5 per 1,000.
- The under five mortality rate is 35 per 1,000.
- The infant mortality rate is 26 deaths per 1,000 live births.
- About 10 percent of the population lack formal health insurance coverage.

### **4. REPRODUCTIVE HEALTH INDICATORS**

- The total fertility rate is 2.6 children.
- The maternal mortality ratio is 35 per 100,000 births.
- 72 percent of women use family planning.

### III. HEALTH SYSTEM

The right of all citizens to health care is embodied in the Constitution of the Islamic Republic of Iran which recognizes the rights of all citizens to health as well as an equitable distribution of health services based on Islamic religious principles. In practice this has resulted in a strong focus on basic public health financed from the public budget and delivered to all Iranians through a public primary health care (PHC) delivery system run by the Ministry of Health and Medical Education (MOHME), while secondary and tertiary level curative care is financed (and sometimes directly provided) through the compulsory Social Security Organization (SSO) for formal sector employees and their dependents, the Armed Forces Medical Service Organization for members of the military and their dependents, and the Medical Service Insurance Organization (MSIO) for government employees, rural households, the self-employed, and "others" (e.g., students). In addition, there is the Imam Khomeini Foundation that provides insurance coverage for the poor. Private insurance generally is supplemental to these public programs. The MOHME is responsible for overall management of the public health system, regulates the provision of private health services as well as NGOs. The system is described in detail below in terms of eligibility, benefits, financing, medical care provider payment, and the service delivery system.

#### 1. ELIGIBILITY

- All Iranians are eligible for community-based preventive, public health, and limited curative health services financed and provided through the country's PHC network. The network effectively reaches about 90 percent of the population and is particularly extensive in rural areas.
- All formal sector workers and dependents have mandatory coverage for curative services through the SSO.
- Members of the armed forces and their dependents are covered through the Armed Forces Medical Service Organization.
- The rest of the population is eligible to enroll in the MSIO, which has four separate funds covering distinct groups: government employees, rural households, the self-employed, and "others" (e.g., students). The MSIO is compulsory for the government employees and voluntary for the other groups. All individuals except for the self-employed are immediately eligible for all benefits upon enrollment. Two changes in the fund for the self-employed have been implemented recently: (i) a three month waiting period before the individual is covered for inpatient care; and (ii) all household members need to be covered under the fund.
- The Imam Khomeini Relief Foundation finances health services for the poor.
- In 1997, the insurance coverage among the various financing agencies was as follows:
  - ⇒ 23.4 million covered through SSO, mostly in urban areas
  - ⇒ 29.1 million covered through MSIO, mostly government employees, farmers, students, etc.
  - ⇒ 3.1 million covered by other institutions like the Imam Khomeini Foundation for the poor
  - ⇒ 5.4 million not covered by any form of insurance

## 2. BENEFITS

- Benefits provided through the PHC network include: immunizations for children and pregnant women; pre- and post-natal care; growth monitoring of children under 5; promotion of nutrition and breast-feeding; control of diarrhoeal diseases and acute respiratory infections; environmental health--water and sanitation; control of endemic diseases such as malaria; surveillance of communicable diseases; provision of basic curative services; and school health promotion.
- The services of the PHC network are fully paid through budget allocations (i.e., there is no cost-sharing, premium, etc.).
- MSIO, SSO, and the Military Insurance System provide a comprehensive set of curative care benefits including hospitalization, diagnostic tests, and pharmaceuticals.
- SSO beneficiaries face no cost-sharing for services provided in SSO facilities (where about one-third of SSO financed care is provided), but face cost-sharing of 10 percent for inpatient care and 20 percent for outpatient care for services provided in non-SSO contracted facilities. For care in private non-contractually-related facilities individuals face a coinsurance amount equal to the difference between the facilities charge and SSO's normal payment level.
- Under MSIO co-payments are set at 25 percent for outpatient and 10 percent for inpatient care services for all individuals except for the rural households. Rural households face a co-payment of 25 percent for inpatient care.

## 3. FINANCING

- In 1996, Iran spent an estimated 5.7 percent of its GDP on health, some US\$101 per capita in exchange rate-based dollars (US\$305 in purchasing power parity-adjusted dollars).
- Health spending accounts for some 10 percent of Government spending and 5.3 percent of household spending.
- The public share is estimated to be 2.4 percent of GDP or some 42 percent of total health spending. (We assumed that expenditures by "Non Profit Institutions Serving Households" (NPISH) are public. If NPISH expenditures were counted as private expenditures the public share would only be about 1.8 percent of GDP or 32 percent of total health spending).
- An estimated 85 percent of public spending on health is for recurrent costs.
- PHC (fully financed through Government budget) accounts for 30-35 percent of Government health expenditures.
- SSO contributions are earnings related and account for 30 percent of earnings for a wide range of social security and health benefits. Seven percentage points of the contributions are paid by employees, 20 percentage points by employers, and 3 percentage points by government. Health accounts for some 9 percentage points of the 30.
- The Government budget covers MSIO deficits.
- The monthly premium for MSIO (suggested by the MSIO High Council and approved by the Cabinet) is currently Rials 7,920 for the following funds: Government employees, rural households and "others". Self-employed pay Rials 10,000. The actual share of the premium paid by the individual depends on which fund the individual is covered through:
  - ⇒ Government employees: They pay 30 percent of the premium and the Government the remaining 70 percent.
  - ⇒ Rural households: The Government pays the total amount of the premium.

- ⇒ "Others" (e.g., students, clergies, etc.): They pay between 20 and 30 percent of the premium. The remaining 70 to 80 percent is paid by the relevant institution the individual is a member of.
- ⇒ Self-employed: They pay the full amount of their premium.

#### **4. PAYMENT OF MEDICAL CARE PROVIDERS**

- Government health sector employees are salaried and Government facilities are reimbursed based on budgets and/or fee for service payments from Government, MSIO and SSO.
- Private providers are paid on a fee-for-service basis.
- MSIO, the Imam Khomeini Foundation, and SSO reimburse providers on a fee-for-service basis with no overall budget caps or other cost control mechanisms.
- Fees are established by the High Council composed of a number of Ministers and Managing Directors, and these fees apply to MSIO, the Imam Khomeini Foundation, and SSO.

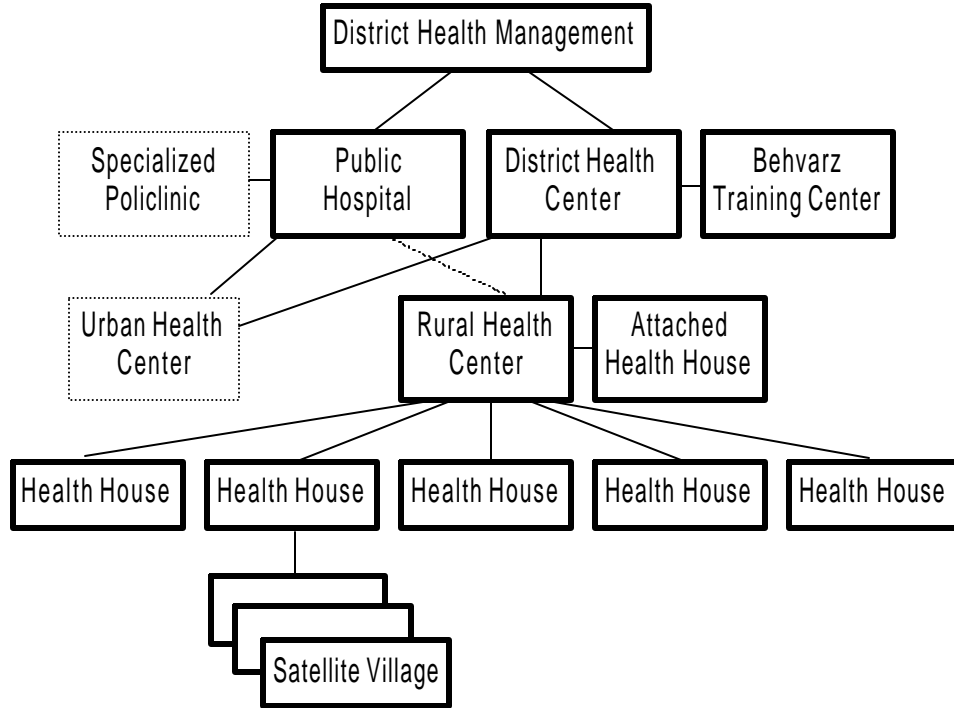
#### **5. DELIVERY SYSTEM**

- Iran's health care delivery system can be defined in terms of three levels: the first two of which are encompassed in the PHC network (Figure 1).
- The basic PHC level includes (i) rural health houses with a catchment population of 1,500 staffed by behvarzes (front line allied health workers); (ii) rural health centers containing a physician and other health workers (e.g., nurse, midwives, dental technician, environmental health workers) supervising a number of health houses with a population base of 9,000; (iii) urban health posts; and (iv) urban health centers.
- The second level of the system is the district health center, which is responsible for the planning, supervision, and support of the PHC network and district hospitals.
- The third level of the system consists of the provincial and specialty hospitals.
- Almost 85 percent of all deliveries take place in health facilities and almost 90 percent of babies are delivered by trained health attendants.
- Iran has 15,400 health houses, 25,000 behvarzes, 2,200 rural health centers, 300 health posts, and 1,900 urban health centers.
- Iran has 98,000 hospital beds, 1.6 per thousand population.
- 76 percent of beds are in State hospitals, 6 percent in SSO, 10 percent in the private sector, and the remainder in charity and NGO hospitals.
- There are few data on utilization, but hospital occupancy rates are believed to be below 60 percent in state and SSO hospitals.
- By the millennium, hospital beds are projected to increase by 14,000 including 8,000 private and 4,000 SSO beds.
- Iran has 0.8 physicians, 0.5 midwives and 2.3 nurses per thousand population.
- Training for health professionals is carried out at state universities, where education is free.
- Doctors must provide 3-5 years of service to the MOHME after graduation before they can go into private practice.
- Most doctors have private practices, in addition to part-time contracts in public hospitals.
- Iran is turning out 4,000-5,000 new physicians each year.
- 95 percent of the country's local drug needs are met through local production.
- Generic names are used for all the drugs manufactured and sold in Iran.



Figure 1:

### Primary Health Care Network Design



Source: Government of the Islamic Republic of Iran, 1995.

## IV. INTERNATIONAL COMPARISONS

Tables 1-4 (see Annex 1) compare Iran's health care system from demographic, health status, delivery system, and health expenditure perspectives to other countries in the Middle East and North Africa Region. Figures 2-7 compare Iran's infant mortality, bed to population ratio, physician to population ratio, the public share of total health expenditures, per capita health expenditures, and health to GDP ratio to those of other countries worldwide as well as those of similar income levels. From an international comparative perspective, the following picture emerges:

### 1. DEMOGRAPHIC INDICATORS

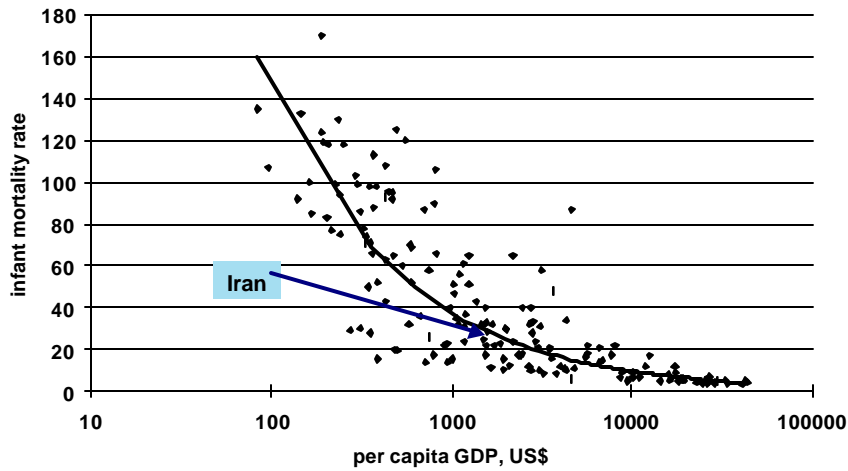
- Iran's population growth rate and TFR are well below the MENA average.
- Iran's share of population over age 60 is above the regional average.

### 2. HEALTH INDICATORS

- Except for the Gulf states, the Palestinian Administration and Libya, Iran's infant mortality rate (IMR) is the lowest in the region.
- Relative to all other comparable income countries of the world, Iran's IMR is slightly lower (Figure 2).
- Except for several of the Gulf states, Iran has the lowest maternal mortality ratio in the region.
- In terms of adult mortality, Iran's probability of death for males and females in the 15-60 age range is below the regional average with somewhat better relative performance for males.
- In terms of life expectancy at birth, Iran's figures are slightly above the regional average.
- In terms of malnutrition, Iran has the third highest level in the region after Yemen and Iraq (Aoyama).

Figure 2:

### Global Trends in Infant Mortality, mid 1990s



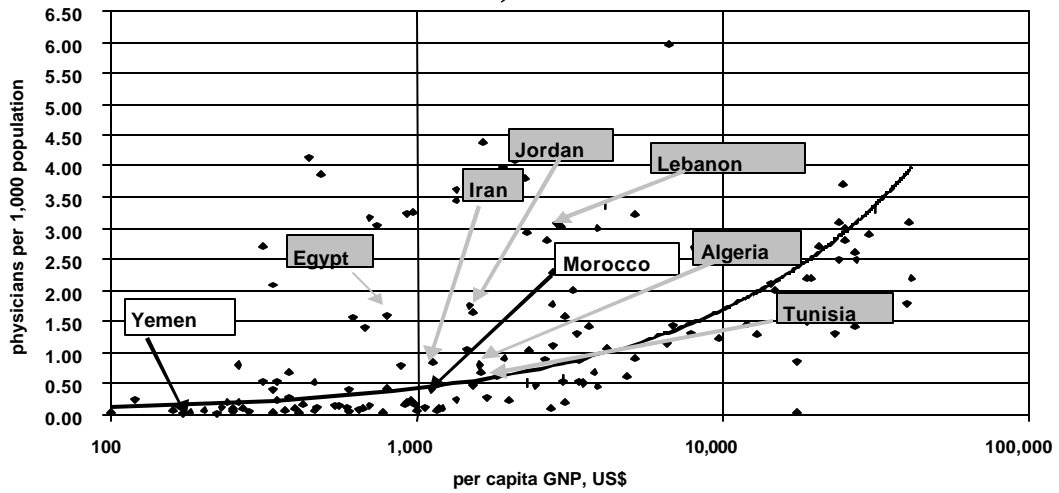
Source: World Bank estimates, 1999.

### 3. DELIVERY SYSTEM CAPACITY

- In terms of physicians, Iran's physician to population ratio is slightly below the regional average.
- Compared to all countries in the world, Iran has more physicians than other countries of comparable income (Figure 3).
- In terms of hospital beds, Iran's hospital bed to population ratio is slightly below the regional average.
- Compared to all other countries in the world, Iran has slightly fewer beds than other countries of comparable income (Figure 4).

Figure 3:

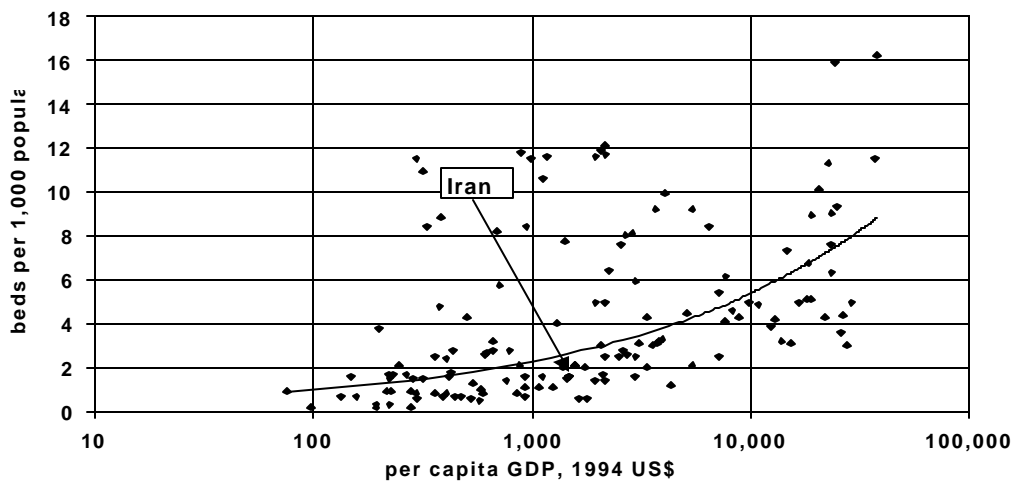
### Global Trends in Physician Number, mid 1990s



Source: World Bank estimates, 1999.

Figure 4:

### Global Trends in Bed Capacity, mid 1990s



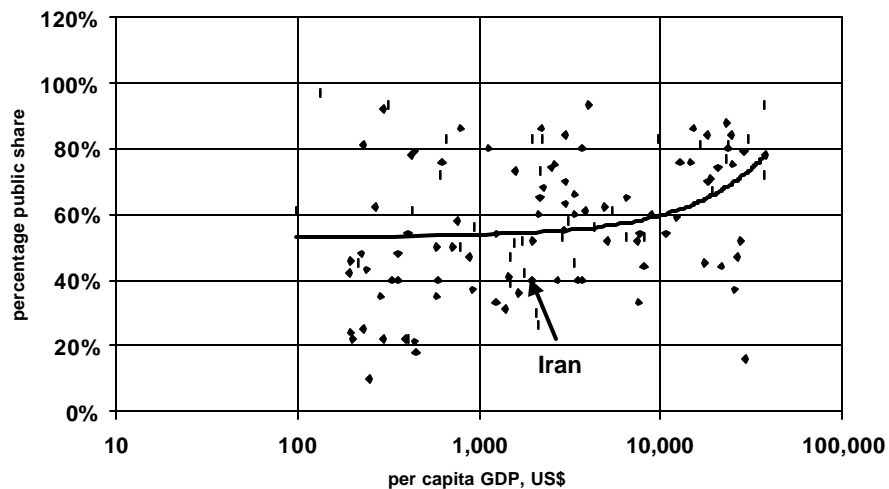
Source: World Bank estimates, 1999.

#### 4. HEALTH EXPENDITURES

- Iran's per capita GDP is above the regional average excluding the Gulf States.
- Iran's public share of total health spending is below the regional average.
- Assuming Iran's 2.4 percent public share figure is accurate, the public share is below that found in comparable income countries (Figure 5).
- Iran's per capita health spending is below the regional average.
- Compared to other countries in the world, Iran's per capita health spending is almost exactly the same as that found in comparable income countries (Figure 6).
- As a share of GDP Iran's health spending is slightly below the regional average.
- Compared to other countries in the world, Iran's health to GDP ratio is almost one percentage above the ratio found in other comparable income countries (Figure 7).

Figure 5:

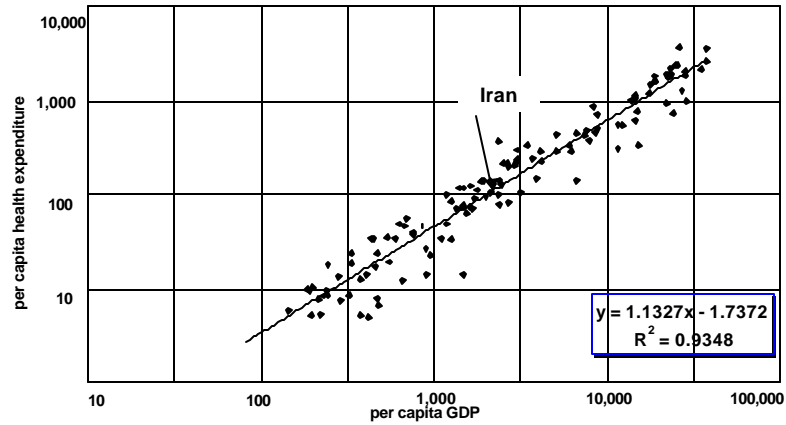
### Public Health Expenditure Share and Income Levels



Source: World Bank estimates, 1999.

Figure 6:

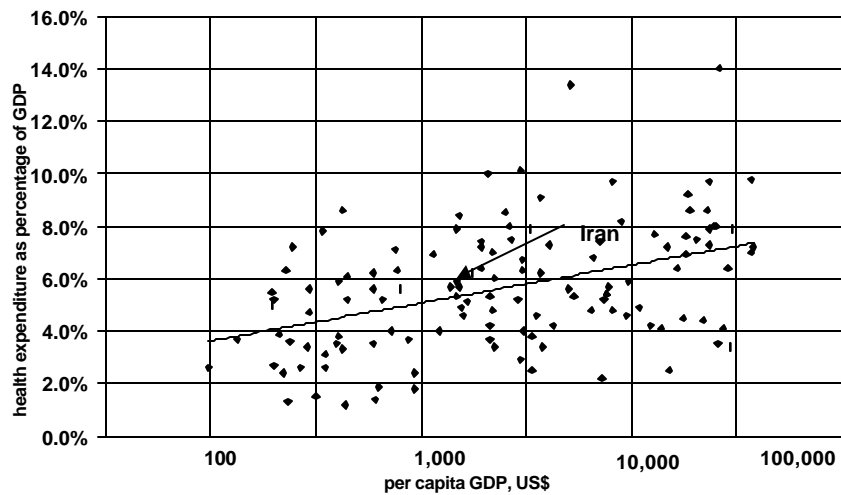
### Per Capita GDP vs. Per Capita Health Expenditure, World



Source: World Bank estimates, 1999.

Figure 7:

### Health Expenditure as Percent of GDP, Global Trends, mid 1990s



Source: World Bank estimates, 1999.

In summary, in a comparative international context, Iran's health outcomes, except for malnutrition, are better than most countries; population growth and fertility is below many countries in the region; bed and physician to population ratios are slightly below regional averages but above for physicians and below for hospital beds those found in other comparable income countries in the world; and, health expenditures are below the regional average but above the level found in other comparable income countries.

## **V. HEALTH SYSTEM PERFORMANCE**

Like all health systems, the Iranian system has a number of strengths and weaknesses. Reform policies should build on these strengths, while addressing the inherent weaknesses.

### **1. STRENGTHS OF THE SYSTEM**

#### **1.1 Strengths Regarding Health Outcomes**

- Health outcomes are excellent.
- Immunization levels are high.
- Most of the population has access to clean water and sanitation.
- Population growth and fertility are well below regional averages. Virtually the entire population has physical access to health care.

#### **1.2 Strengths in the Health Care Delivery System**

- The three tiered health delivery system is well-integrated structurally.
- Virtually the entire population is covered by the PHC system.

#### **1.3 Strengths in the Health Finance/Insurance System**

- About 90 percent of the population has formal health insurance coverage.
- Health spending is not overly excessive with good health outcomes.
- The underlying principles of the system in both theory and practice focus on emphasizing cost-effective primary care and equity in terms of both finance and access, particularly for the poor and other disadvantaged groups.

#### **1.4 Strengths in the Pharmaceutical Sector**

- Pharmaceuticals are readily available, and there is widespread use of generics.

### **2. WEAKNESSES OF THE SYSTEM**

#### **2.1 Weaknesses Regarding Health Outcomes**

- Malnutrition still appears to be a serious problem (average caloric intake of 2600 calories and 70 grams of protein are above daily physiologic needs, but there are maldistributions by geographic and socio-economic factors).
- 34 percent of women in the childbearing years suffer from iron deficiency and 17 percent have iron deficiency anemia.
- The proportion of low weight births is high.
- There are still significant urban-rural differentials in health outcomes, access, use, and expenditures.
- A portion of the population is uninsured for curative care and some 10 percent of the population lacks effective access to the PHC network.

## **2.2 Weaknesses in the Health Care Delivery System**

- The PHC orientation and network needs to be evaluated in terms of the health transition and increasing non-communicable disease burden facing the country.
- Lack of coordination between the PHC system and curative care financing of HIO and SSO leads to inefficiency and waste.
- There is substantial over-capacity in the public and possibly private health delivery systems; yet both are expanding irrespective of underlying needs.
- Quality needs to be enhanced and monitored.

## **2.3 Weaknesses in the Health Finance/Insurance System**

- The revenue sources used to finance MSIO and SSO are complex, not transparent, not actuarially sound and may be inefficient and inequitable.
- The partly voluntary nature of MSIO and immediate eligibility for benefits (except for the self-employed) leads to favorable selection on the part of individuals, raises costs, and limits risk pooling across low and high risk groups.
- The option of Government agencies to provide insurance through MSIO or some other source both limits risk pooling and predictability of revenues for MSIO.
- The insurance benefit package needs to be analyzed from cost-effectiveness, affordability, and consumer expectation perspectives.
- In terms of net benefits (financing costs versus benefits received), it isn't clear which income groups are net winners and net losers.
- The fee-for-service provider payment system used by MSIO and SSO leads to inefficiency, cost escalation and provision of unnecessary services.
- The multiple insurance systems lead to high administrative costs, complex management, inefficient risk-pooling, and potentially unlimited liabilities on the Government to cover deficits.
- The lack of separation of financing and provision in MOHME and SSO is counter to the trends in most developed and developing countries and discourages efficiency.

## **2.4 Weaknesses in the Management of the Health Care System**

- Decision-making is too centralized and may not be responsive to underlying local needs.
- Modern management techniques and use of information technologies are lacking from both overall system as well as individual facility management and operational perspectives.
- Critical data for decision-making are lacking including: national health accounts information on health spending by source of payment and type of service (currently being developed); information on utilization such as occupancy rates, average lengths of stay, admission rates, days of inpatient care per capita, outpatient visits per capita; detailed morbidity and mortality data; micro data on service use; out-of-pocket payments; and reliable information on the insurance coverage status of the population.
- There is little information on the private sector both on private providers and private insurers.
- There is little information on quality and consumer satisfaction.

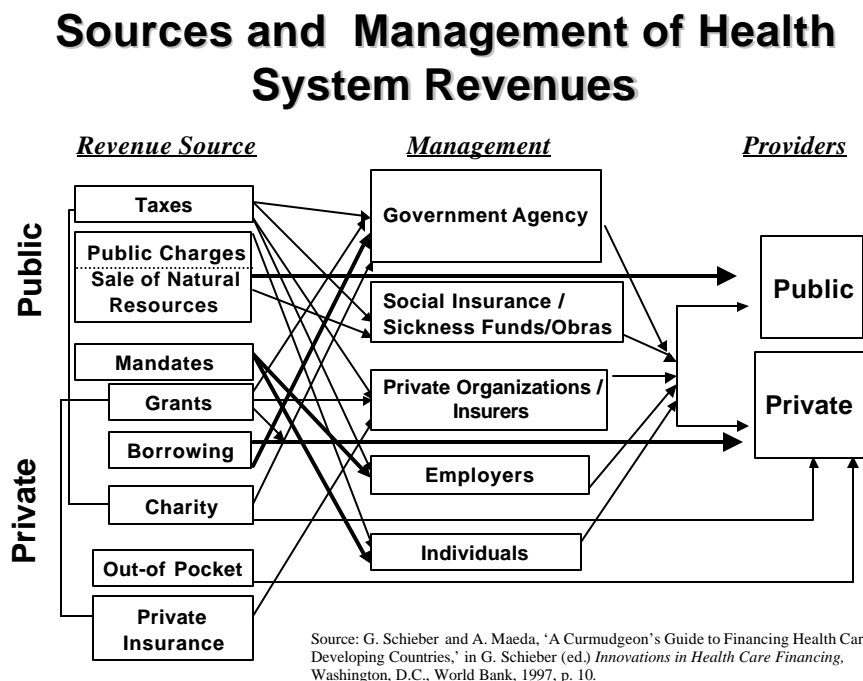
## **2.5 Weaknesses in the Pharmaceutical Sector:**

- The pharmaceutical sector faces many of the usual problems faced by developing countries including inefficient subsidies, need for essential drug lists, adequacy of quality, need for training of physicians and consumers in the rational use of drugs, need to conform to WTO standards, etc.

## VI. THE GENERIC HEALTH FINANCING UNIVERSE

Health care systems can be financed by numerous public and private sources. These funds can be managed by public and/or private entities and can be spent on both public health services (those with benefits beyond the individual) and personal health services (those that benefit uniquely the individual) provided by public and/or private providers. Figure 8 provides a simplified picture of alternative revenue, management, and provision arrangements, or to characterize this slightly differently: sources of funds, management of funds, and uses of funds.

Figure 8:



As shown in Figure 8, revenues can be raised through: taxes, charges to users of public services, sale of natural resources, mandates, grants, borrowing, charity, out-of-pocket payments, and private insurance. Funds can be managed by various public and private entities including government ministries, local governments, autonomous public agencies, social security organizations, private insurers, NGOs, employers, purchasing cooperatives, labor unions, and individuals. Services can be purchased (i.e., uses of funds) from public and private (for-profit and non-profit) providers of services.

Policy choices regarding the 'appropriate' mix of the above options are driven by both the political realities and socio-economic circumstances of individual countries. However, two other important conceptual bases underlying effective policy-making are: the principals of insurance and public economics. Thus, while a country's baseline political and socio-economic structure is critical, both the principles of insurance and public economics provide guidance in the design of reforms that can improve access, equity, and efficiency. Each of these areas is addressed in turn.

In addition, the recent experiences of the OECD and a number of developing countries with incentive-based provider payment mechanisms provide powerful lessons for improving efficiency in the provision of services (i.e., on the uses side of the sources and uses of funds balance sheet of health financing). While a detailed discussion of this issue is beyond the scope of this paper, it will be addressed in a summary manner in Section 8.

## **1. PRINCIPLES OF INSURANCE**

Insurance, compared to individual purchase, is the preferred method for financing personal health services because it improves predictability of risk and improves individual welfare since individuals are risk averse and prefer to pay a small predictable amount up front for coverage against large health risks than a large unpredictable amount sometime in the futures. The specific sequence of arguments follows:

- Individuals are risk averse and prefer to pay a relatively small price to avoid a large unpredictable loss.
- Pooling a large number of similar events improves the predictability of the event (i.e., by the statistical properties of the law of large numbers) and lays the basis for insurance markets.
- Insurance is a system that reduces risks through risk pooling and thus increases population well-being.
- As a result, insurance vis-à-vis individual direct purchase is a preferred mechanism for financing personal health services.

Insurance markets should be established to protect individuals from high cost, low probability random events. Insurance policies should not include low cost high probability events since such events can be budgeted for and given their high probability there is little or no predictability gain from ‘pooling’ such events. Inclusion of large amounts of these types of services in an insurance program subverts the basic principles of insurance. Nevertheless, in many countries, consumers prefer to have such events ‘prepaid’ through insurance systems.

## **2. PUBLIC ECONOMICS: MARKET FAILURE AND THE RATIONALES FOR PUBLIC INTERVENTION**

The basic issues relating to the appropriateness of public and/or private sources of finance are a function of government’s allocational, distributional, stabilization, and economic goals and on the policies that are used to correct for market failures and externalities in the financing, consumption, and provision of health services (Musgrove). Particularly relevant, and less often elaborated, are instabilities and failures in insurance markets which may preclude both effective risk pooling through insurance arrangements as well as equity objectives, particularly given the effects of ill health on the distribution of income. Below are summarized the better known cases of market failure in the health sector. (Aspects of public economics relating to the public financing of health services (e.g., taxation) are discussed in the next section.) These include:

- Health services with collective benefits—public goods and merit goods
- Redistribution/equity
- Health insurance market failures

- Other market failures in the direct consumption and provision of health services including information gaps and asymmetries, interdependence between supply and demand, and other supply side market failures such as entry barriers, scale and scope economies, etc.

Since the standard cases of market failure in health have been discussed extensively in the literature, the focus here is on instabilities and failures in insurance markets, an area where public versus private sector financing rationales are somewhat less clear cut. Also, the focus here is on the public—private mix in financing. Issues concerning public versus private mix in provision are not dealt with given both the complexity of the subject and the lack of clear definitive guidelines beyond the economically sensible but operationally void maxim that governments should make the decision to ‘make or buy’ the service the same way a private sector firm does: buy it if its cheaper, if not the government should produce it.

There are two aspects of insurance markets that lead to instability: adverse selection and moral hazard. *Adverse selection* occurs when sicker than average individuals enroll in competing private (and sometimes public) health insurance plans. This can destabilize insurance markets through premium spirals if healthier individuals disenroll. Insurers react by trying to screen out such high risk individuals through a series of practices known as medical underwriting. These practices include: requiring medical exams, examining claims history, having waiting periods, excluding pre-existing conditions from coverage, and refusing insurance coverage. While such practices are more typical of private insurance, they can occur in public programs where there are multiple insurance funds and individuals can choose among funds. Such practices lead to risk segmentation and in the limit preclude the sickest and most vulnerable from purchasing affordable insurance. These adverse effects can be offset by: regulation of insurers vis-à-vis community rating (everyone is in the same pool and pays the same rate) and other limitations on medical underwriting, marketing insurance to groups formed for other purposes (e.g., employment), and/or having a mandatory public insurance program.

The second instability of insurance that affects both public and private insurance is *moral hazard*. Moral hazard results because of the tendency for insurance to increase the probability of the occurrence of the event that is being insured against. In other words, if individuals at the point of service face zero price or a subsidized price, than they will consume more than they would in a perfectly competitive market. It is present in both public and private insurance. Insurance design features undertaken by both public and private insurers to offset moral hazard include: cost sharing, limits on benefits, frequent renewability, and utilization management (e.g., prior review, second surgical opinions, etc.).

These insurance market instabilities have important implications for both public and private financing of health insurance for personal health services. Public financing of health insurance pools risks over the entire population, eliminates adverse selection and medical underwriting problems, but publicly financed programs still face cost and overuse problems associated with moral hazard. On the other hand, private insurance by its very nature segments risk, does not need to be financed through coercive public revenue collection (see below), allows consumer choice, but also faces cost problems due to moral hazard.

It is clear that for the poor and those unable to pay, on equity grounds the government should either provide insurance coverage directly or subsidize private insurance for these groups. For those able to pay, the choice is less clear. However, if effective risk pooling is an objective of government policy, private insurance markets will need to be regulated in order to avoid excessive

risk segmentation even for those who are able to pay. Indeed, one objective of health systems is to protect people from financial ruin as a result of catastrophic illness costs. If private premiums are excessive for high risk individuals because of excess market segmentation, this goal may not be achieved. Interestingly, with the obvious exception of the United States, virtually all OECD countries have chosen to publicly finance health insurance for their populations for personal as well as public health services, rather than rely on private insurance markets. Nevertheless, as discussed below, another important question in this policy debate is: what can a country afford ?

Based on the above discussion, there are several basic prescriptions for public and private financing of health services:

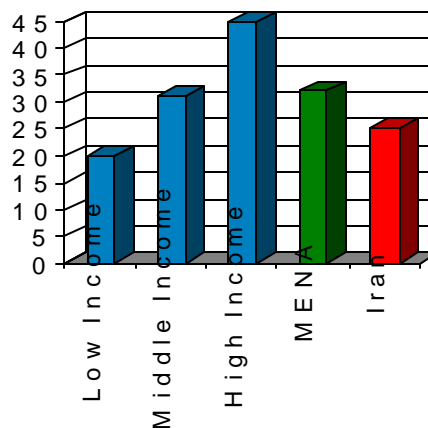
- Public health services should be financed publicly.
- Personal health services that have collective benefits (i.e., merit goods) should be publicly subsidized.
- Personal health services that have no collective benefits can be publicly or privately financed.
- Personal health services for vulnerable populations are generally financed publicly on equity grounds.
- Insurance reduces overall risks by pooling them, and thus is a preferred method for financing health services than individual purchase.
- Insurance for personal health services can be publicly or privately financed.
- Instabilities in insurance markets necessitate government regulation and in certain cases government finance.
- Market failures create inefficiencies relating to individual out-of-pocket purchase of health services.
- In some cases government provision, regulation, and provision of information may be a viable alternative to public financing of personal health services.

## VII. PUBLIC AND PRIVATE FINANCING SOURCES

This section discusses the various public and private revenue raising methods that can be employed to finance health systems. The capability for a government to raise revenues has important implications for its ability to finance services for its population. Revenue raising is particularly problematic in developing countries for a number of reasons including large informal and rural production sectors, large numbers of small and transient firms in urban areas, inefficient tax administrations, and reliance on inefficient and inequitable revenue raising mechanisms. As countries develop, urbanization increases, their production sectors become more formalized with less reliance on agriculture, and tax administration improves, their relative revenue raising capacities increase. Figure 9 below provides empirical verification of this trend.

**Figure 9:**

**Government Revenues as Percent of GDP**



As shown in Figure 9, as a percent of their GDP, low income countries raise less than half, and middle income countries some 30 percent less than high income countries. Iran raises some 25 percent of its GDP in revenues, well below the 32 percent average for middle income countries. Perhaps this is due to the recent decline in oil prices, as oil sales account for over half of all government revenues.

Nevertheless, these figures indicate that Iran can raise approximately US\$400 per capita in revenues (.25 x \$1600) for *all* public expenditure purposes. Even if the country devotes 10 percent of the public budget to the health sector (a relatively high figure by international standards), only some \$40 per person per year will be available to finance health services publicly. Given Iran's extensive infrastructure, age distribution, and sophistication, it is highly unlikely that this level of expenditures will satisfy consumer expectations. Thus, policy-makers need to carefully consider both public and private financing sources, and develop policies to optimize health sector performance.

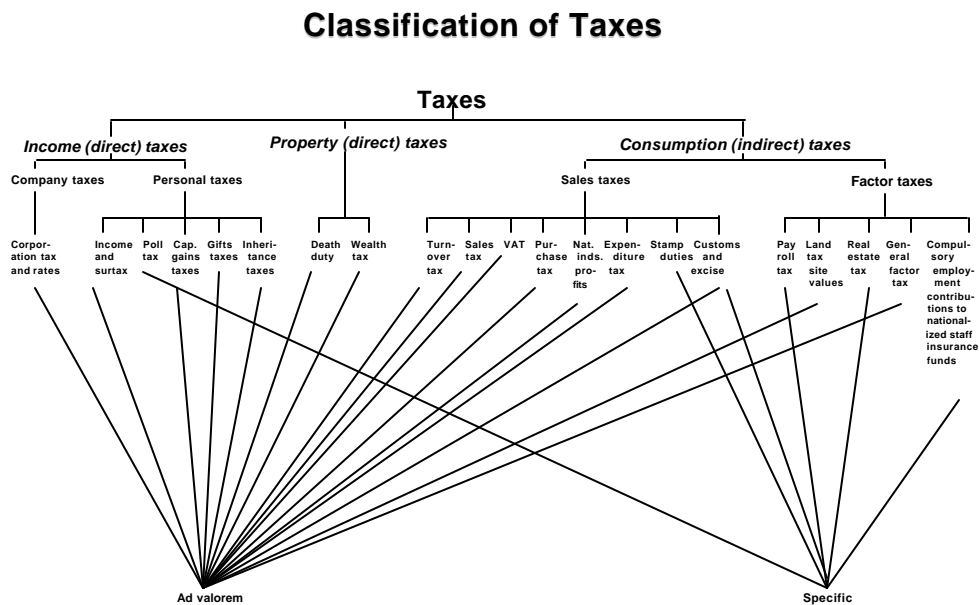
## 1. PUBLIC REVENUE SOURCES

As shown in Figure 8 above, the main sources of public revenues are taxes, sales of natural resources, user charges, mandates, grants and borrowing. Each is discussed in turn.

### 1.1 Taxation

Taxation is the major source of government revenues in most countries except for those like Iran, the Gulf states, Algeria, and other countries that are well-endowed with important natural resources. Figure 10 displays the many different types of taxes that can be used for revenue generation as well as to achieve allocation, distributional, and stabilization goals.

Figure 10:



Government tax policy is obviously a function of economic and political factors. However, to assess performance, tax systems need to be evaluated against the criteria of economic efficiency, equity, administrative simplicity, revenue generation potential, flexibility, and transparency. *Economic efficiency* in the sense of taxes refers to the loss in economic activity engendered by the behavioral changes of households and businesses as they react to taxes in order to minimize their impact. Whenever governments extract resources from the private sector through taxation, there is an economic cost that in most cases exceeds the amounts of resources extracted. This efficiency cost results from the production and consumption inefficiencies associated with taxes that distort the production and consumption decisions made by firms and households. Excess burdens of taxes are directly related to the behavioral response of the taxed entity and the tax rates: the greater the responsiveness and rates, the greater the excess burden. Only lump sum/poll taxes have no excess burden.

*Equity* refers to the fairness of the tax system. Equity/fairness relates to the distribution of the tax burden by income class. Horizontal equity means treating individuals with the same incomes

equally, irrespective of the source. Vertical equity means distributing the tax burden on the basis of ability to pay. Unfortunately, defining income and ability to pay is not straightforward. Moreover, it is quite difficult to use the tax system to redistribute income from rich to poor because a sizeable portion of rich people's income comes from capital which is internationally mobile, because much of the income is entrepreneurial and thus is hard to measure and tax, and because the rich are politically powerful. It has been recognized that in developing countries the tax system is a poor instrument for redistribution and that a better approach is using the revenues from efficient taxes to provide direct subsidies to the poor.

*Administrative simplicity* means minimizing the significant costs imposed on governments, firms and households in the administration of the tax system. In fact, successful changes in tax policy can only be achieved through effective tax administration. Effective tax administration and policy means: eliminating unproductive taxes, keeping differential tax rates and provisions to a minimum, and having clear tax provisions and effectively communicating them.

*Revenue generation potential* refers to the amounts of revenues generated by the tax. *Flexibility* refers to how tax revenues behave relative to the business cycle. *Transparency* relates to people's understanding of the system and openness in its application. Transparency has important implications for enforcement and compliance. These aspects of taxes are important components of the overall macro economy.

One other important element of the tax system of particular relevance to the health sector is the use of *tax subsidies* to encourage purchase of health insurance and medical services. These subsidies generally take the form of deductions or credits against personal or corporate income taxes. Tax subsidies can provide a powerful incentive for individuals and employers to purchase private health insurance as well as medical services, thus relieving the government of the responsibility for covering the full costs. However, there are also a number of disadvantages. First, there is a potentially large revenue loss to the government. Second, depending on how it is structured, it may become an open-ended loss of revenues based solely on the decisions of employers or individuals. Third, the benefit incidence may be highly regressive (i.e., high wage firms getting most of the benefit). Fourth, such subsidies mute cost consciousness.

Needless to say, as discussed above, many of the basic prescriptions concerning efficiency, equity, administrative simplicity, revenue generation, flexibility and transparency are harder to apply in developing countries, given the nature of their economies and administrative structures. Box 1 summarizes these 'complicating' institutional features. Some of these institutional features are inherent in the Iranian economy, and increase the difficulty of using efficient tax policies to raise government revenues.

**Box 1: Institutional Features of Developing Countries Affecting Tax Capacity**

- Much of the population is widely dispersed in rural areas.
- Most of the population is self-employed in subsistence small-scale agriculture, where much of the income is in kind, transactions are hard to trace, and high rates of illiteracy and poor accounting and record keeping limit the use of personal income and profits taxes.
- In urban areas there are large informal sectors of small and transient firms, and even individuals employed in the manufacturing sector work in small firms.
- Large firms tend to be government enterprises or extraction industries that are often owned by foreigners.
- Agricultural products and mineral resources face unstable and unpredictable world prices.
- The dualism of the modern economy and a traditional rural sector, and the market segmentation it creates, distorts commodity and labor markets, increasing tax burdens.
- High levels of income inequality tend to result in higher tax rates, greater tax avoidance, and higher efficiency losses.
- Trade distortions—import tariffs, quotas, export taxes, differential exchange rates, foreign exchange rationing—abound, resulting in resource misallocation and inequity.
- The influence of state-owned enterprises, coupled with non-optimal user charge structures, often results in inefficient public investment decisions
- Tax administration capacity is limited.

Source: Schieber and Maeda, *op. cit.*, p. 20.

**1.2 Sales of Natural Resources**

Sales of natural resources are yet another source of government revenues. This form of revenue is significant in countries with large amounts of natural resources such as oil, gas, diamonds, chemicals, etc. However, besides being susceptible to large swings in world prices, most such resources are non-renewable, and thus will not be a valid long-term financing source.

**1.3 User Charges**

User charges are private payments for publicly provided goods and services. User charges are an important source of government revenue in most countries. Policies to impose user charges should be evaluated using the same efficiency, equity, and administrative feasibility criteria used to evaluate taxes. Such charges can be used whenever a publicly provided good or service has individual as opposed to collective benefits. They can be an important source of revenue when it is not politically feasible to increase taxes. However, user charges perform poorly on equity grounds, unless the poor are exempted.

User charges have been extensively evaluated given their widespread use and their potential for raising public revenues without increasing taxes. These evaluations suggest:

- Strong utilization responses often disproportionately affecting the poor
- Exemptions often benefiting high income groups
- Total revenue generation from user charges has not met expectations
- Impacts on health status and efficiency are less clear

- Appears to be a greater consumer willingness to pay for tangible benefits (e.g., drugs)
- Need to analyze private sector effects (e.g., do increases in public user charges result in increases in private sector fees)

#### **1.4 Mandates**

Mandates are another mechanism to assure provision of health services without using government revenues. When fiscal constraints and market failures preclude public provision of particular services, such as health insurance, government mandates to require provision of such benefits, either by employers or individuals, can help a government achieve its policy goals and correct for market failures. Mandates should be evaluated on the basis of the efficiency, equity, and administrative feasibility criteria discussed above. Under certain circumstances (i.e., the employee fully values the mandated benefit), mandates have no efficiency costs. However, mandates perform poorly on equity grounds and are essentially a benefit, not an ability to pay, “tax”. One major problem deals with enforcement of mandates. Mandate enforcement is difficult in industrialized countries, and is even more difficult in developing countries that generally lack the needed administrative mechanisms.

#### **1.5 Grants**

Grants from foreign donors are a major source of funding for certain countries and in some African countries account for 20-50 percent of health spending. Grant recipients can be governments or private entities such as NGOs, so such assistance can be either a public or private revenue source. Concerns have been raised about whether such assistance augments or replaces government revenues. In addition, grant assistance can have chaotic effects on a country’s revenues and expenditures as such assistance often reflects the priorities of the donors, not the government. A further problem with grants as a revenue source is that they are subject to the budgetary situations and political agendas of the donors.

#### **1.6 Borrowing**

Borrowing, like grant assistance, can be a public or private source of revenues. Funds can be borrowed from either domestic or foreign sources. Often borrowed funds contain some element of grant assistance. The essential feature of borrowed funds is that they must be paid back at some time in the future. Thus, borrowing imposes a burden on future generations. Domestic and foreign borrowings have different economic implications. Domestic borrowing has a clear short-run opportunity cost – the opportunity cost of the alternative uses of those funds. Foreign borrowing on the other hand does not reduce current consumption or investment (i.e., there is no short-run domestic opportunity cost). However, foreign borrowing has an inter-temporal tradeoff – the value of the future income stream produced by the investment versus the amount that needs to be paid back from this future income stream.

## **2. PRIVATE FINANCING SOURCES**

The main private sources of revenue for financing health care are private health insurance, out-of-pocket payments for direct purchase, charitable contributions, grants, and borrowing. Grants and borrowing were discussed previously. Each of these other revenue sources is discussed in turn.

## **2.1 Private Insurance**

Private insurance is an important source of private health financing in many countries. While private insurance markets tend to grow as countries become more developed, private health insurance, is nevertheless an important source of finance in many middle, and even in some low income countries. There are several reasons for the non-poor to purchase private insurance to finance their personal health services. First, as discussed above, by pooling risks overall risks are reduced and welfare is improved. Second, consumer sovereignty in choosing an insurance package that best fits the consumer's specific preferences maximizes welfare. Third, deadweight losses/excess burdens from government revenue raising activities are avoided. Fourth, private insurers can negotiate with medical care providers over cost and quality more effectively than individual consumers.

There are also several potential problems with relying on private insurance. First, private insurance markets segment rather than pool risks across large population groups. Both adverse selection and medical underwriting to preclude adverse selection support risk segmentation. Second, large numbers of insurers and inefficient insurance companies may result in high administrative costs. Third, private insurance can only be purchased by the non-poor, unless subsidies are provided for the poor.

## **2.2 Out-of-Pocket Payments**

Out-of-pocket payment for the direct purchase of health services is the most important source of private financing used in most developing countries. Such expenditures take a variety of forms including direct purchase of private services, direct purchase of publicly provided services, and cost-sharing for publicly and privately insured services.

Most of the issues concerning out-of-pocket payments were discussed above. In particular, such payments perform poorly on equity grounds, and their effects on access, quality, costs, and utilization must be carefully monitored. One of the major issues facing many developing countries, where such private out-of-pocket payments frequently account for half of all health spending, is to develop mechanisms to enable the public sector to 'capture' these potential revenues so that the government can better fulfill its functions of providing public health services, protecting the poor, and pooling risks effectively.

## **2.3 Charitable Contributions**

Charitable contributions can be directed at both public and private institutions and, hence, like grants and borrowing can be a public or private revenue source. In industrialized countries such contributions are sometimes encouraged by the tax system. In some countries such contributions are encouraged by religious customs or through other mechanisms. In most countries charitable contributions are a small proportion of revenues. Moreover, such contributions are often beyond the control of policy-makers, sometimes reflect contributor preferences, and cannot be relied upon as a stable and long-term financing source. Charitable contributions can be foreign or domestic. Foreign contributions are similar to grants. Domestic contributions have an opportunity cost—the rates of return on alternative domestic uses of the funds provided by the domestic charity.

## **VIII. IRAN'S HEALTH FINANCING REFORM: POSSIBLE NEXT STEPS**

Health systems reforms have important budgetary implications, health system impacts, and affect every member of society. Thus, as governments undertake such reforms, not only must the reforms be based on sound socio-economic and health policy bases, but appropriate information must be developed to inform decision-makers and the public. This section of the paper discusses the types of analyses that need to be undertaken, the informational needs of such analyses, the often neglected area of implementation, and posits some possible next steps in the Iranian health reform process. While much of the discussion will be germane to overall health reform, the emphasis will be on health financing reform.

### **1. ANALYSIS AND INFORMATIONAL NEEDS**

#### **1.1 Types of Analysis**

Health system reforms affect 6 percent of the Iranian economy, 10 percent of the Government Budget, 5.3 percent of household spending, and 2.1 percent of all employment. As a result serious reforms will have major impacts on the multiple public and private financing agents, marginal tax rates, government revenues and expenditures, medical care providers, employers, employee compensation, and the entire Iranian population as potential and/or actual consumers. The types of questions that need to be answered include:

- To what extent will the reform increase insurance coverage?
- What would be the effect on taxes, premiums, and public subsidies?
- What would be the effect on public and private insurers, employers, and households?
- How much choice will consumers have regarding insurer and provider?
- To what extent would the scope and depth of covered benefits change?
- What would be the effect on employment?
- What would be the effect on the level and rate of growth of aggregate health spending?
- What would be the affect on the delivery system?
- What would be the affect on financial and physical access to care?
- What would be the effect on quality of care?
- What would be the effect on equity, poverty reduction, and financial protection?
- What would be the effect on health outcomes?

In designing proposals and addressing these types of questions, analysts and policy-makers need to be able to develop three global scenarios:

1. An accurate picture of the current health system (i.e., the baseline or base case) is needed including data on health spending, insurance coverage, and availability and use of services.
2. Projections of the health system in the future assuming no changes are needed so that policy-makers can understand the need for reform and its design aspects.

3. Projections of the future system after the reform are needed so that policy-makers and the public can understand the likely effects of the reform.

Developing any of these scenarios is difficult. Most countries lack the necessary information to even develop the policy baseline. Information is generally not available on spending from national health accounts, on insurance coverage by the insuree's characteristics (income, employment, family situation—including multiple insurance coverage, health status, etc.), on current financing sources, on use of services, etc. Projecting health systems into the future is extremely complex, not only for the usual difficulties in making socio-economic projections, but also because of rapidly changing medical technologies and delivery arrangements (e.g., managed care, outpatient surgery). Developing the third scenario is even more difficult, since it requires knowledge of behavioral change on the part of consumers and providers (as well as all the other stakeholders). In addition, to the extent that reform embodies major, not marginal changes, even if behavioral response studies do exist, one will need to be able to estimate impacts that go well beyond the range of the existing estimates.

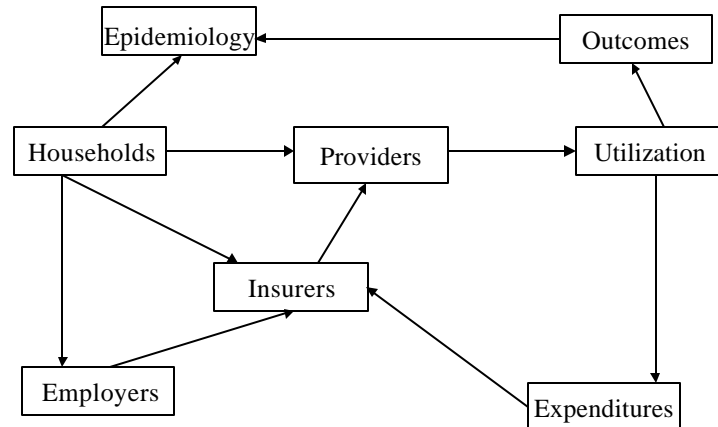
To reduce some of these estimation problems, analysts will often assume that the reform is put in place in the base case year, since this avoids the need to make future projections. This reduces the estimation error from forecasting the future, but one also loses the dynamics inherent in both the problems underlying the system and the potentially large changes to the base case that will need to be dealt with by reformers.

## **1.2 Types of Information**

In a major health insurance reform one needs to analyze the impact of the proposal on health insurance coverage, health expenditures, and financing sources (Bilheimer and Reischauer). This requires information on the costs – ‘premiums’ -- needed to cover different groups of individuals as well as the changes in such costs over time; numbers of people who would be covered (and those left uncovered) along with their demographic and economic characteristics; and, how will these costs be shared by government, individuals, employers, etc. Answering these questions requires information on the current distribution of health insurance coverage, health status and socio-economic characteristics of those covered and uncovered, and information on health expenditures and current sources of payments. Figure 11 below provides a useful diagram of the information flows and potential sources of information needed for such an analysis. One should keep in mind, that employers, insurers, and providers can all be government or autonomous public agencies or private.

**Figure 11:**

### Data Needs for Assessing Reform Proposal Impacts



Source: L. Nichols, 'Comment' in H. Aaron (ed.) *The Problem That Won't Go Away: Reforming U.S. Health Care Financing*, Washington, D.C.: The Brookings Institution, 1996, p.172.

Estimating 'premiums'/costs is complex. Such costs reflect both demand and supply considerations. Premium costs are heavily dependant on which individuals will be covered. Under universal coverage, one would need information on the numbers and characteristics of those individuals who currently lack coverage as well as those who currently have it. In a voluntary system, assumptions would need to be made about who would choose to enroll and their characteristics. A second critical information area concerns covered benefits: what particular services would be covered under the plan? If services are expanded beyond the current package, then the costs of this expansion for those already covered will also need to be estimated.

A third important area for premium estimation concerns that of service use. Service use will be affected by both demand and supply side characteristics. One needs to estimate the increase in service use that will occur when an individual goes from uninsured to insured status and faces lower out-of-pocket costs. In addition to the obvious demand response, this will also be affected by the assumed supply side response. Estimating consumer behavioral response as well as supply response is problematic. There is generally little or no information available on consumer or provider behavioral response in developing (as well as many developed) countries. Using such information from developed countries may be problematic (e.g., for the Clinton reform it was assumed that spending by uninsured people would increase by 57 percent when covered by a comprehensive policy with standard cost sharing requirements). Factoring in supply response is also difficult. In the case of most developed countries, which usually have significant excess capacity, the assumption is generally made that supply is infinitely elastic. This may not be an appropriate assumption for many developing country contexts, especially if the uncovered population is large.

Another important element in estimating premiums concerns the cost containment policies that will be put in place. If binding constraints are put on total spending, then premium costs will be lower than under open-ended fee-for-service arrangements. Provider payment mechanisms and

global cost control strategies are critical elements in determining premium levels and their future rates of increase.

Once the premium/costs of the insurance coverage have been established, one needs to estimate the sources of payment of such costs: the government budget, employers, and/or individuals, and the effects of such payments on the paying entity. If the reform contains an employer mandate, then the impacts on employers and employees need to be discerned. Such impacts include employment effects, competitiveness concerns, firm failures, effects on part-time employment and low wage workers, etc. Issues of duplicate coverage in multiple worker families must also be considered, and rules for establishing primacy developed.

Payments by individuals are a revenue source in a variety of ways including through paying general and/or earmarked taxes, and out-of-pocket payments for premiums and cost-sharing. There are important equity implications, which need to be analyzed as part of any reform effort. In this context the analyst needs to look at net benefits by income class: benefits received minus the contributions including 'payments' through the tax system and employer contributions shifted onto the employee.

The costs to the government from direct coverage of individuals, subsidies of all types including tax subsidies for the purchase of private health insurance, effects on tax rates and new tax sources, etc. must also be calculated to inform policy-makers of the additional (and/or reduced) public expenditures required to put the reform in place. If there are strong cost containment and efficiency gains as well as increased cost-sharing by consumers, the reform could in theory save money. In fact, this is almost never the case. Such 'savings' normally take the form of reductions in the rate of growth of future health spending as increased coverage and greater access to services generally increase costs beyond the obtainable savings.

Since the focus of this paper is on financing, the above analysis concentrates on the direct costs of health financing reforms. Clearly, impacts on health status, quality, and delivery system responses are important as well. However, given the difficulty of analyzing such responses as well as their longer-term nature and multi-causal aspects, these areas tend to get less attention. Nevertheless, it is important for analysts to examine likely health financing reform impacts along these dimensions as well, at least qualitatively, given the tradeoffs among costs, quality, and access.

Overall, one needs to be extremely realistic in terms of what can be done. Basic information is generally lacking. There is little or no information on behavioral response. It is extremely difficult to forecast the future. Data that do exist are generally point estimates and based on a narrow range of observation. Analysts must be transparent about what they do, what they don't know, where the most ambiguity lies, and how all these factors affect the estimates. Perhaps this is best characterized by a quote by Dr. Robert Reischauer, former Director of the U.S. Congressional Budget Office. During Congressional testimony when asked about the accuracy of his estimates of the Clinton Health Reform Plan – "Are you sure you're estimates are in the ballpark?" – Dr. Reischauer replied: "We're in the town the ballpark is in." (Bilheimer and Reischauer, p.171)

## **2. IMPLEMENTATION ISSUES**

Another set of reform issues concerns implementation of the proposed reform. This entails getting the necessary legislation, establishing new institutional structures if needed, developing an appropriate phasing-in strategy, providing training where needed, and developing and putting in place the new systems (e.g., insurance, provider payment, etc.). Unfortunately, implementation issues are often neglected, and analysts often fail to take into account the administrative costs imposed by the reform in addition to the service delivery costs. Implementation arrangements are very country and reform specific, and, hence a detailed synopsis of such arrangements for Iran is beyond the scope of this paper. However, to give a general flavor of these issues in the health financing area, Boxes 2 and 3 contain summaries of some of the issues and administrative systems that need to be addressed as part of health insurance and provider payment reforms.

### **2.1 Implementation of Health Insurance Reforms**

Box 2 provides a summary of some of the many issues and systems that need to be developed to implement a health insurance reform. As indicated above, one needs to also estimate the administrative costs to implement such reforms. The Health Financing Study that the Government of Iran (GOI) is about to undertake under the current World Bank Health Project should assist with some of these areas.

## **Box 2: Implementation Plan of Health Financing Reform**

1. Considerations for Establishment of 'Funds':
    - number and pecuniary basis (public, non-profit private, for profit)
    - legal basis
    - administrative arrangements
    - reinsurance requirements
    - audit requirements
    - regulatory mechanisms, etc.
  2. Defining Benefit Package(s), including:
    - cost-sharing
    - uncovered services
    - limits on covered services
    - exclusion of pre-existing conditions
    - coverage of expensive technologies
    - new experimental hi-tech procedures, etc.
  3. Defining Eligible Group(s), e.g.,:
    - individuals/families, formal/informal sector employers/employees
    - vulnerable population groups (poor, children, pregnant women, disabled, elderly)
    - other groups outside the labor force
    - civil servants
    - special groups (armed forces, industries like railroads), etc.
  4. Determining actuarially sound premium levels (including both benefit and administrative costs)
  5. Determining financing sources
  6. Determining revenue collection mechanisms
  7. Developing Administrative Systems, including:
    - enrollment systems
    - beneficiary identification/eligibility procedures
    - beneficiary indemnification and/or provider payment systems (see Box 3)
    - registry of participating providers
    - claims processing systems
    - claims payment systems
    - quality assurance systems
    - fraud and abuse controls
    - beneficiary and provider appeals processes
  8. Developing steps to transition from current to new system
  9. Developing and implementing monitoring and evaluation procedures
-

## 2.2 Implementation of Provider Payment Reforms

Much of this analysis has focused on the *source* of revenues side of health financing reform. The *use* of revenues is also of critical importance, and indeed requires a separate in-depth analysis. As discussed above the costs of a health insurance reform will be heavily dependent on supply side responses and global cost containment efforts. Normal competitive market supply—demand interactions do not work well in the health sector because of information asymmetries and the interdependence of supply and demand. Thus, incentive-based provider payment systems and global cost controls are needed to assure that purchasers of health services pay ‘efficient’ prices and that expenditures don’t skyrocket out of control as they do in virtually all unregulated systems, especially those with extensive insurance coverage and open-ended fee-for-service payments.

Establishing efficient provider payment systems and, perhaps harder, global cost containment mechanisms, are major challenges even in OECD countries. Yet, one critical lesson from the OECD countries over the past 20 years is that having money follow patients in the context of incentive based payment mechanisms with global budget caps, is one of the best ways to assure efficient delivery of services. The basic technical parameters in a provider payment system are the unit of payment and methods for establishing the level of payment. These can be summarized as follows:

- Unit of payment:
  - individual service
  - per visit/encounter
  - per day
  - per admission
  - per episode of illness
  - all services supplied by the provider for a fixed period of time (i.e., budget, salary)
  - all (or a defined set of) services for an individual for a fixed period of time (i.e., full or partial capitation)
- Level of payment
  - providers costs
  - providers charges
  - administratively set by payor
  - negotiated
  - competitive bidding

The steps needed to implement such systems are summarized in Box 3. The minimal information needs to implement such systems are non-trivial and are frequently unavailable in many developing countries. On the other hand, there is now significant experience in developing countries with successful efforts to implement incentive-based provider payment systems. Issues such as civil service reform, establishment of new contracting arrangements, and how best to include public and private providers are fundamental issues in most countries.

**Box 3: Implementation of Provider Payment Reforms**

- Define services covered (i.e., benefit package )
- Obtain unit service cost information from medical care providers
- Define an “efficient” level of service provision costs
- Evaluate administrative costs of options including costs to payors, providers and consumers
- Choose payment method(s)/may vary by provider type
- Set payment levels to cover costs of efficient provision
- Develop contracts among payors, providers and consumers
- Develop management information and quality monitoring systems at payor and provider levels
- Provide appropriate training for payor and facility personnel and information to consumers
- Develop needed regulatory structure including an appeals process
- Demonstrate and evaluate system in sample facilities, practice settings and geographic areas
- Modify system and implement countrywide
- Undertake needed complementary delivery system restructuring and manpower training reforms
- Monitor cost, quality, and access, and revise system periodically as needed

### **3. POSSIBLE NEXT STEPS IN IRAN'S HEALTH FINANCING REFORM EFFORT**

Some 90 percent of Iran's population has formal health insurance coverage. Such coverage is provided through several different Government ministries, other public/quasi-public agencies, and private health insurance companies. On the other hand, several of the insurance programs are running deficits that need to be made up by the Government. There is a lack of transparency vis-à-vis revenue sources, and the equity aspects of the system are far from clear. As coverage has expanded, there does not appear to be much emphasis on actuarial soundness or sustainability. Iran is well into the health transition and will face strong cost pressures in the very near future from its aging population. With health spending accounting for 6 percent of the economy, reform is essential. Establishing an actuarially sound and sustainable financing base is critical, especially given the sensitivity of Iran's revenue structure to unpredictable fluctuations in world oil prices.

Health financing reform cannot be considered in isolation from the rest of the health system. Such reforms would ideally be part of a comprehensive reform, or the health financing reform effort will need to clearly articulate its interactions with other critical institutional aspects of the system including public health, the delivery system, quality, etc. Consumer and stakeholder involvement and information campaigns to 'sell' the reform to consumers, providers, insurers, and legislators are also important inputs.

#### **3.1 General Aspects of the Process**

There is no 'right' way to go about a reform of this type. There must be commitment and ownership on the part of the government. How this is achieved in the complex policy environment in Iran is an important question. The population must be convinced that the reform will improve their situation and not simply cut the budget at their expense. Ideally, all stakeholders should be involved in the reform process. The reform must be led by in-country experts who can, if needed, rely on both internal and foreign technical advice (particularly to bring in the experiences of other countries). Whether at the policy or technical level, there is little sense in trying to re-invent the many difficult 'wheels' of experience and knowledge that have already been developed, in many cases at great cost. The country must decide what it can afford both publicly and privately and set its enrollment criteria, benefit packages, provider payment mechanisms, and financing strategies accordingly. Balancing this fiscal reality against virtually unlimited consumer expectations is a major challenge. This needs to be done both in the context of the current situation and projections of future needs and resources. All reforms embody tradeoffs. These tradeoffs need to be well understood, and policy-makers must be in a position to deal with both winners and losers.

#### **3.2 A Possible Reform Process**

Given the plethora of issues raised above and (based on available documentation) a dearth of in-depth comprehensive analyses of the system, a comprehensive reform approach would appear to be called for. The reform should target the weaknesses in the system, identified previously, and build upon the strengths. The objectives of the reform need to be clearly articulated and then dealt with in a policy-relevant context. Given the inter-sectoral nature of the issues and the fact that numerous Government Ministries need to be involved, leadership probably needs to be at the level of the President with day to day management delegated to an appropriate Minister such as the Minister of MOHME, Finance, Head of PBO, etc.

The following process, which has been utilized in a number of countries, is one possible way to move the reform effort forward:

- The President establishes a Health Reform Council that will develop a comprehensive health reform plan for the country over the next two years.
- Members of the Council will include all relevant Ministers (MOHME, Finance, PBO, Labor, Education, etc.), local government representatives, the heads of the major public and private insurers (SSO, MSIO, Imam Khomeini Foundation, Bimeh Markazi, etc.), representatives of providers (hospitals, physicians, nurses, pharmacists), consumer representatives, and other relevant stakeholders.
- The Council will be co-chaired by the Minister of Health and Medical Education and the Head of PBO (and/or the Minister of Finance).
- A Technical Secretariat composed of full-time technical and administrative staff, which will be responsible for both administrative functions and technical analysis, will be created and report to the Chairman of the Health Reform Council.
- Under the policy guidance of the Council, the Technical Secretariat will be responsible for the development of the policy options, analyses, and implementation arrangements underlying the reform.
- The Technical Secretariat will coordinate the efforts of all donors and NGOs that wish to assist with the reform effort.
- Specific timetables for meetings and deliverables will need to be established along with dedicated sources of funding for the reform effort.
- Given the complexity of the reform and the heterogeneity of many of the issues, the Technical Secretariat may create separate Task Forces/Work Groups to analyze specific issues, but will serve as the coordinating body to assure consistency across subject areas.
- Among the issues that will need to be addressed are:
  - overall macroeconomic situation including Government revenue and expenditure structures, both present and projected for the future
  - underlying demographic and epidemiological situation
  - socio-economic situation including poverty, employment, etc
  - an assessment of available data and data needs including national health accounts, household and employer expenditure and utilization information, insurance coverage data, availability and reliability of epidemiological information, data on the availability and use of services, etc.
  - detailed description of the existing system
  - development of policy reform options for public health (including environmental and occupational health, sanitation and water, nutrition), health insurance (e.g., financing sources, eligibility, benefit package), provider payment, manpower, delivery system infrastructure, pharmaceuticals, quality assurance, information systems, long-run financial sustainability, etc.
  - costing out reform options including taking account of interaction effects
  - development of phasing-in strategies
  - estimation of administrative costs and specification of implementation arrangements
  - putting in place monitoring and evaluation mechanisms

This proposed process is complex, requires both professional and financial commitment on the part of the government, and will take time. It is absolutely essential to involve the line ministries both for their expertise and to assure that they will not undermine implementation of the reform.

Less complex variants of the above process are possible if a relatively small cadre of people with the necessary skills to develop the reform can be found and organized to work together to develop the reform proposal. This approach is viable when the issue set can be limited and highly skilled technical people with policy skills can be found. Again, there is no 'right' way to do this, and each country must utilize a process that accommodates its institutional structures, skills base, knowledge base, and political needs.

A reform focusing on health financing would focus on a more limited set of issues, but would nevertheless need to consider the interactions with many of these other aspects of the system, particularly the delivery system and public health programs (i.e., the insurance benefit package needs to be coordinated with the PHC system).

Among the specific issues that would need to be addressed are:

- assessment of the overall present and future fiscal and health situations
- analysis of current public and private financing programs with respect to eligibility, benefits covered, financing, service utilization, expenditures, equity, actuarial soundness, administrative costs, etc.
- analysis of the characteristics of those with and without coverage and their current spending patterns
- assessment of what can be afforded and is sustainable in light of the economic situation and health transition
- development of reform options including eligibility criteria, benefit package, provider payment arrangements, financing sources, implementation arrangements
- analysis and costing out of options including both service and administrative costs
- assessment of impacts on access, overall costs, quality, health outcomes, delivery system, poverty reduction, income security, employment, inflation, competitiveness
- demonstrate and evaluate option(s) chosen in specific geographic areas
- develop necessary legislation
- implement reform

### **3.3 Conclusion**

Health reform is a complex and politically risky undertaking. It is country-specific and grounded in the social, political, and institutional fabric of each country. There needs to be commitment and ownership from the top. There will always be winners and losers, and reformers must deal with both groups. Limited resources both augur the need for reform and constrain its expansiveness.

As Iran considers the next steps in its reform strategy, it needs to built upon its impressive results in primary care and focus on other aspects of the system that have received less attention: non-communicable diseases, health insurance, provider payment, hospitals, information systems, quality of care, etc. A careful assessment is needed of the gaps in available data for decision-making. The development of National Health Accounts in Iran is an important first step in filling one of these most important information gaps. Donor coordination is also essential. A comprehensive reform plan is a valuable tool to assure donor coordination and to assure that donor efforts are targeted to the areas where they will do the most good.

The next step in the reform process is to specify a reform agenda and get the political commitment of the Government. Funding and dedication of personnel to the reform effort must be agreed to. Once this is done, the process for reform can be specified, and the reform effort can commence. Donor assistance should be used to the maximum as it reduces the costs and also gives access to needed foreign expertise. Involvement of all the major public and private stakeholders is important both to tap expertise and get support for the reform. The reform process will be long and difficult. However, given Iran's ability to implement policies when there is a strong Government commitment, why not health reform?

## ANNEX 1: TABLES

Table 1: Middle East and North Africa: Global Demographic Indicators, 1995-2010

Country/Region	Population Growth Rate		Percent of Population over Age 60		Percent of Population over Age 60		Total Fertility Rate
	1995	1995-2010	Males	females	males	females	
			1995	1995	2020	2020	
Yemen, Rep.	3.2	3.3	4.1	4.8	2.9	4.1	5.9
Egypt, Arab Republic	2.3	1.9	5.8	7.1	10.0	11.1	3.3
Morocco	1.7	1.6	5.9	6.5	9.0	10.7	3.5
Syrian Arab Republic	3.0	2.7	4.2	4.7	5.2	6.3	4.0
<b>Iran, Islamic Republic</b>	<b>2.7</b>	<b>1.5</b>	<b>6.0</b>	<b>5.7</b>	<b>9.4</b>	<b>9.1</b>	<b>2.6</b>
Jordan	4.3	2.4	4.9	4.9	6.6	7.4	4.4
Algeria	2.2	1.7	5.4	6.2	9.1	10.0	3.6
Tunisia	1.8	1.5	6.9	7.1	10.4	11.7	2.8
Palestinian Administration							6.0
Gaza Strip	6.3	3.7	5.2	5.4	2.8	4.9	
West Bank	4.9	4.1	3.8	3.9	6.0	5.3	
Lebanon	1.9	1.3	7.8	8.6	7.7	11.4	2.5
Oman	5.5	3.8	3.6	4.4	6.5	5.0	4.8
Saudi Arabia	3.8	3.3	4.1	4.5	8.4	5.5	5.9
Bahrain	3.2	1.6	4.9	5.2	..	12.1	3.3
Qatar	5.8	2.4	3.2	1.7	..	11.9	5.9
Kuwait	5.0	2.6	3.8	3.4	13.3	13.5	2.9
United Arab Emirates	5.0	2.2	3.0	2.7	..	12.4	3.5
Iraq	2.1	3.0	4.5	5.0	6.4	7.1	4.7
Libya	3.8	3.5	4.6	4.0	5.9	5.8	4.0
<b>MENA Regional Average</b>	<b>3.6</b>	<b>2.5</b>	<b>4.8</b>	<b>5.0</b>	<b>7.5</b>	<b>8.7</b>	<b>3.9</b>

Source: World Bank *estimates*, 1998.

Table 2: Middle East and North Africa: Health Indicators

Country /Region	Infant	Maternal	Adult Mortality		Life Expectancy	
	Mortality	Mortality	Rate, 1995/c		at Birth, 1995	
	Rate/a	Rate/b	males	females	males	females
Yemen, Rep.	96	1400	384	358	53	54
Egypt, Arab Republic	51	174	278	258	64	66
Morocco	51	228	213	188	64	68
Syrian Arab Republic	31	97	217	186	66	70
<b>Iran, Islamic Republic</b>	<b>26</b>	<b>35</b>	<b>158</b>	<b>150</b>	<b>68</b>	<b>71</b>
Jordan	29	130	171	145	68	72
Algeria	32	140	177	155	68	71
Tunisia	30	69	171	160	68	70
Palestinian Administration	25	70	..	..	70	74
Gaza Strip		..	148	125	..	..
West Bank		..	150	126	..	..
Lebanon	28	104	191	163	67	71
Oman	18	21	201	167	68	73
Saudi Arabia	21	18	181	165	69	71
Bahrain	9	39	170	139	70	75
Qatar	12	10	177	139	69	75
Kuwait	12	9	126	68	74	79
United Arab Emirates	8	2	122	92	73	76
Iraq	112	130	182	143	59	62
Libya	24	40	215	166	63	66
<b>MENA Regional Average</b>	<b>34</b>	<b>151</b>	<b>191</b>	<b>163</b>	<b>67</b>	<b>70</b>

Source: World Bank *estimates*, 1998.

Notes: a. Rate per 1,000 live births. b. Rate per 100,000 live births. c. Rate per 1,000 adults, age 15-60.

**Table 3: Middle East and North Africa:  
Physicians and Beds per 1,000 Population, 1990-1997**

Country /Region	Per 1,000 Population	
	Physicians	Beds
Yemen, Rep.	0.1	0.8
Egypt, Arab Republic	1.6	2.1
Morocco	0.4	1.1
Syrian Arab Republic	0.8	1.1
<b>Iran, Islamic Republic</b>	<b>0.8</b>	<b>1.6</b>
Jordan	1.6	1.6
Algeria	0.8	2.1
Tunisia	0.6	2.0
Palestinian Administration	..	1.2
Lebanon	2.8	3.0
Oman	0.6	2.1
Saudi Arabia	1.4	2.5
Bahrain	1.3	..
Qatar	1.5	..
United Arab Emirates	0.8	3.1
Iraq	0.2	1.7
Libya	1.0	4.1
<b>MENA Regional Average</b>	<b>1.0</b>	<b>2.0</b>

Source: World Bank *estimates*, 1998.

Table 4: Middle East and North Africa: Health Expenditure Patterns, 1990-1997/a

Country /Region	Per Capita GDP (US\$)	Per Capita Health Expenditure (in US\$)	Health Expenditure as % of GDP			Public Share of Health Expenditure (% total)
			Total	Public	Private	
Yemen, Rep.	449	19	6.3	1.6	4.7	22
Egypt, Arab Republic	1,016	38	3.7	1.6	2.1	43
Morocco	1,241	50	4.0	1.1	2.9	33
<b>Iran, Islamic Republic</b>	<b>1,776</b>	<b>101</b>	<b>5.7</b>	<b>2.4</b>	<b>3.3</b>	<b>42</b>
Jordan	1,584	118	7.9	3.7	4.2	47
Algeria	1,468	73	4.6	3.3	1.3	73
Tunisia	2,001	105	5.9	3.0	2.9	51
Palestinian Administration	1,500	129	8.4	4.7	3.7	56
Lebanon	2,776	375	10.0	3.0	7.0	30
Oman	5,668	..	..	2.5	..	..
Saudi Arabia	6,600	536	8.0	6.4	1.6	80
Bahrain	8,769	497	5.5	..	..	..
Qatar	11,856	319	2.8	..	..	..
Kuwait	17,249	..	..	3.6	..	..
United Arab Emirates	15,897	1814	9.0	4.5	4.5	50
<b>MENA Regional Average</b>	<b>5,608</b>	<b>321</b>	<b>6.3</b>	<b>3.1</b>	<b>3.2</b>	<b>48</b>

Source: World Bank *estimates*, 1998.

Notes: a. Figures in this table are taken from the latest available data between 1990-97.

b. Including the Gulf States.

Excluding the Gulf States, the average GDP per capita for the MENA region is US\$ 1,535

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