Azerbaijan
Health Sector Review Note
(In Two Volumes) Volume I: Main Report
June 30, 2005
Human Development Sector Unit
Europe and Central Asia Region
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This Sector Review Note was prepared by a team led by Enis Barış, principal author, comprising Panagiota Panopoulou (health financing), Antonio Lim (pharmaceuticals), Maria Gracheva (health status and determinants), Monique Mrazek (health financing and pharmaceuticals) and Lucia Kossarova (demand and utilization). Elvira Anadolu provided research and technical assistance. Some sections of Volume I and chapters in Volume II were prepared by overlapping groups, each of which was led by a member of the task team. Nicole L. La Borde provided administrative assistance. The peer reviewers were Mukesh Chawla, Lead Economist, ECSHD; Michael Borowitz, Senior Health Advisor, Open Society Institute; and Joseph Kutzin, Regional Advisor, Health Financing, WHO Regional Office for Europe. The team received feedback from colleagues in the Human Development Unit of the Europe and Central Asia Region, including Armin H. Fidler and Peyvand Khaleghian. The report has also benefited from discussions with D-M Dowsett-Coiolo, Country Director, who provided overall guidance to the team.

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**ACRONYMS AND CURRENCY EQUIVALENTS**

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
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<tbody>
<tr>
<td>AIDS</td>
<td>Acquired Immunodeficiency Syndrome</td>
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<tr>
<td>ALOS</td>
<td>average length of stay</td>
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<td>AMU</td>
<td>Azerbaijan Medical University</td>
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<td>BPMS</td>
<td>basic package of medical services</td>
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<td>BSL</td>
<td>Budget System Law</td>
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<td>CAS</td>
<td>Country Assistance Strategy</td>
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<td>CDCL</td>
<td>Central Drug Control Laboratory</td>
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<td>CDH</td>
<td>Central District Hospital</td>
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<td>CEE</td>
<td>Central and Eastern Europe</td>
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<td>CIS</td>
<td>Commonwealth of Independent States</td>
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<td>CoM</td>
<td>Cabinet of Ministers, Republic of Azerbaijan</td>
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<tr>
<td>DALY</td>
<td>disability adjusted life years</td>
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<td>DOTS</td>
<td>directly observed treatment, short course</td>
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<td>DPOLY</td>
<td>district polyclinic</td>
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<td>DPT</td>
<td>diphtheria, pertussis, tetanus</td>
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<td>DRG</td>
<td>diagnosis-related groups</td>
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<td>ECA</td>
<td>Europe and Central Asia</td>
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<td>ECSHD</td>
<td>Europe and Central Asia Human Development Unit</td>
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<td>EDL</td>
<td>essential drug list</td>
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<td>EU</td>
<td>European Union</td>
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<td>FAP</td>
<td>Feldsher Ambulatory Point</td>
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<td>FDI</td>
<td>foreign direct investment</td>
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<td>FSU</td>
<td>former Soviet Union</td>
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<td>FSW</td>
<td>female sex worker</td>
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<td>GDP</td>
<td>gross domestic product</td>
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<td>GFATM</td>
<td>Global Fund against AIDS, Tuberculosis and Malaria</td>
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<td>GLP</td>
<td>good laboratory practice</td>
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<td>GMP</td>
<td>good manufacturing practice</td>
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<td>GoA</td>
<td>Government of Azerbaijan</td>
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<td>GTZ</td>
<td>German International Development Agency</td>
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<td>HBS</td>
<td>Household Budget Survey</td>
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<td>HDR</td>
<td>Human Development Report</td>
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<td>HiT</td>
<td>Health Systems in Transition</td>
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<td>HIV</td>
<td>Human Immunodeficiency Virus</td>
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<td>HMO</td>
<td>health maintenance organization</td>
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<td>HRP</td>
<td>Health Reform Project, Republic of Azerbaijan</td>
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<td>IBTA</td>
<td>Institution Building and Technical Assistance project</td>
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<td>IDA</td>
<td>International Development Association</td>
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<td>IDPs</td>
<td>internally displaced populations</td>
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<td>IDU</td>
<td>injecting drug user</td>
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<td>IEC</td>
<td>information, education, communication</td>
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<td>IMC</td>
<td>International Medical Corps</td>
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<td>IMCI</td>
<td>integrated management of childhood illness</td>
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<tr>
<td>Acronym</td>
<td>Description</td>
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<tr>
<td>IMF</td>
<td>International Monetary Fund</td>
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<td>IMR</td>
<td>infant mortality rate</td>
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<td>IUD</td>
<td>intrauterine device</td>
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<td>KAP</td>
<td>knowledge attitude practice</td>
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<td>LBW</td>
<td>low birth weight</td>
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<td>LICUS</td>
<td>Low-income Countries under Stress</td>
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<tr>
<td>MCH</td>
<td>maternal and child health</td>
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<td>M&amp;E</td>
<td>monitoring and evaluation</td>
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<td>MDG</td>
<td>Millennium Development Goals</td>
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<tr>
<td>MDR-TB</td>
<td>Multiple Drug Resistant Tuberculosis</td>
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<tr>
<td>MED</td>
<td>Ministry of Economic Development, Republic of Azerbaijan</td>
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<td>MMR</td>
<td>maternal mortality ratio</td>
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<td>MICS</td>
<td>Multiple Indicator Cluster Survey</td>
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<td>MLSPP</td>
<td>Ministry of Labor and Social Protection of Population, Republic of Azerbaijan</td>
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<td>MOA</td>
<td>Ministry of Agriculture, Republic of Azerbaijan</td>
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<td>MOE</td>
<td>Ministry of Education, Republic of Azerbaijan</td>
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<td>MOF</td>
<td>Ministry of Finance, Republic of Azerbaijan</td>
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<td>MOH</td>
<td>Ministry of Health, Republic of Azerbaijan</td>
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<td>MOI</td>
<td>Ministry of Interior, Republic of Azerbaijan</td>
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<td>MOJ</td>
<td>Ministry of Justice, Republic of Azerbaijan</td>
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<tr>
<td>MTEF</td>
<td>medium-term expenditure framework</td>
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<td>MTPES</td>
<td>medium-term public expenditure strategy</td>
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<td>NAR</td>
<td>Nakhchivan Autonomous Republic</td>
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<td>NCD</td>
<td>non-communicable diseases</td>
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<tr>
<td>NCFPA</td>
<td>National Committee to Fight and Prevent AIDS</td>
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<td>NGO</td>
<td>nongovernmental organization</td>
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<td>NTP</td>
<td>National Tuberculosis Program</td>
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<td>OOP</td>
<td>out-of-pocket</td>
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<td>OR</td>
<td>occupancy rate (beds)</td>
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<td>OTC</td>
<td>over-the-counter</td>
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<td>PA</td>
<td>Poverty Assessment</td>
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<td>PER</td>
<td>Public Expenditure Review</td>
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<td>PHC</td>
<td>primary healthcare</td>
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<td>PIP</td>
<td>public investment program</td>
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<td>PPL</td>
<td>public procurement law</td>
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<td>PRSC</td>
<td>Poverty Reduction Support Credit</td>
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<td>PRSP</td>
<td>Poverty Reduction Strategy Paper</td>
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<td>RDU</td>
<td>rational drug use</td>
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<td>RH</td>
<td>reproductive health</td>
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<td>RHS</td>
<td>reproductive health survey</td>
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<td>San-Epid</td>
<td>Sanitary Epidemiological Network, Republic of Azerbaijan</td>
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<td>SCPESP</td>
<td>Science, Culture, People’s Education and Social Problems Unit, Republic of Azerbaijan</td>
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<td>SME</td>
<td>small and medium enterprises</td>
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<tr>
<td>SOCAR</td>
<td>State Oil Company of Republic of Azerbaijan</td>
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</table>
SOFAR  State Oil Fund of Republic of Azerbaijan
SPPRED  State Program for Poverty Reduction and Economic Development,
         Republic of Azerbaijan
SSC  State Statistical Committee, Republic of Azerbaijan
SSPF  State Social Protection Fund, Republic of Azerbaijan
STI  sexually transmitted infections
STP  standard treatment protocol
SUB  rural hospital and polyclinic, Republic of Azerbaijan
SVA  doctor ambulatory center, Republic of Azerbaijan
TB  tuberculosis
USMR  under-five mortality rate
UN  United Nations
UNDP  United Nations Development Programme
UNICEF  United Nations International Children's Emergency Fund
USAID  United States Agency for International Development
VCT  voluntary counseling and testing
VHI  voluntary health insurance
WDI  World Development Indicators
WHO  World Health Organization

**CURRENCY EQUIVALENTS**

Exchange rate effective as of May 9, 2005

Currency unit = Azeri Manat (AZM)

US$1 = AZM 4,809

**GOVERNMENT OF AZERBAIJAN FISCAL YEAR**

January 1–December 31
EXECUTIVE SUMMARY

Health outcomes in Azerbaijan are poor, in part due to a healthcare system that is persistently ineffective in delivering affordable, quality services with equal access for all segments of the population. In fact, Azerbaijan lags behind most post-transition countries in terms of health status, as well as in its approach to reforming the healthcare system.

This two-volume Sector Review Note outlines the burden of ill health, its distribution and trends, then addresses the adequacy of the existing healthcare system to meet unmet healthcare needs and respond to epidemiologic and demographic challenges. The main rationale behind this Sector Note is to spur policymakers to consider a set of options for reforming the system, thereby enabling them to embark on a long-awaited reform initiative to improve health outcomes.

The Burden of Illness and its Determinants

Azerbaijan is undergoing a demographic transition as a result of a decreasing population growth rate, a steady decline in fertility rates over the past several decades and net emigration during the 1990s. Despite declining fertility, Azerbaijan presently has a relatively young population. In 2003, 26.8 percent of the population was under age 15, while only 7.5 percent was over 65. However, the population is aging and, according to projections, the dependency ratio (the number of people aged 0–14 and 65 years and older divided by the number of people aged 15–64) is expected to increase.

Between 1990 and 2002, life expectancy at birth shortened by six years—the highest downtrend in the world, excluding the countries of Sub-Saharan Africa, which lost up to three times as many years during the same period due to the HIV/AIDS pandemic. The most likely primary explanation for this decline is increasing infant, child and maternal mortality, all corroborated by independent surveys. This finding is most disconcerting if one considers that there is one maternal and child health (MCH) clinic in the country for every 900 children below age five and for every 2,200 women of childbearing age (15–44). Similarly, there are 3.6 physicians and 7.5 nurses per 1,000 population—clearly adequate ratios from a purely resource input perspective. The decline in life expectancy is also due to premature adult mortality. The probability of dying between ages 15 and 60 is 23.1 percent for Azeri males and 12.2 percent for females, twice as high for both sexes than in EU countries.

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2 See in particular UNICEF, Reproductive Health Survey 2001 (New York: UNICEF, 2003), and Multiple Indicator Cluster Survey (New York: UNICEF, 2002). The Reproductive Health Survey was conducted in 2001 and published in 2003; it is referred to as the RH Survey throughout this Sector Note. The Multiple Indicator Cluster Survey was conducted in 2000 and published in 2002; it is referred to as the MIC Survey throughout this Sector Note.
3 The EU-15 averages for doctors and nurses are 3.9 and 7 per 1,000 population, respectively.
If current trends continue unabated and urgent action is not taken, health outcomes are expected to decline further, making it unlikely that Azerbaijan will meet its pledged health-related Millennium Development Goals (MDG) by 2015 (a two-thirds reduction in maternal mortality and a three-quarters reduction in child mortality).  

Non-communicable diseases are mainly responsible for high premature adult mortality in the country, accounting for about 85 percent of total mortality. Specifically, circulatory diseases are the main cause of mortality, affecting men and women equally. However, male mortality from accidents, injuries and poisoning is three times higher than female mortality from the same causes.

Adult health is also adversely affected by a recent resurgence of infectious diseases. For example, during the last 15 years, the TB incidence rate has more than doubled. During the same time span, the HIV incidence rate has increased 35 times. While the HIV prevalence rate is still less than 1 percent, survey data indicate that the risk of HIV transmission is high due to lack of awareness of HIV transmission modes, a high prevalence of intravenous drug use, high rates of HIV infection among IDUs, and a high rate of infection among commercial sex workers.

According to survey data, the maternal mortality ratio (MMR) remains high—the third highest in the ECA region and 10 times higher than the EU average. The main causes of maternal deaths are acute post-partum hemorrhage and post-abortion complications, which are exacerbated by a high prevalence of anemia in pregnant women. Inadequate quality and uneven access to antenatal and postnatal care also contribute significantly to high maternal mortality. The infant mortality rate (IMR) is also high in Azerbaijan—the second highest in the ECA region and 16 times higher than the EU average. IMR is also three times higher among poor households than rich households. The same is true for under-5 child mortality (U5MR), also the second highest in the region and 20 times higher than the EU average. Both IMR and U5MR are 50 percent higher in rural than in urban areas. The main causes of mortality and morbidity among infants and children are respiratory diseases and dehydration caused by diarrhea.

There are several forces driving deteriorating health outcomes in Azerbaijan. Unhealthy lifestyle choices are perhaps the most powerful risk factors affecting mortality and morbidity. They include tobacco use, alcohol abuse, a high-fat diet, lack of physical activity, a relatively low intake of fruits and vegetables, and drug addiction. The consequences of some of these risks include high blood pressure, high cholesterol, and diabetes, all of which contribute to the high prevalence of circulatory diseases. Lifestyle risks are compounded by socioeconomic factors, including urban/rural and poor/wealthy disparities, as well as environmental factors (e.g., inadequate water quality).

Access to and quality of health services also affects health outcomes in the country. For example, only half of the population utilizes health services when experiencing an illness, indicating that people either cannot or will not pay for poor-quality services. While decreased utilization of healthcare services due to high out-of-pocket payments may not,

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4 See Annex 1 for a detailed assessment of Azerbaijan's prospects of meeting these MDG goals.
in the short term, significantly impact levels of morbidity and mortality resulting from non-communicable diseases, the impact may grow exponentially over time. Low utilization of healthcare services is and will continue to be the case for the poor, who at present are less healthy because they do not have the necessary financial resources to pay for health services (informal payments) and drugs. The poor also have less access to good nutrition (leading to malnutrition and micronutrient deficiencies), tend to live in more unsanitary and overcrowded conditions, and have less access to safe drinking water.

Another health condition, one often overlooked by health policymakers and practitioners alike, is the high incidence of mental illness as a cause of disability, with men affected twice as much as women. Since the early 1990s, the population of Azerbaijan has undergone significant stress as a result of the war with Armenia, economic transition, mass population displacement and high rates of poverty, all of which have played an important role in adversely affecting health outcomes.

**The Societal Response**

Although it is more than adequately endowed in terms of facilities and staff, the healthcare system in Azerbaijan has not been successful in achieving the societal goal of providing essential health services to the population, nor has it been able to respond to the evolving needs, preferences and aspirations of the Azeri people. Unfortunately, despite very large unmet preventive and curative healthcare needs in Azerbaijan, policymakers continue to rely on administrative data that indicate a population in generally good health and an adequately performing healthcare system. The need for reform has not, therefore, been widely acknowledged. Today, there is a general consensus that the Azeri healthcare system has, in fact, failed to reform Soviet-style centralized financing and normative allocation of human, physical and financial resources. Indeed, compared with other countries of the FSU, Azerbaijan is truly lagging behind in the modernization of its healthcare system.

The collapse of the Soviet Union and Azerbaijan’s subsequent independence led to the obsolescence of existing healthcare governance, organization and financing models as a result of: (i) lack of enforceability of the previous system’s hierarchy and regulatory framework, which constituted the backbone of a highly technocratic and normative organizational model, and (ii) disengagement of the state from its financial obligations to the healthcare system.

The response of the Ministry of Health (MOH) has been to consolidate new power, hitherto based in Moscow, and hold on to the Soviet healthcare system model as long as possible without major disruptions to system authority or hierarchy. Accordingly, MOH opted to make changes gradually and began reforming those subsectors and spheres of activity most easily amenable to change, such as primary healthcare, dental care and pharmaceuticals. In addition, MOH has been reluctant to address the issues of excess capacity of healthcare providers and the informal payments adopted by these providers as a coping mechanism during the transition period.
The lack of proactive systemic reform by MOH has had deleterious effects on the volume, intensity, mix and quality of healthcare services. In addition, private spending by consumers was allowed to flourish at a time of economic hardship. As people paid more, but received less for their money, they became more dissatisfied and eventually lost confidence in the system’s ability to provide adequate care to restore health.

Today, MOH continues to “steer” and “row,” albeit with very little clout over major policy decisions, which theoretically fall within the competence of the President, the Cabinet of Ministers and its advisory units. The MOH’s actual role and capacity to govern the system, make policies, regulate and control overall quality and gather the intelligence needed to monitor public health is very limited. The ministry does not, for example, have a unit tasked with policymaking, nor does it have departments for monitoring and evaluation (M&E), human resources or long-term planning. This institutional weakness is compounded by a lack of pluralism in system governance. In other words, the system is plagued by the absence of an active purchaser of services, extremely weak representation of providers and consumers, and fragmentation of health investment and budget decisions (the latter fall under the responsibility of the Ministries of Economic Development and Finance).

As a result, the current system suffers from the following shortcomings:

- a legal and regulatory platform that is not conducive to effective system stewardship;
- fragmented accountability for technical, administrative and financial matters, leading to conflicts of interest, divided loyalties and inefficient resource allocation;
- excessive hospital and specialized care facilities;
- poorly funded and managed, as well as highly fragmented, primary healthcare services;
- a de-motivated health workforce that relies on informal payments to cope with low wages and a practice environment devoid of incentives to provide appropriate care; and,
- major inequalities in health and healthcare as a result of very low public outlays, coupled with increasingly high levels of out-of-pocket payments.

A Way Forward

This report makes a number of recommendations with a view to moving away from

- a model of specialist physician-centered care towards a model of family-based primary healthcare (PHC);
- a biomedical care model towards a model that values disease prevention and health promotion;
- a highly structured, hierarchical model towards a more integrated, network-based model with built-in gatekeeping;
• a model that does not solve most health problems (referring them instead to higher levels) towards one where most problems are solved at the PHC level;
• a model with extremely inefficient resource allocation towards a model that allocates resources according to healthcare needs; and,
• a model where provider payments are based on inputs towards a model where providers are paid on the basis of productivity and the appropriateness and quality of the care that they provide.

In order to reach the above objectives, the recommendations below are offered for the main elements of the healthcare system: stewardship, financing, organization and delivery structure, human resources, and pharmaceuticals.

Stewardship

_The MOH should assume responsibility for health policymaking in Azerbaijan._ This responsibility would require the ministry to redefine its vision, mission, mandate, roles and responsibilities, all of which would be presented in a White Paper. This paper would also outline Azerbaijan’s health and healthcare policy and reform agenda and propose a road map for its implementation. The drafting of the paper would require: (i) re-activation of the Health Reform Commission, which would be placed in charge of drafting the White Paper; (ii) carrying out a consensus-building exercise among all stakeholders in the healthcare system; and, (iii) preparation of an implementation plan for reform, including the costing of necessary inputs (this crucial step is already envisaged in the upcoming PRSC, a goal to which the GoA has explicitly committed itself).

The preparation and the issuance of the White Paper should have the backing of the President and be supported by an interagency steering committee and technical groups. The array of options presented in the White Paper should be fed back to all stakeholders to build consensus on their specific content and, equally important, to facilitate agreement on the timing, sequencing and financing of reform elements. Following this process, five districts that demonstrate a high level of commitment to the reform process should be selected to pilot the reforms. It is critical to consider that implementation of reforms would likely require changes in laws and regulations, changes which would need to be prepared and put in place in advance of the reforms.

Finally, a public information campaign, preferably conducted through the media, should be developed and properly financed. The campaign should explain to the populations of the five pilot regions the main tenets of the reform, the nature and timetable of reform activities and emphasize those actions that are likely to produce tangible results in the short run (e.g., improved access to and quality of care, as well as reduced out-of-pocket expenses for essential services). Last but not least, collaboration with international partners throughout the process will be needed to secure their political, technical and financial support.
Financing

*Increasing government spending on the health sector is an absolutely necessary first step, but must be accompanied by a major change in the way health resources are pooled and equitably allocated.* There are several mechanisms that can be used to pool both public and private resources.

The simplest mechanism would be to agree on an allocation formula based on objective criteria such as demographic, epidemiologic, socioeconomic and other relevant factors that affect healthcare needs, demand and utilization. Further refinement could include adjustments for the cost of delivering care to more remote areas, with other important risk adjusters added over time.

Another option would be to create a single pooling entity that could enhance rationalization of resources by linking the budget to the healthcare needs of the population. This entity could be virtual, i.e., it could operate within the existing structure of the Ministry of Finance (MOF), or it could be established as a separate public entity in the form of a fund.

A third option would be to establish a Health Insurance Fund that would assume, among other responsibilities, the pooling function.

In order to introduce improvements in technical efficiency, cost-containment and quality of care, *performance-related payments to primary care providers need to be put in place.* Primary-care facilities could receive payment on a per capita basis, with the flexibility to generate savings that could be reallocated for pharmaceuticals and equipment. Such an approach could improve levels of equipment and supplies, as well as enhance national training programs for physicians and nurses. These changes would need to be combined with a more systematic approach towards monitoring user charges and wages in the public healthcare system.

*Performance-related payments should also be introduced for hospitals.* Gains in efficiency could be made by replacing current budgeting with payment mechanisms that reward hospitals for higher throughput while motivating a decrease in cost per case. Based on the experience of other countries, performance-based payments are best applied within a global budget. Lowering the average length of stay and staffing levels could lower the cost per case and result in overall cost savings, particularly if combined within a global budget.

*Equity and access to basic healthcare can be addressed through revision and costing of a package of services.* The provision of existing services should be re-assessed in terms of affordability, various scenarios of population coverage, the size and content of the service package and the service mix. One option is to define an essential package that would be provided to the entire population free of charge and financed by general tax revenues. This package would include all primary and preventive care, plus public health interventions and some secondary and tertiary care. An expanded version of the package
could include additional curative services that would require a financial contribution from
the population, yet offered free of charge to the poorest. Again, the potential cost of
expanded coverage should be realistically assessed to ensure that it is affordable.

A decision must be made as to whether the government will gradually assume full
responsibility for financing all health services or limit its scope of responsibility to a
basic service package, thus allowing for expansion of the health insurance market.
Regardless of the government’s decision, there must be a clear delineation between
services covered by the government and those covered by health insurance. Ideally, the
latter should not cover the same mix of services, but supplement the government
package.

Organization and Delivery

A well-established, grassroots healthcare network exists in Azerbaijan under the name
of Feldsher Ambulatory Points (FAP). This network should be upgraded, its service
mix re-assessed, and the benefit package for feldshers and nurse/mid-wives revalued.
In addition, the scope and quality of maternal and child healthcare services provided by
FAPs need to be upgraded through additional training and investment in facilities,
equipment and supplies. FAP staff can also be trained in outreach activities to work as
change agents in information, education and communication (IEC), especially for health
promotion.

The job description of the physician at doctor ambulatory centers (SVAs) also needs to
be redefined in a manner more conducive to providing community-based preventive
and public health services, managing the staff of other SVAs and FAPs, and delivering
family-oriented PHC or family medicine. This change in job responsibilities would
require retooling physicians through extensive training.

As for rural hospitals (SUBs), the proposed option would be to look into productivity
indicators, such as the degree of concordance between the availability of facilities and
service utilization. On the basis of this evidence, local decisions would be made on
whether to maintain these facilities as small hospitals or transform them into group
practice settings—hubs of a rural network of SVAs and FAPs that would also provide
specialized outpatient care.

The number and bed distribution of central district hospitals needs to be re-evaluated in
parallel with the rationalization of SUBs. As part of the rationalization of facilities,
there is a major need for reconfiguration, consolidation and, in some cases,
downsizing. Indeed, facilities that have separate buildings for maternity, infectious
diseases, children’s hospitals and/or wards and district polyclinics may have to be
consolidated to improve physical access and economies of scale (in terms of maintenance
and operating costs).

There is a definite need to significantly reduce the number of specialized hospitals,
dispensaries, sanatoria and “rest establishments.” This reduction will require, however, a
change of policy vis-à-vis their role in the healthcare system, to what extent their services should be covered out of the public budget in general and by MOH in particular, and which of their services could be integrated into the existing healthcare network.

Finally, the situation in Baku and Nakhchivan deserves separate analysis to better understand the demand side, more specifically, referral patterns and the origin and destination of patient flows. In the case of Baku, this would require setting up a special committee in charge of consolidating the vast hospital sector. As for Nakhchivan, the referral mechanism has to be rethought to ensure minimum referrals to Baku.

**Human Resources**

*There is a need for a long-term human resources policy and planning to redress urban/rural imbalances and inequities in human resource distribution, particularly of specialist/family practitioners and across levels of care.* The latter imbalance could be gradually resolved through the proposed program of post-graduate medical education. In addition, improvements in the pay scale of health workers could partially be addressed by optimizing current budgets so that posts that exceed requirements are removed without reducing the overall staff budget.

The incentive structure also needs to be realigned to link payments to productivity. A more dynamic retirement policy and strategy may be in order, such as severance payments for those who are reluctant to retire. Finally, overproduction of medical graduates could be curtailed by closing or imposing strict regulations and norms on the licensing of private universities.

**Pharmaceuticals**

*Azerbaijan needs a comprehensive national drug policy,* the objective of which would be to improve the population’s access to high-quality, safe and effective drugs in accordance with the burden of disease and the priorities of the national health sector. Areas of emphasis include pricing of brand and generic drugs, an essential drug list and standard treatment protocols for most common diseases.

**Proposed Reform Agenda: Phases and Sequencing**

Three consecutive phases of reform of the healthcare system are suggested as stages of a gradual but comprehensive reform agenda.

*Phase I would entail defining healthcare priorities and improving the day-to-day functioning of the system for enhanced access and quality of care.* In this step, affordability would cease to be the major impediment that prevents people from seeking healthcare. This phase would involve the establishment of an essential package of clinical and public health interventions and build the mechanisms and tools to deliver them effectively. Effective delivery of this package will require a number of actions,
including identification of the major causes of the existing disease burden; standardized diagnostic, treatment and referral protocols; costing of interventions, training and certification of primary care physicians and allied personnel; mechanisms for quality control and assurance, including the information management system; and the legal and regulatory basis to assign roles and responsibilities, together with the necessary financial and non-financial incentives for effective delivery. Phase I would focus almost entirely on primary healthcare, with changes to inpatient care limited to those needed to introduce effective delivery of the essential package.

Phase II would build on Phase I and would focus on improving allocative and technical efficiency, encompassing both inpatient and primary-level healthcare facilities and services. This would require major additional capital investments in hospital infrastructure and equipment with a view toward rationalizing inpatient care facilities. This additional investment would, in all likelihood, require a sharp reduction in the number of hospitals and/or beds on the basis of a nationwide mapping exercise. Such an exercise would follow a thorough assessment of inpatient and outpatient healthcare needs, together with the existing supply and utilization of beds and other inpatient services.

Phase III would be more systemic, encompassing all reforms undertaken under previous phases, and require a restructuring of the existing institutional framework. More concretely, MOH would revise its mandate and business processes and define its functions, roles and responsibilities within the new institutional framework. Accordingly, MOH would mainly become a policymaking, planning, regulating and monitoring agency without direct involvement in the financing or provision of curative services. However, MOH would maintain its responsibility for the provision of public health services, including disease prevention and health promotion (which would be provided at the reformed primary healthcare level).

In terms of financing, MOF, in coordination with MOH, should design a mechanism to allocate resources according to the needs-based formula described above. Ultimately, a separate fund could be established to pool resources and assume the purchasing function of healthcare services as a true Health Insurance Fund. However, this last step may not materialize until the tax base in Azerbaijan becomes broader, or people become more willing to make earmarked contributions to a fund. In any case, more research is needed on potential revenues and expenditures to determine the long-term fiscal sustainability of such a fund.

All phases presented above are implicitly sequenced, so that Phase II cannot be successfully implemented without first undertaking the necessary reform steps required under Phase I, and so on. One may, therefore, view Phase III as the long-term goal of comprehensive reform.

The proposed reform agenda is clearly ambitious in scope and timing. Given a willingness to reform, Azerbaijan can greatly benefit from the experiences and lessons learned in other countries where similar reforms have been implemented. The issue is whether the government has the capacity and/or the political will to follow through and
deliver on these and other commitments in the health sector. Granted, some of the reform initiatives would depend largely on the availability of additional resources. Other initiatives would require difficult policy decisions, with implications for how the budget is allocated to improve efficiency, governance and utilization of available resources. To be successful, the goals of restructuring the healthcare system and strengthening public health in Azerbaijan must become central development objectives of the government. One indicator of this commitment would be the completion of the White Paper discussed earlier.
CHAPTER 1. INTRODUCTION: STRUCTURE AND CONTENT OF THE REVIEW

This review is organized in two volumes. Volume I, designed to be a standalone report, provides a brief summary of health and healthcare issues in Azerbaijan and proposes an agenda for reform. It presents an overview of the country's main health and healthcare needs, discusses priority health conditions and determinants, and undertakes a system diagnosis by documenting the extent of under-performance and shortcomings in system governance, management, organization and financing. It then proposes an agenda and strategy for health sector reform. This agenda is purposefully broad because Azerbaijan is truly lagging behind in reform of the health sector, whether compared to its record in other social sectors (e.g., education and social protection) or to that of other countries of the former Soviet Union (FSU).

Volume II provides the evidence base for Volume I. It is a compilation of seven papers, presented as standalone chapters. Chapter 1 describes the current status and determinants of health in Azerbaijan for infants, children, women and men as adults, and the relative importance and distribution of determinants of the dual burden of communicable and non-communicable diseases. Chapter 2 examines in detail the demand for and use of healthcare services and their behavioral and system-related determinants. More specifically, it focuses on the socio-structural determinants of healthcare-seeking behavior, with a view toward identifying the role that income, education, place of residence and gender play in access to and use of services. Chapter 3 reviews the requirements of healthcare stewardship in theory and practice in Azerbaijan, i.e., who are the key stakeholders, what contextual factors play a role in key policy decisions, threats to and opportunities for comprehensive health sector reform, and the content and process of a sound reform strategy.

Chapter 4 of Volume II presents the main features of healthcare financing in Azerbaijan and assesses the efficiency and equity of resource allocation and use. It also reviews in detail how healthcare facilities and providers are paid and proposes an agenda to improve public financing of essential health services. Chapter 5 deals with human resource issues by analyzing current workforce capacity, distributional inequalities between rural and urban areas as well as between primary and secondary levels of care. It also assesses existing incentive mechanisms, as well as the education and training needs of physicians. Chapter 6 provides a detailed account of the current organizational and management model, concentrating on system hierarchy in curative care and public health services. Finally, Chapter 7 is devoted to pharmaceuticals, or more precisely, to the production, distribution, retail sale, quality control and appropriate utilization of needed pharmaceuticals.

This Sector Review is expected to: (i) help MOH and district-level health authorities understand the main policy issues and development challenges faced by the healthcare system, (ii) help MOH to critically appraise its role and capacity in policy design and development, together with its strengths and weaknesses within the current institutional framework; and (iii) by proposing a reform agenda, assist the Government of Azerbaijan (GoA) in general, and all stakeholders in health in particular (i.e., Cabinet of Ministers,
MOH, Ministry of Finance, Ministry of Labor and Social Protection, and State Social Protection Fund), in their deliberations vis-à-vis the optimal organization and financing scheme for healthcare in Azerbaijan. This Review is also intended to serve as the basis for a coherent policy dialogue to guide the World Bank and, hopefully, its UN, international, bilateral and Azeri partners, on the scope, nature and extent of future investment needs in, and technical assistance to, health sector reform in Azerbaijan.
CHAPTER 2. KEY FINDINGS, ISSUES AND OPTIONS FOR REFORM

2.1 Demography

Azerbaijan is in a demographic transition, with decreasing population growth due to a low fertility rate, an aging population and a flattening dependency ratio (see Figure 2.1). As of 2003, the population of Azerbaijan was 8.23 million, with a male/female ratio of 49:51. More than 90 percent of the population are Azeris. While the population continues to grow, the rate of increase has been gradually declining. The average annual population growth rate declined from 3 percent in the years 1959–1970 to 1.3 percent in the years 1989–1999, reaching 0.7 percent in 2001. This decline is due to several factors, including the recent war with Armenia, net emigration, and a dramatic decline in the crude birth rate from 26.4/1,000 in 1990 to 13.6/1,000 in 2002 (see Table 2.1).

<table>
<thead>
<tr>
<th>Table 2.1. Demographic Indicators, 1990–2002</th>
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<tbody>
<tr>
<td></td>
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<tr>
<td>----------------------------------------------</td>
</tr>
<tr>
<td>Population (millions)</td>
</tr>
<tr>
<td>% population under 15 years old</td>
</tr>
<tr>
<td>% population 15–64</td>
</tr>
<tr>
<td>% population 65 years and older</td>
</tr>
<tr>
<td>Deaths, per 1000 live births</td>
</tr>
<tr>
<td>Live births per 1000 population</td>
</tr>
</tbody>
</table>

Sources: World Bank, World Development Indicators (WDI), 2004 (population figures); WHO, “Health for All” database, (all database figures for deaths and live births in 2001, 2002.

The Total Fertility Rate (TFR) fell from 5.5 in 1964 to 2.8 in 1990, and more recently, to 1.8 in 2002 (1.6 urban and 2.1 rural). This rate is below the replacement level of 2 children per woman over her reproductive live span. As Table 2.2 shows, TFR in Azerbaijan is lower than in almost all Central Asian countries, Albania and Turkey. Although the rate is comparable to that of Kazakhstan, it is still higher than that of other countries in the region.

<table>
<thead>
<tr>
<th>Table 2.2. Total Fertility Rate, 1990 vs. 2002</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<tr>
<td>Countries</td>
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<tr>
<td>----------------------------------------------</td>
</tr>
<tr>
<td>Tajikistan</td>
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<tr>
<td>Turkmenistan</td>
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<tr>
<td>Uzbekistan</td>
</tr>
<tr>
<td>Kyrgyz Republic</td>
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<tr>
<td>Albania</td>
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<tr>
<td>Turkey</td>
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<tr>
<td>Kazakhstan</td>
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<tr>
<td>Azerbaijan</td>
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<tr>
<td>Armenia</td>
</tr>
<tr>
<td>Russia</td>
</tr>
<tr>
<td>Ukraine</td>
</tr>
<tr>
<td>Georgia</td>
</tr>
</tbody>
</table>

Figure 2.1. Demographic Trends in Azerbaijan

Despite its low TFR, Azerbaijan has relatively a young population. In 2003, 26.8 percent of the population was under age 15, while only 7.5 percent was over 65.

The dependency ratio has fallen from 0.61 in 1990 to 0.53 in 2003, mainly because the percentage of young people aged 0–14 has declined by 6.3 percent, while the percentage of persons aged 15–64 and persons aged 65 and older has increased only slightly (3 percent) since 1990 (see Table 3).

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Albania</td>
<td>0.62</td>
<td>0.59</td>
<td>0.56</td>
<td>0.53</td>
</tr>
<tr>
<td>Armenia</td>
<td>0.62</td>
<td>0.56</td>
<td>0.48</td>
<td>0.41</td>
</tr>
<tr>
<td><strong>Azerbaijan</strong></td>
<td><strong>0.61</strong></td>
<td><strong>0.63</strong></td>
<td><strong>0.57</strong></td>
<td><strong>0.53</strong></td>
</tr>
<tr>
<td>Georgia</td>
<td>0.51</td>
<td>0.53</td>
<td>0.51</td>
<td>0.48</td>
</tr>
<tr>
<td>Kazakhstan</td>
<td>0.60</td>
<td>0.58</td>
<td>0.52</td>
<td>0.48</td>
</tr>
<tr>
<td>Kyrgyz Republic</td>
<td>0.74</td>
<td>0.74</td>
<td>0.67</td>
<td>0.61</td>
</tr>
<tr>
<td>Tajikistan</td>
<td>0.89</td>
<td>0.87</td>
<td>0.79</td>
<td>0.70</td>
</tr>
<tr>
<td>Turkey</td>
<td>0.65</td>
<td>0.59</td>
<td>0.52</td>
<td>0.52</td>
</tr>
<tr>
<td>Turkmenistan</td>
<td>0.79</td>
<td>0.78</td>
<td>0.69</td>
<td>0.62</td>
</tr>
<tr>
<td>Uzbekistan</td>
<td>0.82</td>
<td>0.79</td>
<td>0.72</td>
<td>0.64</td>
</tr>
<tr>
<td>EU - unweighted</td>
<td>0.50</td>
<td>0.50</td>
<td>0.50</td>
<td>0.50</td>
</tr>
<tr>
<td><strong>average</strong></td>
<td><strong>0.62</strong></td>
<td><strong>0.63</strong></td>
<td><strong>0.57</strong></td>
<td><strong>0.53</strong></td>
</tr>
</tbody>
</table>


2.2 Socioeconomic Context and Poverty

2.2.1 Macroeconomic Performance

The economy has rebounded strongly after a significant decline in the early 1990s. However, Azerbaijan remains one of the poorest countries in the region. Following the breakup of the Soviet Union, the economy suffered a dramatic decline in output as a result of the war with Armenia over Nagorno-Karabakh, the subsequent dislocation of families and disruption of trade routes, the switch to a market economy, and the reduction of state control over prices and production. Compared to the CIS average of 42 percent, the GDP of Azerbaijan dropped by 63 percent during the period 1989–1995, a drop that was accompanied by hyperinflation and a sharp currency depreciation.

Despite economic recovery that began after 1996, with an average growth rate in excess of 9 percent a year from 1997 to 2002, GDP in 2004 was still roughly 30 percent less than in 1989. Azerbaijan remains one of the seven lowest-income countries in the Europe and Central Asia region (see Table 2.4). Its GDP per capita in 2003 (US$865) was 3.5 times lower than that of many countries in Eastern Europe and the FSU (US$2,949 on average), and 30 times lower than the EU average.
Table 2.4. GDP per capita, 2003

<table>
<thead>
<tr>
<th>Countries</th>
<th>GDP/capita (US$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kyrgyz Republic</td>
<td>343.76</td>
</tr>
<tr>
<td>Uzbekistan</td>
<td>388.58</td>
</tr>
<tr>
<td>Moldova</td>
<td>463.38</td>
</tr>
<tr>
<td>Georgia</td>
<td>768.14</td>
</tr>
<tr>
<td>Azerbaijan</td>
<td>865.30</td>
</tr>
<tr>
<td>Armenia</td>
<td>915.12</td>
</tr>
<tr>
<td>Ukraine</td>
<td>1,024.42</td>
</tr>
<tr>
<td>Turkmenistan</td>
<td>1,235.86</td>
</tr>
<tr>
<td>Albania</td>
<td>1,932.57</td>
</tr>
<tr>
<td>Kazakhstan</td>
<td>1,995.51</td>
</tr>
<tr>
<td>Russian Federation</td>
<td>3,022.52</td>
</tr>
<tr>
<td>Turkey</td>
<td>3,365.34</td>
</tr>
<tr>
<td>EE and FSU average</td>
<td>2,949.95</td>
</tr>
<tr>
<td>EU average</td>
<td>26,704.23</td>
</tr>
</tbody>
</table>


2.2.2 Poverty

Almost 50 percent of the population of Azerbaijan is considered poor. Poverty is more entrenched among urban dwellers, IDPs and people living in Nakhchivan. Despite significant economic growth since the mid-1990s, the 2002 Household Budget Survey (HBS) found that 46.7 percent of the population was living below the poverty line, with the highest incidence of poverty recorded in the Nakhchivan Autonomous Republic, or NAR (62.9 percent). The risk of poverty increased with household size; poverty levels were found to be slightly higher in urban than rural areas and generally lower in larger cities than small towns. According to the survey, 40 percent of the population of Baku, a city that comprises one-fifth of the total population of Azerbaijan, had household incomes below the absolute poverty line.

Lack of employment opportunities is one of the root causes of poverty. At the end of the 1990s, the unemployment rate was 16 percent (14.2 percent among males and 18.6 percent among females). In addition, the 1999 census revealed that the employment-to-population ratio was only 54 percent, indicating that almost half of the population was dependent on income generated by others. The unemployment rate was particularly high (29 percent) among urban youths aged 20–24.

Azerbaijan has attained a very high level of literacy, but the educational system does not provide the necessary skills for gainful employment. The enrollment rate for compulsory education is still high (95 percent in 2001), with literacy rates close to 100 percent, irrespective of gender and ethnicity. Beyond the age of 16, however, enrollment rates drop sharply, with only 13 percent of young adults aged 17–24 enrolled in post-secondary educational institutions. Among children of poor families, the number is 9 percent. Low enrollment in higher education can be attributed to the falling quality of this education and the inability of institutions to adapt to the changing skills requirements of the labor market, as confirmed by youth high unemployment in the country.
2.2.3 Life Expectancy

Since independence, Azerbaijan has experienced a significant decrease in life expectancy. Although official figures show that life expectancy at birth has increased by one year, according to World Bank estimates, it has actually shortened by 6 years over the period 1990–2002, affecting men and women equally—one of the steepest declines in the world.

Table 2.5. Life Expectancy at Birth in Azerbaijan, Selected Years, Official Data vs. World Bank Estimates

<table>
<thead>
<tr>
<th>Year</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990</td>
<td>67.0</td>
<td>74.8</td>
<td>70.9</td>
</tr>
<tr>
<td>1995</td>
<td>65.2</td>
<td>72.9</td>
<td>69.05</td>
</tr>
<tr>
<td>1996</td>
<td>66.3</td>
<td>73.8</td>
<td>69.05</td>
</tr>
<tr>
<td>1997</td>
<td>67.4</td>
<td>74.6</td>
<td>70.0</td>
</tr>
<tr>
<td>1998</td>
<td>67.9</td>
<td>75.0</td>
<td>71.0</td>
</tr>
<tr>
<td>1999</td>
<td>68.1</td>
<td>75.1</td>
<td>71.5</td>
</tr>
<tr>
<td>2000</td>
<td>68.6</td>
<td>75.1</td>
<td>71.6</td>
</tr>
<tr>
<td>2001</td>
<td>68.6</td>
<td>75.2</td>
<td>71.9</td>
</tr>
<tr>
<td>2002</td>
<td>69.4</td>
<td>75.0</td>
<td>72.2</td>
</tr>
</tbody>
</table>

World Bank data also shows that average life expectancy in Azerbaijan is one of the lowest in the region—13 years lower than the EU-15 average. Azerbaijan also ranks highest, together with Kazakhstan, in terms of the number of years lost in life expectancy since 1990 (see Table 2.6).

Table 2.6. Average Life Expectancy at Birth in Selected ECA Countries, Selected Years

<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Kazakhstan</td>
<td>68</td>
<td>65</td>
<td>64</td>
<td>64</td>
<td>62</td>
</tr>
<tr>
<td>Azerbaijan</td>
<td>71</td>
<td>69</td>
<td>68</td>
<td>65</td>
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</tr>
<tr>
<td>Kyrgyz Republic</td>
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<td>67</td>
<td>66</td>
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<tr>
<td>Turkmenistan</td>
<td>66</td>
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<td>66</td>
<td>65</td>
<td>65</td>
</tr>
<tr>
<td>Tajikistan</td>
<td>69</td>
<td>68</td>
<td>68</td>
<td>67</td>
<td>67</td>
</tr>
<tr>
<td>Uzbekistan</td>
<td>69</td>
<td>69</td>
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<td>68</td>
<td>67</td>
</tr>
<tr>
<td>Turkey</td>
<td>66</td>
<td>68</td>
<td>69</td>
<td>70</td>
<td>70</td>
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<tr>
<td>Georgia</td>
<td>72</td>
<td>73</td>
<td>73</td>
<td>73</td>
<td>73</td>
</tr>
<tr>
<td>Albania</td>
<td>72</td>
<td>71</td>
<td>72</td>
<td>74</td>
<td>74</td>
</tr>
<tr>
<td>Armenia</td>
<td>72</td>
<td>72</td>
<td>74</td>
<td>74</td>
<td>75</td>
</tr>
<tr>
<td>EU-15</td>
<td>76</td>
<td>76.8</td>
<td>77.2</td>
<td>77.7</td>
<td>78.0</td>
</tr>
</tbody>
</table>


2.3 Health Status and Unmet Healthcare Needs

2.3.1 Health Status

The health status of the population of Azerbaijan remains poor, even when compared with other CIS countries. Health outcomes in Azerbaijan were significantly worse than in Western Europe before the breakup of the Soviet Union; the dramatic political and socioeconomic changes that accompanied its collapse have only exacerbated these outcomes.
Adult Health

Premature adult mortality is one the main reasons behind reduced life expectancy. Premature deaths among adults (under age 65) account for roughly 68 percent of all deaths in Azerbaijan, compared to roughly 51 percent in EU-15 countries. The highest share (90 percent) of the increase in mortality from 1990 to 2002 falls within the 35–50 age group, with premature male mortality more than twice premature female mortality. Overall, the probability of dying for men between the ages of 15 and 60 in Azerbaijan is 23 percent, compared to 11.7 percent in EU-15 countries.

Non-communicable diseases constitute the main reason for high adult mortality, accounting for about 85 percent of total mortality (see Table 2.7). Circulatory diseases are the main cause of mortality, affecting men and women equally. Men suffer more than women from respiratory diseases and cancer; women suffer predominantly from breast cancer, as well as cervical, ovarian and uterine cancers. Types of cancers that affect men include cancers of the stomach, larynx, trachea, bronchial tubes and lungs, bladder, bone and lymphatic tissue.

<table>
<thead>
<tr>
<th>Total deaths from all causes</th>
<th>Diseases of the circulatory system</th>
<th>Cancers</th>
<th>Diseases of the respiratory system</th>
<th>Diseases of the digestive system</th>
<th>Accidents, poisoning and injuries</th>
<th>Diseases of the nervous system</th>
</tr>
</thead>
<tbody>
<tr>
<td>Women</td>
<td>538.9</td>
<td>327.7</td>
<td>63.1</td>
<td>35.1</td>
<td>32.8</td>
<td>10.9</td>
</tr>
<tr>
<td>Men</td>
<td>618.2</td>
<td>330.7</td>
<td>82.9</td>
<td>44.4</td>
<td>36.2</td>
<td>36.0</td>
</tr>
<tr>
<td>Average</td>
<td>578.5</td>
<td>329.2</td>
<td>73.0</td>
<td>39.7</td>
<td>34.5</td>
<td>23.4</td>
</tr>
</tbody>
</table>


Male mortality is three times higher than female mortality in terms of accidents, injuries and poisoning. In fact, road traffic accidents in Azerbaijan caused more deaths per accident than in most comparator countries, with the ratio of deaths to accidents 52 times higher than the EU average. This astounding statistic is compounded by the fact that accidents, poisoning and injuries are also important causes of morbidity (8.4 percent) in Azerbaijan, even more prevalent than diseases of the circulatory system (7.5 percent), although diseases of the respiratory system (46 percent) account for the majority of morbidity.

Adult health is also adversely affected by the recent resurgence of infectious diseases. For example, between 1990 and 2003, the TB incidence rate has more than doubled, from 37/100,000 to 82/100,000 population, while the prevalence rate is estimated at 109/100,000 population. The reported incidence of syphilis has also increased almost fourfold from 1990 to 1997 and, while official data suggests that it declined to 1990 levels by 2002, this is unlikely in light of international comparisons. For example, the 2002 figure for syphilis prevalence in Azerbaijan is 20 times less than that reported in Turkmenistan and 10 times less than that reported in Georgia and the Baltic countries.
Lastly, HIV incidence has increased by 35 times between 1996 and 2003 and, while prevalence is still less than 1 percent, survey data indicate that risk of HIV transmission is very high in Azerbaijan due to: (i) rudimentary knowledge about HIV transmission and AIDS in general, particularly in rural areas; (ii) the prevalence of high-risk sexual behavior in young adults (only 36 percent of youths aged 15–24 had ever used any type of contraception); (iii) a high prevalence of intravenous drug use and high rates of HIV infection among IDUs (up to 19.5 percent); and (iv) increasing heterosexual HIV transmission, as evidenced by a high rate of infection among commercial sex workers (8.5 percent).

Maternal and Child Health

Maternal mortality remains high. If this trend continues, Azerbaijan may not meet the MDG goal of a two-thirds reduction in maternal mortality by 2015. The Maternal Mortality Ratio (MMR) of 94/100,000 live births in 2000 is the third highest in the region and ten times higher than the EU average. Meanwhile, official figures cite a number of 19.9/100,000 for 2002, which is probably a significant underestimate, at least partly because an increasing number of women (36 percent in rural areas) give birth outside medical facilities, with their deaths unlikely to be recorded as maternal mortalities.

The main cause of maternal deaths is acute post-partum hemorrhage and post-abortion complications, both of which are exacerbated by the high prevalence of anemia in pregnant women. Chronic or recurrent anemia is linked to malnutrition and/or iron deficiency, often compounded by frequent pregnancy and repeated abortions, all factors that are highly prevalent in Azerbaijan. The abortion rate is also very high—twice the total fertility rate in the country and the second highest in the region after Georgia.

Infant mortality is also high in Azerbaijan. If this trend continues, Azerbaijan may not meet the MDG goal of a three-quarters reduction in child mortality by 2015. The Infant Mortality Rate (IMR) is estimated at 81/1,000 live births for 2001 (38/1,000 neonatal mortality within 0–27 days and 43/1,000 post-neonatal mortality within 28–364 days). It is the second highest IMR in the region after Tajikistan. With respect to the under-five mortality rate (USMR), it is estimated at 92.2/1,000 live births in 2000, while some sources suggest an even higher figure of 102/1,000. This rate is almost 20 times higher than the EU average of 5.3/1,000 live births in 2002.

The main causes of mortality and morbidity among infants and children are respiratory diseases and dehydration caused by diarrhea. Diarrhea, infectious and parasitic diseases and even measles also contribute to child illness and death. In addition, children also suffer from micronutrient deficiencies and poor nutrition, with resulting high levels of anemia. The prevalence of iodine deficiency among young children is

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5 Please note there is a large discrepancy between official maternal and child mortality data reported by the State Statistical Committee of the Republic of Azerbaijan, and estimates provided by the RH and MIC surveys. The discrepancy extends to the prevalence of underlying conditions (e.g., anemia, abortion rates, etc.).
extremely high, as is vitamin A deficiency. Also, the prevalence of low-birth-weight babies is one of the highest in the region. In terms of child nutrition, the MIC Survey revealed high rates of underweight, stunted (as a result of chronic malnutrition) and wasted (due to acute malnutrition) children under five years of age.

2.3.2 Determinants of Health Outcomes

The main determinants of poor child, maternal and adult health, together with the high overall mortality rate in Azerbaijan, are behavioral and/or related to reduced access to and low quality of healthcare services. There are four groups of health determinants: (i) human biology and/or genetic inheritance, (ii) lifestyle, (iii) environment (social, physical and psychological), and (iv) the healthcare system. The first factor—genetic makeup, sex, age and other characteristics that make an individual more or less susceptible to disease—is an important determinant of health, but one over which the individual and society have little control. The other three factors represent areas of opportunity where individuals and society can make changes that would eventually lead to improved health outcomes. An understanding of these determinants is critical in order to formulate sound policies and actions to prevent disease and promote health.

Lifestyle determinants constitute the main risk factors affecting mortality and morbidity in Azerbaijan. These include tobacco use, alcohol abuse, a high-fat diet, lack of physical activity and a relatively low intake of fruits and vegetables. These risks are mostly self-imposed and can be divided into consumption (e.g., smoking, alcohol and drug use, poor nutrition) and unhealthy lifestyle choices (e.g., lack of exercise, poor hygiene, high-risk sexual behaviors). Many of these factors are clearly related to the high prevalence of circulatory and respiratory disease, which account for 64 percent of mortality and 54 percent of morbidity in Azerbaijan. For example, 40 percent of all adult males in Azerbaijan smoke, which contribute to an estimated 17 percent of all mortality among men aged 35–69. Likewise, Azerbaijan ranks third, after Russia and Belarus, in consumption of alcohol in the region, a consumption pattern that contributes to increased violence and extremely high death rates from motor vehicle accidents, in addition to causing liver and cardiovascular disease.

In terms of nutrition, a high-fat diet rich in cholesterol is prevalent in Azerbaijan, with 21 percent of the population overweight or obese. This situation has direct consequences for developing cardiovascular disease and diabetes. Drug use and addiction have also quadrupled since 1990. Sixty percent of an estimated 400,000 IDUs inject heroin, making this group particularly vulnerable to HIV infection. It should be noted that high drug use and addiction rates are occurring in a country that has a predominantly young population, which is already at higher risk for HIV transmission (particularly in light of high-risk sexual behavior and a general lack of knowledge about HIV transmission).

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6 Information based on the ranking of risks for ECA Sub-region B, which includes Azerbaijan. WHO 2002.
In addition to lifestyle determinants described above, there are socioeconomic and environmental determinants, including externally imposed stress that also affect health outcomes. Since the early 1990s, the population of Azerbaijan has undergone significant stress as a result of the war with Armenia, economic transition, dramatic population displacement and high rates of poverty, all of which have adversely impacted health outcomes. This can be seen in the incidence of mental illness, which rose sharply in the early 1990s and again in 2000. The incidence of disability from mental illness is twice that from TB and more than twice that from cancer. Men are more than twice as likely to be affected by mental illness than women.

Poverty adversely impacts health outcomes in Azerbaijan. Poor individuals tend to be less healthy because they do not have the necessary financial resources to pay for health services (informal payments) and drugs. They also have less access to good nutrition (leading to malnutrition and micronutrient deficiencies) and safe drinking water, and tend to live in more unsanitary and overcrowded conditions, where infectious diseases generally thrive more aggressively. For example, the MIC Survey found that IMR among poor households was three times higher than in rich households, most likely because antenatal and perinatal care was not available to these households. The percentage of low-birth-weight babies in poor households is also more than twice that in rich households, as is the prevalence of underweight and stunted children.

The MIC Survey also found that iodized salt is used in 41.3 percent of households; the figure for poor households is 33.4 percent and in some areas, such as Nakhchivan, 10.6 percent. Another important difference between poor and rich households is seen in the prevalence and treatment of children with diarrhea, a major cause of death among children due to dehydration. Three times as many children in poor households suffer from diarrhea, with 60 percent more in rural areas than in urban; the percentage of children who received no treatment for diarrhea was twice as high for poor households than for rich. This outcome is compounded by the fact that only 75 percent of the population has access to safe drinking water, a figure comprised of 52 percent of poor households and 57.5 percent of rural households.

The examples provided above indicate that health indicators of poor households correlate well with those of rural households. For example, whereas 5 percent of urban households were considered poor, the corresponding figure for rural households was 40 percent. Table 2.8 below demonstrates differences in health outcomes of children by level of poverty, urban/rural variations and the mother’s level of education. As the table shows, mortality rates are twice as high for infants and children whose mothers have only a secondary or high-school diploma. The same is true for low birth-weight babies and underweight children.

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The healthcare system is another determinant of health outcomes. The current health system is severely under-funded, which impacts both access and quality. With respect to access, public health expenditures declined from roughly 3 percent of GDP in 1991 to an estimated 0.9 percent of GDP in 2004. There was a corresponding increase in formal and informal out-of-pocket payments to providers. Even as early as 1995, out-of-pocket expenditures amounted to 80 percent of total healthcare spending. In fact, nearly all healthcare services are paid for by the population in Azerbaijan, putting poor households at greater risk for many health problems.

The 2001 Household Budget Survey found that one in three households could not use health services when needed because they were too expensive. Since 50 percent of the population is deemed poor, this means that half of the population is likely to postpone seeking care and will definitely avoid seeking preventive care. This assumption is supported by the fact that 25 percent of all births take place at home (36 percent in rural areas) due to patients’ inability to pay hospital and provider fees. This situation has immediate consequences for health outcomes, since home deliveries pose a greater risk of post-partum complications and mortality, particularly when not managed by a skilled attendant. Some abortions are also performed outside medical clinics, generally also due to lack of funds, leading in some cases to severe complications and even death.

**Despite the fact that many patients are required to pay for services, healthcare is of poor quality, with poor physical infrastructure, scarce or obsolete technology and inadequate staff skills.** Good-quality primary care and preventive services are not widely available. MOH does not have a unit that designs and implements community-based health education and promotion programs. Evidence-based medicine has, moreover, not yet been incorporated into the medical curriculum, with many physicians continuing to rely on training materials and pedagogical tools from the Soviet period. For instance, TB case detection and treatment is still largely based on chest x-rays and admission to TB hospitals, respectively.

Another area impacted by the lack of evidence-based medicine is reproductive health care. For example, antenatal and postnatal care is provided only to 70 percent and 25

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**Table 2.8. Comparisons of IMR, U5MR and Malnutrition by Urban/Rural, Poor/Rich and Educated/Poorly Educated Households (% of total)**

<table>
<thead>
<tr>
<th>Mother's Education</th>
<th>Infant mortality rate</th>
<th>Under-5 mortality rate</th>
<th>Low birth-weight</th>
<th>Under-weight</th>
<th>Severely under-weight</th>
<th>Stunted</th>
<th>Severely stunted</th>
<th>Wasted</th>
<th>Severely Wasted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban</td>
<td>63</td>
<td>79</td>
<td>8.3</td>
<td>14.9</td>
<td>3.9</td>
<td>17.2</td>
<td>6.8</td>
<td>8.0</td>
<td>1.7</td>
</tr>
<tr>
<td>Rural</td>
<td>92</td>
<td>122</td>
<td>10.4</td>
<td>18.5</td>
<td>4.6</td>
<td>21.7</td>
<td>7.7</td>
<td>7.9</td>
<td>2.1</td>
</tr>
<tr>
<td>Rich</td>
<td>35</td>
<td>41</td>
<td>5.0</td>
<td>8.8</td>
<td>2.0</td>
<td>13.2</td>
<td>3.9</td>
<td>5.4</td>
<td>1.0</td>
</tr>
<tr>
<td>Poor</td>
<td>102</td>
<td>133</td>
<td>12.6</td>
<td>21.2</td>
<td>5.3</td>
<td>26.5</td>
<td>8.6</td>
<td>7.3</td>
<td>1.8</td>
</tr>
<tr>
<td>Secondary or less</td>
<td>92</td>
<td>118</td>
<td>11.9</td>
<td>23.2</td>
<td>6.4</td>
<td>24.5</td>
<td>8.7</td>
<td>10.1</td>
<td>3.0</td>
</tr>
<tr>
<td>High school</td>
<td>84</td>
<td>108</td>
<td>9.8</td>
<td>18.0</td>
<td>4.3</td>
<td>20.8</td>
<td>7.6</td>
<td>7.3</td>
<td>1.5</td>
</tr>
<tr>
<td>College/vocational</td>
<td>65</td>
<td>80</td>
<td>8.1</td>
<td>11.6</td>
<td>3.3</td>
<td>16.5</td>
<td>5.5</td>
<td>7.7</td>
<td>1.9</td>
</tr>
<tr>
<td>University</td>
<td>42</td>
<td>50</td>
<td>6.5</td>
<td>10.4</td>
<td>2.3</td>
<td>12.1</td>
<td>6.4</td>
<td>8.1</td>
<td>2.3</td>
</tr>
</tbody>
</table>

*Source: MIC Survey.*
percent of women, respectively. Also, only 57 percent of all women report having been examined by a gynecologist once in their lifetimes. And only an astounding 2 percent of women have ever had a pap smear for detection of cervical cancer. High rates of post-abortion (27 percent) and post-partum (38 percent) complications also point to low standards of care in public facilities and, most likely, poor hygienic conditions. High abortion rates are also a result of lack of awareness of modern methods of contraception. In surveys, 75 percent of women in Azerbaijan reported wanting more information about these methods. Only 12 percent reportedly used modern contraception, one of the lowest figures in the region.

2.3.3 Health and Healthcare Needs

The health needs of the population are numerous, especially in relation to lifestyle choices. For example, some of the main risks behind non-communicable diseases, such as smoking, poor diet and alcohol consumption, need to be addressed at the primary-care level, through health promotion efforts. Likewise, maternal and child health must be approached in a comprehensive way that encompasses quality preventive reproductive health services, improved information, and education of women on modern methods of contraception and nutrition. Similarly, communicable diseases such as TB, diarrhea and other diseases can most effectively be handled on an ambulatory basis. In summary, primary healthcare needs to be strengthened (including upgrading of the workforce), particularly in rural areas, and should play a central role in improving health outcomes.

A number of challenges, however, go beyond the reach of the MOH alone and require multisectoral initiatives:

- Public services, such as water supply and sanitation—especially outside Baku and in areas where IDPs reside—need to be improved in order to reduce the burden of waterborne diseases.

- Collaboration with the Ministry of Justice and Ministry of Interior to prevent and reduce harm associated with intravenous drug use, both in society at large and in prisons. Collaborative efforts should include prevention and control of TB and HIV/AIDS in prisons and other detention and correctional facilities. Similar efforts should be made to reduce the very high incidence of traffic accidents by reducing drunk driving (i.e., through education and law enforcement initiatives, use of seatbelts, improved road signalization, etc.).

- The impact of the environment on health is another area that requires further attention. Studies are needed to assess the health impact of exposure to health hazards caused by the dilapidation of defunct industries (e.g., metallurgy, dye production, etc.). Azerbaijan has significant oil and other mineral deposits, as well as relatively extensive agriculture, including cotton production for export. Pollution from heavy industry, mineral extraction and agriculture is a long-standing and persistent problem.
• Closer collaboration with the food industry, Ministry of Agriculture, and other government agencies is needed to establish a nutrition strategy to preempt the rise of diet-related chronic diseases and to prevent and cure micronutrient, iron and iodine deficiencies among the population at higher risk (i.e., rural residents, women and children). These strategies will decrease anemia in women, as well as mental retardation and arrested cognitive development in children with iron deficiencies.

2.4 Healthcare System

2.4.1 Health System Stewardship

Stewardship in healthcare refers to sound principles of health system governance, a responsibility usually assigned to, or assumed by, the Ministry of Health. It is considered a core function in healthcare, along with financing, resource generation and service delivery. Assessment of the core stewardship function in Azerbaijan includes four dimensions: (i) the extent to which MOH provides strategic direction for policymaking in health and healthcare; (ii) the effectiveness of MOH in setting and enforcing the legal and regulatory framework, as well as establishing mechanisms and tools for policy implementation; (iii) the ability of MOH to ensure a coherent institutional and organizational culture that supports the attainment of policy objectives; and (iv) the capacity of MOH to generate intelligence for the monitoring and evaluation of policy implementation.

Policymaking in healthcare is an integral part of stewardship and is supported by prevailing social values. Accordingly, in a fundamentally egalitarian society, health and access to healthcare are perceived as fundamental rights. Healthcare policies are expected to be equitable—driven by a conscious effort to reduce inequities in access, especially those of a financial nature. Azerbaijan is, or at least aspires to be, an egalitarian society; rights to health and healthcare are enshrined in the 1995 Constitution (Article 41) and detailed in the Law on Public Healthcare.

Despite these laudable goals, no official document exists (e.g., a white paper or health policy document) that critically assesses the extent to which the aim of equitable access to care has been achieved in the country. Such a document would identify outstanding issues that need to be addressed (e.g., improvements to access and health outcomes); policy prescriptions; the main elements of an implementation plan; who is going to implement these policies, and how, when and where. Nor is there a functioning government unit that could be tasked with leading or steering the policy design process, which requires a good understanding of context, dialogue with various stakeholders, and development of a broad consensus on policy content and implementation.
Issues

Any description of the macro-context in Azerbaijan, as in all FSU countries, must begin with a reference to the triple challenges of transition: the socioeconomic and political consequences of the breakup of the FSU, the switch from a state-planned to market-driven economic model, and ongoing political transition. Azerbaijan's own transition has proven all the more challenging due to armed conflict with Armenia, which resulted in the occupation of about 20 percent of its territory and the uprooting and migration of about one million people (including refugees and internally displaced people).

The social, political and economic costs of the conflict have been considerable: major economic decline, hyperinflation and political instability. Indeed, it is remarkable how quickly the country recovered from the damage of war in macroeconomic terms, with a resumption of growth, reduced inflation and improved budgetary discipline. However, the socioeconomic costs of the transition and war have proven enduring, seen in widespread and increased poverty, growing inequalities in income and access to social services, reduced purchasing power of people with regular incomes, decreased social spending and reduced state subsidies.

The lingering social and political consequences of the failure to achieve peace and recover occupied land in the post-conflict period continue to inhibit progress towards greater democracy and pluralism. Azerbaijan could be considered a late reformer at best, and a reluctant one at that. In brief, power is still concentrated in the hands of a few. There is limited oversight of the executive branch of the government by legislative and judicial entities. And, despite the fact that many political parties vie for power and presidential and local elections were recently held, representative democracy with a true opposition has yet to flourish in Azerbaijan. Participation in policy and political processes by professional associations and civil society remains rudimentary and ineffectual, with a consequent lack of transparency, limited media freedom and endemic corruption.11

All these contextual factors have a bearing on the health sector (see Box 2.1). One obvious challenge is the lack of a culture or process of policy development that involves various stakeholders.

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11 According to Transparency International, Azerbaijan in 2005 scored only 1.9 out of a maximum score of 10 on the Corruption Perception Index and ranked 140th out of 146 on a listing of most corrupt countries, with 146th country being the most corrupt. For purposes of comparison, Georgia, Russia and Turkey scored 2.0, 2.8 and 3.2, respectively, giving them respective rankings of 133, 90 and 77. For details, see the Global Corruption Report 2005 at http://www.globalcorruptionreport.org.
Box 2.1. Macro-environmental and sector-specific factors with consequences for effective healthcare stewardship

- Limited degree of pluralism and transparency in policy- and decision-making in the country in general
- Azerbaijan’s transition towards a market economy
- Macroeconomic management in the context of an expected rise in oil revenues
- Government commitment to the State Program for Poverty Reduction and Economic Development (SPPRED)
- Proposed reform of public administration and the civil service
- Lack of tradition of policy-based reform (in the Soviet system, most key decisions were made in Moscow and planning was normative in nature)
- A prevailing bureaucratic system of governance in which the involvement of healthcare professionals and consumers is visibly absent

Despite the economic transition towards a market economy and ever-increasing private sector involvement, a bureaucratic proclivity for top-down normative planning and budgeting continues to impact the health sector. Last but not least, purported corruption in the health sector compromises a level playing field, undermines system authority and public confidence, and seriously constrains access to care, especially by the poor, underprivileged and those without “connections.”

Pluralistic healthcare systems are characterized by four main stakeholders, each of which represents a specific function (see Figure 2.2): the population and/or “consumers” are at the receiving end of health services, for which they pay either directly out-of-pocket or indirectly through taxes and contributions. Providers of care represent the “supply” side of the equation and charge patients directly or through a third-party payer. The latter can be a public or private entity (either for- or not-for-profit) that collects premiums from enrollees or taxation from the population and, in turn, pays service providers according to various modes of payment and/or reimbursement.

In a truly pluralistic system, the state, the fourth stakeholder, is often confined to making policies, legislating and regulating transactions among the three other parties and collecting information to ensure that each party respects the rules and regulations (i.e., payment compliance, quality of services, etc.). This role in turn requires the active involvement of all stakeholders in system governance and management.

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12 According to the results of Transparency International’s “Country Corruption Assessment: Public Opinion Survey in Azerbaijan, 2004,” public confidence in the MOH is about 30 percent, on par with confidence in the road police, tax and customs agencies, and the Privatization Committee—the so-called “fourth group” that enjoys the least amount of public confidence, less than the Cabinet of Ministers in general and other ministries (MOE, MOI, MOSP, etc.) in particular. For details, see http://www.transparency-az.org.
Governance of the healthcare system in Azerbaijan is not pluralistic. Decisionmaking in policy matters is highly centralized. Accountability for technical, administrative and financial matters is fragmented, leading to conflicts of interest, divided loyalties and inefficient resource allocation. The population, or consumers, have very little involvement in system governance or policymaking. The role of providers in system governance is also very limited, to an extent almost unheard of in any democratic system. The state, mainly the MOH, plays a dominant role in system governance, largely because there is no separate entity, or third-party payer, in Azerbaijan. On the other hand, MOF allocates financial resources for healthcare to the districts. Although the various layers of authority established subsequent to the dissolution of the Soviet Union were intended to improve system governance, they instead increased its fragmentation.

Healthcare Organization

Under the current stewardship model, the Ministry of Health continues to “steer” and “row,” albeit with very little clout over major policy decisions, which theoretically fall within the competence of the President, the Cabinet of Ministers and its advisory units. Equally important, MOH has very limited capacity to make policies, or to plan or regulate the healthcare system. It does not have a unit tasked with policymaking, nor does it have departments for monitoring and evaluation, human resources, or long-term planning (a responsibility that has been partly assumed by the MOD).

On the other hand, MOH is in charge of proposing a plan for future investments in health facilities; regulates the provision of private healthcare and the pharmaceuticals subsector; and contributes to the drafting of proposed health-related legislation. The Ministry of Health is also asked to develop norms (e.g., number and mix of staff, bed requirements, etc.) for MOF to use in budget allocation, as well as medical standards to control and assure the quality of healthcare. In addition, MOH is in charge of and directly funds
public health programs, such as those concerning HIV/AIDS, tuberculosis and malaria, even though these programs receive co-financing and technical assistance from external donors.

Finally, all personnel in central and district facilities are technically accountable to MOH, which controls staff appointments, including that of chief doctors (a process usually conducted in consultation with district governors). MOH also determines the staff mix of facilities, salary scales, grading issues and other personnel policy matters. In addition, it specifies the nature of employment contracts, leaving institutions at the local level very little discretion to adapt these contracts to local needs and conditions. Finally, it is noteworthy that the Nakhchivan Autonomous Republic (NAR) has its own “Ministry of Health” within MOH, which is in charge of the administration of NAR health facilities. Baku also has a separate line of authority within MOH, which is accountable to its own health division.

**Recommendations**

*The Ministry of Health should assume responsibility for health policymaking in Azerbaijan. This step would require a careful redefinition of its vision, mission, mandate, roles and responsibilities.* A senior-level intergovernmental working group should be formed, preferably by decree of the President, to prepare a mission statement and a new organizational structure for MOH in line with these new functions and responsibilities. The new structure should, at the very least, include separate units for health policy; research, planning and coordination; and health promotion. It is expected that the statement will move the MOH away from “rowing,” that is, being mainly in charge of service delivery, towards “steering,” that is, having a greater role in policymaking, regulation, quality assurance, control and intelligence gathering. In all likelihood, policy support and technical assistance will be needed from international partners.

The next step would require establishing a mechanism to produce a White Paper that explicitly outlines Azerbaijan’s health and healthcare policy and reform agenda and proposes a road map for its implementation. (See Chapters 4 and 5 for a proposed agenda and implementation options.)

**2.4.2 Healthcare Financing**

*Healthcare financing in Azerbaijan still largely resembles, at least officially, the former Soviet model of full public financing, inherited at independence in 1991. However, the healthcare system has grown increasingly dependent on extra-budgetary funds derived from formal user charges and/or informal payments by patients.* Most patients now pay for all types of health services, from simple consultations to sophisticated interventions. Drug expenditures in particular account for an increasing share of household expenditures on health care.

The 1997 law, “About the Protection of Health of the Population,” states that the health system shall be financed from the state budget, mandatory medical insurance, voluntary
allocations, donations by legal and physical persons and other sources not explicitly prohibited by the legislation. Despite the fact that mandatory medical insurance is mentioned in the legislation and a law on a national health insurance system was passed in 1999, this system has not yet been introduced. This leaves three types of pooled resources to finance the healthcare system: (i) public resources financed through taxation and collected by the Ministry of Taxes; (ii) voluntary private health insurance contributions collected by private insurers; and (iii) loans and grants from foreign governments and multilateral agencies.

Collection of funds

Public resources financed by general taxation account for only a small proportion of total health expenditures. The ratio of public to total health resources depends on the estimated level of out-of-pocket (OOP) expenditures. The Azerbaijan health expenditure study shows that only 20 to 25 percent of total expenditures were financed by public monies in 2002 (see Table 2.9).

Voluntary health insurance contributions represent less than 5 percent of total health expenditures. Although voluntary health insurance (VHI) was first introduced in Azerbaijan around 1995, the market remains small. Approximately 20,000 people (less than 0.2 percent of the total population) are currently covered by VHI, which represents only an estimated 5 percent of total health expenditures. It is assumed that the amount of private services financed through VHI is even smaller. This type of insurance is currently very expensive for the average Azeri and usually covers expatriates or people who work for large companies, in particular, those who work in the oil industry.

Table 2.9. Composition of Total Health Expenditures, 2002

<table>
<thead>
<tr>
<th>Type of expenditure</th>
<th>AZM (Billions)</th>
<th>%</th>
<th>Source/Assumption</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Government Expenditure</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>District health sector expenditure</td>
<td>179.5</td>
<td>14.9</td>
<td>Form 50 calculation</td>
</tr>
<tr>
<td>MOH</td>
<td>50.0</td>
<td>4.2</td>
<td>Latest figure from MOH interview</td>
</tr>
<tr>
<td>Rail, Police, Oil (250,000 pop.)</td>
<td>10.0</td>
<td>0.8</td>
<td>Assumed to be AZM 40,000 per capita per year</td>
</tr>
<tr>
<td><strong>Total Government Expenditure</strong></td>
<td><strong>239.5</strong></td>
<td><strong>19.9</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Private Expenditure</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>User charges</td>
<td>13.7</td>
<td>1.1</td>
<td>Form 50 calculations</td>
</tr>
<tr>
<td>Informal payments for services</td>
<td>270</td>
<td>22.4</td>
<td>Average informal payment 3 times the average government salary</td>
</tr>
<tr>
<td>Private health services</td>
<td>60.0</td>
<td>5.0</td>
<td>SSC – 25% of government expenditure</td>
</tr>
<tr>
<td>Drug direct payments</td>
<td>600.0</td>
<td>49.8</td>
<td>MOH estimate: US$130 million per year</td>
</tr>
<tr>
<td><strong>Total Private Expenditure</strong></td>
<td><strong>943.7</strong></td>
<td><strong>78.4</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Expenditure by aid agencies</strong></td>
<td><strong>21.1</strong></td>
<td><strong>1.8</strong></td>
<td>8.8% of government expenditure (WHO estimate)</td>
</tr>
<tr>
<td><strong>Total Health Expenditure</strong></td>
<td><strong>1,204.3</strong></td>
<td><strong>100.0</strong></td>
<td></td>
</tr>
</tbody>
</table>

Informal payments, which in many cases are the result of the regulatory regime, are widespread. The low level of public expenditures devoted to health has increased the private cost of healthcare services over time. This trend has been exacerbated by the regulatory regime, which promulgates troublesome norms (e.g., for treatment by specialized doctors) and decrees (such as one that forbids family members from visiting hospitals, creating an incentive to levy informal fees for each family visit). Informal payments can take two forms: (i) payments made outside of official channels directly to healthcare workers in government health facilities, and (ii) the purchase or provision of inputs (e.g., drugs and medical supplies) needed for care in government health facilities, inputs that are supposed to be included in the services to which the population is entitled.

Estimates of OOP healthcare payments based on official data vary between AZM 707 billion and 934 billion (approximately US$150–190 million) in 2002. OOP healthcare payments reported in household surveys likely include both formal and informal charges. Based the 2002 Household Budget Survey data, average per capita OOP spending on healthcare per month was AZM 6,970 (around US$1.40). This is approximately three times what the government spends on healthcare per capita per year. On an annual basis, survey estimates suggest that direct OOP accounted for AZM 707 billion in 2002, or 75 percent of total health expenditures. This figure is lower than estimated in the 2004 health expenditure study; the highest figure was AZM 934 billion, which would increase the share of OOP to 78 percent of total health expenditures (see Table 2.9).

Out-of-pocket expenditures can exceed official figures by a factor of five. According to a recent household survey undertaken within the framework of the Health Reform Project, OOP expenditures appear to be much higher than those reported in national household budget surveys, with annual per capita OOP expenditure reaching AZM 479,446 (around US$96), or roughly five times the previous official figures (AZM 83,600 for 2002 and AZM 88,908 for 2003). These figures were expected, given that household health expenditure surveys tend to show higher expenditures than general consumption surveys (where health expenditure represents only part of the entire consumption pattern). This finding has two important policy implications. First, taking into account the survey’s estimate of OOP health expenditure, total health expenditures are rising sharply and second, the share of OOP spending is also increasing.

More informal payments are made to health personnel than to health facilities. In addition, more of these payments are made in cash than in kind, and more are made for hospitalization than for primary or preventive care. Recent survey results distinguish between: (i) cash payments for items other than the provider bill (i.e., “donations”); (ii) payments in cash to health personnel other than the provider; (iii) payments in kind (valuables or gifts) to health personnel; and (iv) payments for goods (drugs and medical supplies) and procedures (lab tests) procured outside the government healthcare facility. Regarding the latter, the survey did not provide information on the extent to which inputs purchased outside a state healthcare provider were expected to be included in services to which the population is entitled free of charge.

Altogether, informal payments represented 31.4 percent of all OOP payments (see Table 2.10) in 2004. The majority (63 percent) of these payments were made in the form of
cash payments to health personnel. Payments out of gratitude (in the form of gifts) were small, suggesting that informal payments are not made willingly by patients to show satisfaction with services provided. Informal payments were, moreover, higher for hospitalization than for outpatient or preventive services. In the case of hospitalization, payments for medicines or procedures (e.g., lab exams, diagnostics, medicine, etc.) procured outside the provider represented 44 percent of total OOP payments. Expenditures on drugs obtained outside the provider represented the second-highest category of OOP spending (32 percent of total payments), indicating an insufficient stock of drugs in hospitals.

Table 2.10. Formal and Informal Payments by Type of Service, 2004
(% of total payment)

<table>
<thead>
<tr>
<th>Type of service</th>
<th>Hospitalization</th>
<th>Outpatient</th>
<th>Preventive</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formal payments</td>
<td>15.8</td>
<td>64.8</td>
<td>78.1</td>
<td>58.1</td>
</tr>
<tr>
<td>Informal payments</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Payments to personnel outside official channels</td>
<td>40.2</td>
<td>35.2</td>
<td>21.9</td>
<td>31.4</td>
</tr>
<tr>
<td>Payments for goods/procedures outside the provider</td>
<td>43.9</td>
<td>1.1</td>
<td>-</td>
<td>5.4</td>
</tr>
</tbody>
</table>


Rich people make larger and more frequent OOP payments than do poor people, but OOP expenditures (mostly for hospitalization and drugs) represent a higher share of the income of poor households (see Figures 2.3 and 2.4). It is estimated that about 28 percent of the population did not seek treatment when ill in 2001, primarily because health services were too expensive. The figure rose to 39 percent among poorest households. This finding was also supported by a 2004 survey on OOP health expenditures. While decreased utilization of health care services due to high OOP payments may not have an impact on levels of morbidity and mortality in the short term, the impact may grow exponentially over time.

Figure 2.3. Monthly OOP per Capita Health Expenditure by Income Quintile, 2002


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The low level of public funding of the healthcare system in Azerbaijan is exacerbated by inefficient budget management. In addition to low public spending, there are discrepancies between the planned and executed national budget for healthcare (see Figure 2.5), with all types of expenditure, even salaries, appearing to be lower in the executed budget. Consultations with MOH officials could not provide a clear explanation of these discrepancies. One plausible explanation could be problems in the MOF’s release of the budgeted amount in the first place. A second explanation could be that personnel expenditures are not calculated accurately during the budget preparation process.

Pooling of funds

Health-related revenues in Azerbaijan are pooled by multiple agencies, both at the central and district level. While the collection of public revenues in Azerbaijan is performed by a single agency, the Ministry of Taxes, the accumulated funds are then divided among a number of agencies. The two most important agencies are the MOH.
and district administrations. The healthcare budget for the MOH and district administrations is established by the MOF, according to fiscal priorities set by the Cabinet of Ministers (CoM). The annual line-item budget allocation is based on expenditures reported in the previous year. Forecasted budgets are reviewed by the MOF and CoM, then approved by Parliament. Central funding is, for the most part, used to cover hospitals, maternity homes, research centers, sanitary and epidemiological stations and training. Local budgets are largely used to cover district hospitals, ambulatory and PHC facilities, among others facilities. Approximately 75 percent of the public healthcare budget is spent on the management of facilities run by districts and large cities, while the remainder covers facilities run by MOH.

**Parallel health systems exist for the State Railways Department, the Ministry of the Interior, the Ministry of Defense and the Government Oil Company.** The MOF allocates healthcare resources directly to these entities. With the possible exception of the military, the budget of which is unknown, entities that run parallel health care systems are generally small; together, they represent perhaps 1 percent of total public health expenditures.

**Payment of public hospitals**

_Hospitals obtain most of their funding from the budgetary allocations of MOF, paid through MOH or district administrations, according to line-item budgets._ These allocations are intended to cover major cost items, namely, staff salaries, pharmaceuticals, equipment, maintenance and infrastructure. In addition, hospitals also receive direct payments from patients by imposing formal charges for health services. Income from user fees is mainly used to supplement salaries and, on the rare occasion when there is a surplus, to pay for drugs and/or improvements to a facility. A small number of the most prestigious hospitals in Baku receive payments from private insurance companies.

**Input-based, normative line-item budgeting is a major impediment to efficient resource allocation by type of healthcare, hinders performance and productivity, and reduces access to and quality of inpatient care services.** The use of line-item budgets as a payment mechanism for public hospitals poses a number of problems. Line-item budgeting assumes that individuals will seek care in facilities to which resources have been allocated and consequently receive services. However, there is no obvious incentive on the part of a facility to provide these services, given that the budget is allocated ex ante and not predicated on service needs or utilization. Further, in a system where public resources are barely sufficient to pay salaries, utilities and a small fraction of supplies, the first priority of a health institution is to ensure payment of its medical personnel, then to finance the provision of services on a residual basis.
Payment of medical personnel

The great majority of medical staff in Azerbaijan are salaried state workers. The salary of these medical professionals is among the lowest in the country. In 2003, the average monthly wage of medical personnel was just AZM108,900 (about US$22), only 28 percent of the national average. In an effort to improve the situation, the salaries of state-funded health sector employees were increased by 50 percent in June 2003. The measure did not, however, appear to bring their salaries into line with the national average. As a result, medical professionals continue to have a strong incentive to charge patients both formally and informally.

The imposition of formal and informal charges is accepted as a coping mechanism not only by medical professionals, but also by patients, who understand that official salaries are only a part of fair remuneration. State salaries, however small, formally link healthcare staff and the institutions where they work. Working as an employee of these institutions, however, currently gives staff a quasi-license to impose informal charges on patients. This situation leads to rent-seeking activities throughout the hierarchy, with individuals appointed to senior positions often having to make significant payments (i.e., payments representing several years' pay) to even more senior executives.

Fee-for-service is the primary de facto payment mechanism of public healthcare providers. Given the high level of informal payments as a percentage of total health expenditures, one can argue that the most common provider payment mechanism in Azerbaijan is fee-for-service payments from patients directly to medical professionals.

Private healthcare facilities

Fee-for-service is also the primary payment mechanism of private healthcare providers. Private medical facilities were introduced in Azerbaijan in 1999 with the passage of the Law on Private Medicine. The objective of this law was to formalize private delivery of healthcare and subsequently reduce the state’s role in the sector. The law facilitated the establishment of private healthcare facilities and stipulated their operating standards. MOH is the sole licensing authority for such private facilities. To date, approximately 300 licenses have been awarded to private-sector entrepreneurs involved in dental clinics, diagnostic laboratories and outpatient clinics.

A number of services are provided free of charge in Azerbaijan, while copayments apply to others. Public funds are intended to pay for services provided free of charge, as well as services for which official user charges were introduced in 1998. Certain groups of individuals are exempt from official charges; the government is responsible for paying all healthcare services provided to these groups. An actual copayment has two components: a payment to the person providing the service (which supplements his or her salary) and a payment to the institution (which may use the money to supplement salaries and/or purchase drugs). The exceptionally low level of user fees as a percentage of total health expenditures in the country (1.1 percent in 2002), as reported by official figures, suggests serious underreporting of these fees.
Poverty is not a criterion for exemption from formal healthcare payments. As already mentioned, according to the law, healthcare in Azerbaijan should be provided free at the point of use, save for certain services for which a fee is designated. A number of groups are exempt from these charges but, with the exception of IDPs and refugees, poverty is not a criterion for exemption from formal payments. However, it is believed that anyone who cannot pay is exempt from formal user charges, although they may still be required to pay some informal fee (possibly at a "reduced" level).

Key Issues

Analysis of healthcare financing in Azerbaijan has identified the following key issues: (i) a low level of public spending on health; (ii) fragmentation of pooled revenues; (iii) allocation of resources according to historical budgets that favor large facilities with a high number of beds and personnel; (iv) an absence of links between allocation of funds and outcomes achieved; (v) an increasing role of informal payments in financing the health sector and their adverse impact on utilization of healthcare services, especially by the poor; (vi) growing inequities in regional allocation of healthcare funds; (vii) under-execution of planned health expenditures; and (viii) a disproportionate share of resources devoted to inpatient care and salaries.

A disproportionate share of public resources is devoted to hospital care and salaries. These levels of expenditure are high compared to those of other FSU countries (see Figure 2.6). If Azerbaijan seeks to move towards a family-based PHC model, where individuals can in most cases be treated by a general practitioner, a shift of resources from inpatient to outpatient primary care is advisable. Although a high share of resources devoted to hospital care may not be inefficient per se, the very low utilization rates of hospital facilities in Azerbaijan suggests that these resources are being spent on underutilized facilities. Similarly, although total healthcare staffing is not excessive compared to other countries, the fact that hospital facilities are empty indicates that hospital personnel are also underutilized.

High hospital spending crowds out spending on public health and primary care. The PHC facilities currently tend to be underfinanced. The lack of a sustainable system to finance these facilities impacts the effectiveness of PHC providers and the availability of resources, such as pharmaceuticals and medical supplies, essential to their operation. In general, PHC funds are only sufficient to cover salaries.
Figure 2.6. Inpatient Expenditures as % of Total Health Expenditures in Selected Countries, Latest Available Year

<table>
<thead>
<tr>
<th>Country</th>
<th>Year</th>
<th>Expenditure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kyrgyz Republic (2000)</td>
<td></td>
<td>67</td>
</tr>
<tr>
<td>Azerbaijan (2000)</td>
<td></td>
<td>61.8</td>
</tr>
<tr>
<td>Latvia (2003)</td>
<td></td>
<td>60.3</td>
</tr>
<tr>
<td>Kazakhstan (2000)</td>
<td></td>
<td>53.6</td>
</tr>
<tr>
<td>Finland (2002)</td>
<td></td>
<td>39.2</td>
</tr>
<tr>
<td>Estonia (2002)</td>
<td></td>
<td>30.5</td>
</tr>
<tr>
<td>Czech Republic (2003)</td>
<td></td>
<td>36.2</td>
</tr>
<tr>
<td>Hungary (2002)</td>
<td></td>
<td>29</td>
</tr>
<tr>
<td>Turkey (2000)</td>
<td></td>
<td>19.9</td>
</tr>
</tbody>
</table>


Spending on wages negatively impacts spending on drugs and medical equipment. Wage costs also negatively impact the cost-effectiveness of service delivery, which is determined not only by overall spending, but by the mix of spending (which affects the availability of drugs and medical equipment). Wages are essentially a fixed cost that must be financed regardless of the amount of medical supplies or other health production inputs. As a result, only about 14 percent of the state health budget is spent on medicines and medical supplies, indicating that most health facilities lack adequate supplies of medicines and that patients themselves must pay for the medicines they need.

Recommendations

The recommendations presented below focus on

- increasing the budget allocation for health, in particular for PHC services
- creating larger pools of health revenues
- allowing for a provider-purchaser split and selective contracting
- promoting the allocation of healthcare funds based on the health needs of the population
- using performance-related payments for all health providers
- ensuring access to health services for the poor and basic services for all, and
- rationalization of the current provider network.
A consensus on these recommendations is shared by several stakeholders active in the health sector in Azerbaijan. Although certain progress has been made towards their implementation, further efforts are needed.\textsuperscript{13}

\textit{There is a clear need to increase governmental spending on the health sector.} The low level of public resources presently devoted to the health sector has had a negative impact on access to, and utilization of, services, and needs to be increased. The collapse of public health spending over the last ten years has also had a negative effect on the equity and quality of health services. Without further government expenditure on the health sector, the distribution of health service utilization across income groups will become even more skewed towards the better off.

\textit{Public resources should be allocated by linking the budget with the healthcare needs of the population.} Health funding could be allocated on a per capita basis, with adjustments made for patient characteristics, including demographic, epidemiologic, socioeconomic and other relevant factors. Further refinements could include adjustments for the cost of delivering care to more remote areas, with other important risk adjustments added over time.

\textit{The creation of a single pooling entity could result in better planning for the health sector and allow for selective contracting.} A single entity, either within the MOH or a separate entity, could lead to better planning for the health sector. Given that MOH and district authorities are presently the owners of healthcare facilities, the introduction of a separate entity would allow the purchasing and service delivery functions to be separated, thus increasing the probability that selective contracting would occur.

\textit{An important way to improve the budget process is to ensure that historical budget and activity data are accurate.} This data is important in formulating health plans and budgets for future years. Activity data and budget information also needs to be more comprehensive, so that planners and finance staff can gain a more accurate picture of the overall health sector. This means incorporating data from all MOH operations. This

\textsuperscript{13} In response to the consensus on these recommendations, the government has already announced some important initiatives. In particular, the reform strategy set out in the State Program on Poverty Reduction and Economic Development (2003) envisages an increase in expenditure on the health sector, including wage increases. Health expenditures are projected to increase slightly, to 1.2 percent of GDP by 2005. From a low base of only 3.8 percent of total expenditure in 2001, expenditures on the health sector are projected to increase to 6 percent by 2005. Allocations for personal emoluments will be sharply increased, to 64 percent of a much larger overall allocation by 2005. The budget for salaries and wages will increase by about 32 percent in each of the next three years. The wage increase is justified by some downsizing in the number of employees. At the same time, a system of flexible budgeting is planned to ensure that rationalization efforts are not penalized by subsequent reductions in budget allocations. The government also recognizes that health expenditures need to be refocused on providing improved primary health care. The system of targeted exemption for paid medical services will accordingly be reviewed to improve the targeting of the poor. The government has also committed itself to gradually assume responsibility for financing the expanded immunization program and plans to increase financing for other important programs, such as those that address malaria and tuberculosis reduction, child and maternal health and healthy lifestyles.
process will require significant time and has already begun with the reporting of district administrations to MOH.

Improvements in technical efficiency, cost containment and quality could be achieved through performance-related payments to primary care providers and hospitals. Primary care facilities could receive payment on a per capita basis, with flexibility for generating savings that could be reallocated for pharmaceuticals and equipment purchases. Such an approach could improve quality through improved levels of equipment and supplies, as well as national training programs for physicians and nurses. This strategy would need to be combined with a more systematic approach to monitoring user charges and wages in the public healthcare system.

Performance-related payments should also be used for hospitals. Gains in efficiency could be made by replacing current budgeting with payment mechanisms at the hospital level that reward higher throughput while motivating a decrease in cost per case. The experience of other countries shows that performance-based payments are best applied within a global budget. Decreases in both staffing levels and the average length of stay could reduce the cost per case and result in overall savings within such a budget.

The package of services financed through general tax revenues should be revised so that public resources cover the cost of provision of these services. The issue of the breadth and depth of the benefit package merits particular attention. At present, there is a package of services that is fully covered by public resources in Azerbaijan, while other services are only partially covered. However, high OOP payments for all types of services suggest that the real cost of providing these services differs from the public funds allocated for them. The gap between real costs and reimbursement rates is currently financed by individual patients on a fee-for-service basis. One way of addressing this issue would be to revise the specific package of services based on the amount of public resources available in the system.

Targeting mechanisms for reaching the poorest population groups need to improve. Poor individuals should be exempt from copayments for services that are partially covered, as well as from payments for services that are not covered at all. However, exemptions should be given to individuals in need, not to heterogeneous groups that might comprise worse-off and better-off individuals at the same time.

Another approach would be to introduce a compulsory social health insurance system in which individuals in both the formal and informal economies would pay monthly insurance contributions in return for a basic benefit package. The government could pay the insurance contributions of the poor. Copayments based on individual income could be introduced to control demand for healthcare services and raise additional revenues.

In a social health insurance system, special attention needs to be paid to entitlement. Individuals who are able to contribute and do not do so should not be entitled to receive any free care or qualify for low copayments. Rather, they should pay in full. Other
issues that need to be addressed are the capability of the government to enforce and collect social insurance contributions and the ability of a relatively large sample of the population to pay these contributions. A compulsory social insurance scheme could also be used to introduce supplementary coverage. The latter could be offered through either the private insurance market or various forms of “local” prepayment schemes.

For all these measures to work, the restructuring of the healthcare provider network, especially public hospitals, is crucial. This process would involve the gradual merging and consolidation of hospital facilities in order to reduce the total number of hospital facilities in the country. This reduction would allow for a more efficient use of public resources and the provision of better-quality services. As a result, hospitals would increase their occupancy rates, individual patients would pay less out-of-pocket and health personnel would receive higher salaries.

Nevertheless, if efficiency gains are to be made at the facility level, managerial autonomy is necessary to use funds in a way that addresses local needs. Increased autonomy over purchasing, personnel management and service provision means greater accountability of hospitals for their own institutional decisions. A compatible human resource strategy should be developed that considers staff levels, as well as staff training and re-training in response to emerging needs.

Each of the above measures is one piece of the greater puzzle of health reform. None of these pieces can, in isolation, be expected to provide the solution to the multiple challenges faced by the Azeri health system, or any other health system for that matter. Only their simultaneous implementation will initiate changes toward more equitable, efficient and better-quality health services.

2.4.3 Organization and Delivery

The collapse of the Soviet Union and the subsequent independence of Azerbaijan led to the obsolescence of the Soviet organizational model due to (i) lack of enforceability of the system hierarchy and its regulatory framework, which constituted the backbone of a highly technocratic and normative organizational model; (ii) opening up of the healthcare market to private financing and delivery; and (iii) the resulting free choice of providers.

The institutional survival strategy that emerged in the post-Soviet era was predictable: (i) new power, hitherto based in Moscow, was consolidated in the Ministry of Health; (ii) the existing model was maintained as long as possible with no major disruptions to system authority or hierarchy; (iii) changes were introduced gradually, beginning in those subsectors that were either most amenable to change (e.g., primary healthcare services) or untenable (e.g., dental care and pharmaceuticals); and (iv) coping mechanisms adopted by healthcare staff (the price for their continued service and loyalty) were ignored or overlooked.

The downside of such a survival strategy is, of course, its total ignorance of the demand side of the healthcare equation. The result was a reduction in the volume, intensity, mix and quality of health care services; a major increase in private spending
during times of economic hardship, and subsequent loss of confidence in the system's ability to provide adequate care to restore health.

Nonetheless, certain strengths were inherited from the previous system. The fact that the Ministry of Health, district authorities and basic delivery structures were maintained gave the healthcare system a degree of continuity. At the very least, this continuity ensured that funding continued to flow, despite its limited amount and skewed distribution. In short, survival of the system permitted minimal services to continue to be provided to some segments of the population.

**Service delivery is organized into a three-tiered network.** National-level tertiary and/or reference hospitals and polyclinics in Baku form the first tier, followed by district and city hospitals and polyclinics (second tier), and then rural hospitals, ambulatory clinics (SVAs) and village health stations, or FAPs (third tier). In addition, there are a large number of specialized hospitals and dispensaries that address specific medical conditions or segments of the population. While a certain system hierarchy and a referral chain appears to exist, the network is fragmented among polyclinics, hospitals, staff and administrations, depending on the type and level of care. Rural FAPs, for instance, which are meant to serve as first-level gatekeepers, are underused because people frequently bypass these facilities to seek care in district hospitals.

**Despite a modest decrease over the last decade, a surplus of hospitals and hospital beds remains. This surplus severely taxes the limited public sector budget devoted to healthcare, resulting in allocative and technical inefficiencies.** Azerbaijan has a very high hospital bed-to-population ratio. At 7.7/1,000 population, this ratio is second only to that of Russia (9.5) and almost twice as high as the EU average of 4.1. Given the fact that the country has a younger population than Russia, with people aged 65 years or older comprising only 6.5 percent of the population, admissions and occupancy rates remain very low, 4.4 and 25.6 percent, respectively, and the average length of stay very high—15.3 days (see Figure 2.7).

![Figure 2.7 Availability and Use of Inpatient Care Services in Selected Countries, 2002](chart)


*Note:* All data are for 2002, except the EU average data, which is for 2000.
There is also wide variation in the use of inpatient services, depending on the management and productivity of the provider, the types of services offered by a facility and its distance from major centers and the capital. For example, the occupancy rate is about 17 percent in TB hospitals and less than 15 percent in infectious disease hospitals. Occupancy rate alone is not, however, a valid indicator of hospital utilization in Azerbaijan for at least two reasons. First, on the demand side, many patients are expected to pay for food, laundry, consumables and pharmaceuticals, as well as informal payments to inpatient staff, which in all likelihood results in the under-reporting of inpatient service use.

Second, on the supply side, the number of reported beds is very misleading, since a large majority of hospitals, especially in rural and certain remote regions, are not operational, but are nevertheless reported as such because MOF funding is input- rather than output-based. In other words, funding is a direct function of a hospital’s potential, rather than actual, capacity and staffing.

**A primary healthcare (PHC) network is well established in rural Azerbaijan.** This network is composed of 1,830 Feldsher Ambulatory Points (FAPs), 680 Doctor Ambulatory Clinics (SVAs or DACs) and 360 village hospital polyclinics (SUBs) in rural areas. In addition, ambulatory clinics exist in large enterprises, and central district (town) or municipal hospitals and district polyclinics are present in some urban areas, bringing the grand total to 1,620 facilities (excluding 40 public dental polyclinics). There has been very little change in the number, distribution and service mix of these facilities since independence in 1991. One could add to the list of facilities physicians’ private homes, which also function as a site of PHC service delivery.¹⁴

**It is remarkable that all of these facilities are almost fully staffed and still provide certain basic services.**¹⁵ The scope of clinical services provided at this level of the healthcare system is, however, very limited due to lack of medical equipment and supplies, in addition to a limited and narrowly defined skills mix. Indeed, the term primary healthcare is a misnomer, since the care provided is very fragmented and has no continuity. People freely “shop” for physicians depending on their need and ability to pay (even primary-level physicians are considered specialists in their own narrowly defined area of expertise). The concept of integrated family-based care is nonexistent.

**The PHC level does not really operate as a gatekeeper. Rather, it generates a very high number of referrals to hospitals. Alternatively, users of PHC services are treated**

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¹⁴ According to a survey by International Medical Corps (IMC), 31.7 percent of PHC providers commonly see patients in their homes. IMC, “Primary Health Care Network Survey for Southern Azerbaijan,” November 2000.

¹⁵ According to a recent survey conducted in ten districts of Azerbaijan, all FAPs are staffed with fieldshers or nurse/midwives and close to 90 percent of SVAs and 80 percent of SUBs are staffed with physicians. In 2004, the average service population per physician was around 7,965 for SVAs, 19,531 per SUBs and 4,224 for nurse/fieldshers. On average, there are 1.5 physicians per SVA, 3.3 per SUB and 27 per district polyclinic (Western World Consultants, “Evaluation Survey,” 2005). Except for SUBs, which have rather unrealistically high standards, there does not seem to be any major shortage of physicians.
privately if they are able and willing to pay. In any case, most services provided at this level are either a quick prescription, a referral or an illness certificate. The continuing use of specialists to provide "first-contact" care builds low productivity and inefficiency into the system, particularly in small communities. Affordability, perceived quality of care and socio-organizational and geographic accessibility are the main determinants of outpatient services. Indeed, many facilities lack running water or electricity, let alone medical supplies and equipment.\textsuperscript{16}

Improved access to and quality of primary healthcare has been an objective for most UN and international nongovernmental organizations (NGOs) working in the health sector.\textsuperscript{17} These goals are also the primary focus of the World Bank-financed Health Reform Project. The projects financed by all of these organizations combine efforts to train health sector staff, enhance clinical and management skills, upgrade facilities and promote community participation in the management of PHC network facilities. While these efforts are well received by rural populations, PHC providers and local authorities, they need to be better coordinated. In addition, MOH and local authorities need to assume true ownership of these efforts. Finally, collaborative efforts should subscribe to comprehensive health sector reform, especially in the areas of financing and stewardship. Otherwise, these efforts are destined to remain small in scale and experimental in nature, with little chance of sustainability.

The role and responsibilities of Sanitary Epidemiologic Stations (San-Epid) have become obsolete as a result of the current demographic and epidemiologic transition, as well as changes in the organization and financing of the healthcare system. Most public health services geared toward disease prevention and control in Azerbaijan fall under the responsibility of the San-Epid network, although in recent years, many such services have been financially and technically supported by international and private donors. Nonetheless, a decade of underinvestment has significantly reduced the capacity of this system.

A network of 82 Municipal Epidemiological Centers staffed by specialist physicians and technical support staff are responsible for controlling infectious and parasitic diseases and monitoring environmental health. Their responsibilities include food and water safety, bacteriology, parasitology, virology and other laboratory services. These facilities are vertically organized and report directly to the Sanitary Epidemiologic Services Unit of MOH. The network is also in charge of organizing immunization programs, for which it provides technical advice and logistical support.

\textsuperscript{16} In districts hosting World Bank-funded health projects, 83 percent of FAPs receive electricity for only half of the day. Roughly 82 percent of FAPs, 68 percent of SVAs and 55 percent of SUBs do not have a water connection, relying instead on well water. None of the FAPs and only 14 percent of SVAs and 15 percent of SUBs has a sewage connection or their own toilets. The numbers are even worse in the control districts, where a very large majority of facilities are in dire need of repair—renovation and the standard set of equipment used at all levels in these districts is either incomplete, missing or in need of repair. A large proportion of these facilities do not even have a means of transportation (Western World Consultants, "Evaluation Survey," 2005). The findings of the IMC survey cited in footnote 14 above are very similar.\textsuperscript{17} UNICEF, IMC and, more recently, USAID are the most notable examples.
Low salaries and limited resources have put many San-Epid services in abeyance. Outbreaks of infectious diseases raise doubt about official statistics reflecting high coverage rates, especially because all children are included in the statistics, whether or not the cold chain is maintained effectively. Nonetheless, the San-Epid system has had some recent achievements, including having helped to eradicate polio. The network is currently working with international partners on TB, HIV/AIDS and malaria.

*As in most former Soviet Republics, the concept and underpinnings of health promotion have yet to take root in Azerbaijan.* MOH does not have a department or unit in charge of health promotion. The main obstacles to effective health promotion at the PHC level are the current organizational model of the healthcare system, lack of a family-based practice environment and lack of skilled physicians and allied personnel. One could add to this list the role of cultural mores and customs, including the attitude toward lifestyle-related health determinants (e.g., safe sex and not smoking), which require a heightened degree of awareness and the assumption of personal responsibility.

Rehabilitative and Social Care

*Azerbaijan is well endowed with medical sanatoria. However, the contribution of these facilities to the prevention and cure of disease, or the promotion of health in general, is doubtful.* There are some 132 sanatoria and "medical rest" facilities for adults, with a total of 25,000 beds. In addition, there are 18 inpatient medical sanatoria for children and a further array of "preventoriums," rest homes and tourist centers that involve a care element, which account for an additional 3,560 beds. Some of these facilities are owned by MOH, others by the Ministry of Labor and Social Protection, enterprises and trade unions. Each is funded through the budget of the respective agency that owns the facilities (as well as by informal payments). The services provided vary, but most sanitoria don't offer much more than accommodation and low-technology interventions such as occupational or movement therapy, "curative" baths, and so on.

Social care is also fragmented among establishments owned by various ministries (including Education, Interior, Health, and Labor and Social Protection). These establishments provide care to orphans. Abandoned children, the elderly and disabled youth have access to residential facilities. One could add to this list the extended care facilities for mental patients. Social care facilities in Azerbaijan are characterized by: (i) a blurring of boundaries between healthcare and social assistance, including relevant governmental funding and responsibilities, (ii) low-quality medical and psychosocial care due to lack of funding and adequately trained staff, and (iii) overall allocative

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18 According to the "WHO Health for All" database, which uses government statistics, immunization coverage was 97 percent in 2004. However, baseline and evaluation surveys carried out as part of the Health Reform Project in Azerbaijan showed that real coverage varies between 85 and 90 percent for both first-dose and follow-up vaccines, which indicates that the full vaccination coverage rate may be even lower. In addition, no FAPs had refrigerators and 91 percent did not have cold boxes. At the SVA level, only about 3 percent had refrigerators and 34 percent, cold boxes, indicating that the cold chain may have been seriously hampered. Western World Consultants, "Evaluation Survey," 2005.

19 See Chapter 1 of Volume II for a detailed discussion of behavioral determinants.
inefficiency (valuable human, physical and financial resources are captured by a large and ineffective social care network).

2.4.4 Human Resources

Azerbaijan has retained most aspects of the Soviet healthcare provider network, including heavy reliance (at least in urban areas) on hospital inpatient services. Ambulatory care is delivered by approximately 70 narrow-specialist doctors in polyclinics. There are just over 110,000 total health staff in the MOH provider network, about 140 staff per 10,000 residents. Twenty-four percent of this number are physicians; 2 percent, dentists; 46 percent, feldshers, nurses and midwives; and the rest, paramedics and administrative staff.

Azerbaijan has a marked surplus of doctors, with excess capacity of up to 30 percent at the aggregate national level. There are wide geographic variations and inequities in doctor and nursing staff levels relative to local populations. Total healthcare staffing in the country is not, however, excessive. Current doctor and nursing staff levels in Azerbaijan do not reflect actual healthcare needs, or even former Soviet planning norms (Semashko) still in use in the country. Although national staffing averages are high, staffing in rural districts is low, evidence that staffing in urban areas is substantially higher than average. Below the district level, the rural health network is experiencing significant personnel supply problems.

The profile of the medical workforce in Azerbaijan continues to reflect the Soviet-era model of narrow specialization, with over-supply of certain specialties at the national aggregate level and shortages of others at local district and sub-district levels. This narrow specialist model undermines good-quality primary care and the supply of doctors to rural areas, a problem that would be alleviated by moving the system toward a family-doctor model. The role of nurses is also underdeveloped and, to some extent, crowded out by the surplus of doctors in urban areas.

Current Human Resources Planning and Management Capacity

Responsibility for human resource development is fragmented at both the national and local level, with four national ministries (Health, Finance, Education and Labor) involved. A rigid centralized statutory framework severely limits the discretion of local management to make staffing decisions on the basis of local needs and service requirements. The national statutory framework inherited from the former Soviet Union is an impediment to the reform process. The current, 35-year old staffing norms are rigid in prescription, applied inconsistently, and provide a perverse incentive to restructuring. They are also largely based on outdated criteria. A centralized standard obviously cannot reflect the diversity of local clinical needs across the country. Moreover, the current budgetary system imposes rigid constraints on local decisionmaking and actually reduces already inadequate budgets. In short, there is no incentive to restructure staffing in the current healthcare system and every incentive to avoid doing so.
Current Capacity in Medical Training

The capacity to train doctors at the undergraduate level far exceeds what the healthcare system is ever likely to require. As a general principle, state funding for medical education should be linked to demand for new doctors in the system. Unfortunately, the country currently has no demand plan, so it is difficult to determine the appropriate number of budgeted students whose fees will be paid by the state. Currently, some 500 places are available annually in this category. The budgeted system offers a potential mechanism to improve the supply of doctors to rural areas, provided conditions are placed on students who benefit from this free education.

Undergraduate medical education should be integrated and post-graduate specializations should be linked to medium- and long-term demand. There should be further unification of undergraduate training, with pediatrics becoming a post-graduate specialization and undergraduates educated in a single faculty across the spectrum of family medicine.

Options for Restructuring the Health Workforce

Correction of inequitable urban-rural staffing imbalances requires (i) a new system for planning and financing the healthcare workforce; (ii) financial and professional incentives for working in rural areas; (iii) relaxation of supply pressures, thus allowing a family-doctor model of care to emerge; and (iv) development of non-medical roles to allow feldshers, nurses and technicians to work at a higher clinical level and go some way toward meeting the needs of the community (e.g., by being trained to use diagnostic and therapeutic equipment).

The imbalance in the current configuration of medical specialties could be gradually resolved through a new program of post-graduate medical education (such as that proposed by Azerbaijan Medical University) and a new system of healthcare workforce planning based on a mix of specialties that respond to local needs.

Under-utilization of staff and disincentives for staffing reform require changing budget rules to permit greater local autonomy by: (i) removing the formal link between budgets and bed numbers; (ii) abolishing rigid line-item budgets and allowing local managers the discretion to allocate their total budget at the local level; and (iii) allowing districts to retain unspent monies and transfer them to other defined parts of the budget.

Improvements in the pay scale of health workers could partially be addressed by: (i) optimizing current budgets so that surplus posts are removed without reducing the overall staff budget; (ii) changing the incentive structure to link payments to productivity; (iii) formalizing all copayments to increase overall staffing budgets at the local level (this is now being done in “self-managed” units of the system).

A more dynamic retirement policy is needed for older staff, which could include severance payments. Overproduction of medical graduates could be curtailed by closing or imposing strict regulation and norms on the licensing of private universities.
2.4.5 Pharmaceuticals

Public expenditure on pharmaceuticals is one of the lowest in the region, yet as a share of total health expenditures, it is one of the highest because a very large proportion of pharmaceutical expenditures are made out-of-pocket. Affordability of drugs is thus a major concern. While estimates vary from one survey to another, pharmaceutical expenditures account for approximately 60 percent of total health expenditures, 70 percent of total OOP expenditures and 30 percent of inpatient expenditures. Total annual sales of pharmaceuticals in Azerbaijan are estimated between US$120 and US$150 million. A wide range of pharmaceutical products are currently available on the market. However, the public allocation for drugs is a bare minimum, limited to either inpatient care or diseases with public health consequences, such as tuberculosis, malaria, and other chronic diseases. As a result, the burden of paying for almost all outpatient drugs falls squarely on the patients themselves.

Since independence, the pharmaceutical sector in Azerbaijan has undergone considerable changes—from severe shortages to a rapidly maturing and consolidating market. Most drugs are imported and remain expensive by local standards. Domestic production in Azerbaijan remains limited. Imports are estimated to account for at least 60 percent of the local drug market. While there are nominally two production facilities in the country, only one pharmaceutical plant is currently in operation.

There is a large and unregulated informal market in pharmaceutical products in Azerbaijan. The sales of unregulated market traders are estimated to account for as much as 50 percent of market volume. Although several laws govern the import of pharmaceuticals and inspection of imports has improved, anecdotal evidence indicates that up to 70 percent of imports do not pass through customs or undergo inspection. Quality control has recently been instituted through the introduction of a “hologram seal of approval,” but pharmaceuticals without this seal are still widely available and distributed. The absence of the “hologram seal” is often explained by saying that retail drugs came from old stocks distributed prior to the new system, or that the seal was affixed only to the wholesale bulk package, not retail packages.

Access to pharmaceuticals has ceased to be a problem, but geographic variations exist. The number of pharmacies in Azerbaijan is adequate, about 1 per 5,500 persons, compared with the Western Europe average of approximately 1 per 6,750. However, certain rural areas still do not have any pharmacies.

Shortfalls in the public healthcare budget have reduced the number of people eligible for public drug coverage and subsidies, as well as the list of covered products. Although private pharmacies are supposed to supply drugs free to certain defined vulnerable groups, they rarely do so. Private pharmacies generally turn away subsidized patients because of delays in government reimbursement. Community-based health councils, moreover, determine which families are exempt, leading to large variations in their number.
Annual per capita outpatient expenditures for prescribed and over-the-counter (OTC) medicines are very high: 52 percent of total outpatient expenditures. An earlier study (Health Expenditures Analysis study), estimated that direct drug payments ranged from 46.2 to 49.8 percent of OOP health expenditures at the household level. The relatively high incidence of expenditure on pharmaceuticals by households seems to be consistent with the estimate by local experts that public pharmaceutical funding covers, at best, approximately 10 percent of demand.

Rational Use of Drugs

Irrational prescribing of drugs continues to undermine the quality of healthcare. This practice is an inheritance of the former Soviet health system, in which all treatments were free and consultations created the expectation of a prescription.

Since many drugs are available OTC, people often bypass physicians and go directly to the pharmacy. Potent pharmaceuticals, including antibiotics, can often be purchased without a prescription.

With the support of the World Health Organization (WHO) and the World Bank, MOH has started to develop treatment protocols for selected common diseases, linked to modifications of the essential drug list. At present, the only standardized drug list is that used for patients who are eligible for free care. Even that list contains a range of drugs that do not meet WHO standards. An essential drug list (EDL) is being finalized by MOH and may be adopted before the end of 2005. A modern national drug formulary that uses internationally recognized drug classifications (ATC/DDD) is also expected to be adopted, together with revised standard treatment protocols (STP).
Recommendations

**Azerbaijan needs a comprehensive national drug policy.** The objective of such a policy would be to improve the population’s access to high-quality, safe and efficient drugs in accordance with the burden of disease and national healthcare priorities. The policy document should review progress to date on legislation and regulation, identify areas where further legislation and regulation is needed, and highlight weaknesses in existing system capacity (institutional and human) to support enforcement, quality assurance and control. More specifically, the policy document should: (i) maintain and improve the quality, safety and efficiency of the production of pharmaceuticals in the country; (ii) establish an efficient pricing system and reimbursement policies; (iii) secure the uninterrupted supply of and access to drugs belonging to critical therapeutic classes (in accordance with disease prevalence, morbidity and available financial resources); and (iv) build up a system for the rational use of medications.

**Crucial goals include the pricing of brand and generic drugs, creation of an essential drug list and standard treatment protocols for most common diseases.** Present efforts to develop and adopt an EDL suitable to Azerbaijan should be pursued to completion. In addition to an EDL, work on a national drug formulary and standardized treatment protocols (STP), together with a program for rational drug use (RDU), should be completed as expeditiously as possible. Expansion of STPs to cover additional areas should be on the immediate horizon, using present momentum to update the body of medical knowledge in the country. Ongoing work to improve the National Drug Register must be maintained to ensure systematic documentation that meets international standards. Training (pre and in-service) for all practitioners also needs to be conducted on a regular basis. Most importantly, a public education and information campaign should be carried out on the EDL, STPs and RDU.

**Quality control and assurance need to be further strengthened.** Despite a great deal of progress, especially with regard to licensing and the use of holograms, good manufacturing practices (GMP) and good laboratory practices (GLP) in the manufacture and testing of both imported and locally produced drugs need to be introduced. Effective law enforcement to prevent importation or manufacturing of counterfeit or low-quality drugs should be scaled up. All these initiatives require significant investment in human resource development, and in production and testing facilities, not to mention education of the general public.

**Affordability of drugs can be improved under current circumstances.** While the adoption of an EDL would be a step in the right direction, the government also needs to review the pricing of drugs on the EDL and its own payment and reimbursement policies so as to better target the poor and chronically ill. These changes would lead to the revision of state budgetary allocations for pharmaceuticals procurement. Targeting mechanisms used for social assistance could also be used for this purpose. Another method of potential cost containment is for the state to become an active bulk purchaser of, at the very least, drugs used in public facilities or distributed free (or at low cost) to
eligible patients. Albania introduced precisely such a mechanism, resulting in lower prices and a higher quality of publicly procured drugs.

**Appropriate use of drugs begins with good prescribing practices of physicians.** While the introduction of STP would be a step in the right direction, it is unrealistic to expect that all medical practice could be covered by such protocols. While a more holistic family medicine model is likely to increase time spent with patients, and consequently decrease both the number of prescriptions and the number of drugs per prescription, in-service physician training could, in the short run, result in more appropriate prescribing, as seen in pilot districts of the World Bank-financed health project in the country. Current training efforts must, however, be scaled up considerably.

**A monitoring and evaluation system (M&E) is urgently needed.** Admittedly, the amount, reliability and validity of data on pharmaceuticals remain very limited for sound policymaking and regulation in a sector known for its dynamism, private-sector involvement and consequences for health and safety. In its ever increasing stewardship role, MOH should build its own M&E system to collect timely and accurate data on the production, importation, distribution, pricing, quality control and retailing of pharmaceutical products, as well as the prescribing patterns of providers. In addition, feedback mechanisms should be put in place, such as the Central Drug Control Laboratory hotline for user complaints, to improve the quality of pharmaceuticals sold in the country.
CHAPTER 3. AN AGENDA FOR HEALTH SECTOR REFORM

3.1. The Case for Health Sector Reform

Although adequately endowed in terms of facilities and staff, the healthcare system in Azerbaijan has not been successful in delivering essential health services, nor has it been able to respond to the evolving, needs, preferences and aspirations of the people of Azerbaijan. Indeed, the country has very large unmet preventive and curative healthcare needs. The shortcomings in the quality and adequacy of health services presented in the previous section all point towards the healthcare system as the main “culprit.” An equally, if not more, important determinant of the present status of healthcare in the country is the attitude of policymakers, who continue to defend the reliability and validity of inaccurate administrative data.²⁰ In 1999, for instance, MOH reported that 98.5 percent of children aged 12–23 months had been inoculated with the measles vaccine, yet an independent survey found that only 66.9 percent of children in this age group were actually immunized, a rate lower than necessary to build herd immunity to prevent measles outbreaks.

There is broad consensus among national and international policy analysts and health system specialists that the healthcare system of Azerbaijan has failed to reform Soviet-style centralized financing and normative allocation of human, physical and financial resources. This failure is evidenced by persisting skewed budgetary allocations that overfund excessive hospital facilities and inefficient tertiary-level services,²¹ while underfunding highly fragmented and poorly managed primary healthcare services.²² Compared with other countries of the FSU, Azerbaijan is truly lagging behind in the modernization of its healthcare system.

3.2 Scope and Purpose of Health Sector Reform

The recommendations below are intended to achieve the often conflicting objectives of improving equitable access to care, comprehensiveness and continuity of care, patient freedom of choice and satisfaction, and allocative and technical efficiency of service delivery. More specifically, these recommendations are meant to help the healthcare system move from

- a model of specialist physician-centered care towards a model of family-based primary healthcare (PHC);
- a biomedical care model towards a model that values disease prevention and health promotion;

²⁰ According to the UNDP Human Development Report 2002, Azerbaijan (with a GDP per capita PPP of US$2,936) is the only country with a LE₀ of 71 years but with an IMR, U5MR and MMR five to six times those of the countries with the same LE₀, a finding that indicates the incongruity of official and survey data. By comparison, LE₀ in Bulgaria (with a GDP per capita PPP of US$5,710) is 70.8, yet the country’s IMR, U5MR and MMR are 14, 16 and 15, respectively.
²¹ Azerbaijan has 7.3 inpatient beds for acute care per 1,000 population and a hospital occupancy ratio of 28.5 percent or less, compared to EU-15 averages of 4.2 and 77 percent, respectively. Hospital and tertiary care services together represent 62 percent of total health expenditures in the country.
- a highly structured, hierarchical model towards a more integrated, network-based model with built-in gatekeeping;
- a model that does not solve most health problems (referring them instead to higher levels) towards one where most problems are solved at the PHC level;
- a model with extremely inefficient resource allocation towards a model that allocates resources according to healthcare needs; and,
- a model where provider payments are based on inputs towards a model where providers are paid on the basis of productivity and the appropriateness and quality of the care that they provide.

These recommendations are organized into three basic categories: system hierarchy, management (including issues related to decentralization), and funding.

### 3.2.1 System Hierarchy

**The number and distribution of FAPs, as well as the skills mix in FAPs is appropriate.** This level of care has been neglected, resulting in serious deskilling of staff, deterioration of health facilities and lack of basic equipment and supplies. This well-established, grassroot-level healthcare network should be upgraded, its service mix re-assessed, and the benefit package for feldshers and nurse/midwives revalued. In addition, the scope and quality of maternal and child healthcare provided by FAPs could be quickly improved by additional training and investment in facilities, equipment and supplies.

Staff of these facilities could also be trained as change agents in information, education and communication (IEC), especially for health promotion. In addition, they could be used to provide home-based care of patients with chronic conditions (e.g., asthma, diabetes, high blood pressure, etc.), as well as for directly observed short-course treatment (DOTS) for Tuberculosis and other standardized regimens (e.g., the integrated management of childhood illness, or IMCI). These functional changes would require upgrading the training curriculum of FAP staff, as well as extensive in-service training. Research should be conducted to better understand the professional and personal needs, preferences, practice behavior, productivity and aspirations of FAP staff, as well as the incentives that would motivate them to provide the new mix of services effectively.

**While the number and distribution of physicians at the SVA level appears to be adequate, their skills mix is not.** This level of care is too close, in terms of the catchment population, to both grassroots FAP care and SUB care. However, physician qualification requirements and skills at this level are not adequate for family-oriented...
PHC. In addition, SVAs also employ feldshers and nurse/mid-wives whose geographic area of responsibility and skills overlap those of their colleagues at the FAP level. There are two options for SVAs:

- **One option is to abolish this level of care**, at least in areas where geographic accessibility to village-level hospitals (SUBs) is not a problem. The SUBs should then be reconfigured to provide family-oriented PHC in a practice environment with a certain critical mass of physicians. This option would only make sense if no change in the job description of the SVA physician was envisaged.

- **A second, more likely, option would be to redefine the roles and responsibilities of the SVA physician** (and, if needed, increase their number) in a manner more conducive to providing community-based preventive and public health services, managing the staff of other SVAs and FAPs, and delivering family-oriented PHC. This change in job responsibilities would require retooling physicians through extensive training. Again, the same kind of knowledge, attitude and practice (KAP) research would be needed.

*Village-level hospitals (SUBs), which have an average of 32 beds, appear to have become redundant; these units have low admissions and occupancy rates.* There are too many SUBs and most are under-utilized. The proposed recommendation for these facilities is to investigate productivity indicators, including commitment and relevance indexes, preferably in a pilot project in a selected number of districts. On the basis of the pilot, local decisions could then be made to either maintain SUBs as small hospitals or transform them into group practice settings—hubs of a rural network of SVAs and FAPs that would also provide specialized outpatient care.

This strategy would not make major changes to the scope and mix of services provided at the SUB level, except for the discontinuation of inpatient care services. Nonetheless, it would entail extensive training. The evaluation process should build on previous experience in preparing district-level rationalization plans for those districts that are participating in the World Bank-financed Health Reform Project.

*The number of central district hospitals is adequate. However, many appear to have too many beds.* In addition, hospitals at the district level are dispersed into separate buildings—sometimes entire facilities—for maternity care, infectious diseases, childrens' hospitals and/or wards and district polyclinics. There is a major need to reconfigure, consolidate and, in some cases, downsize these facilities. Even changes in physical infrastructure would generate significant savings by decreasing maintenance costs.

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25 A commitment index refers to the proportion of patients seen in the facility who come from the theoretical catchment area; a relevance index refers to the proportion of all patients in the theoretical catchment area who actually use their own facility.

26 Surveys on clinical services and practice styles conducted in the 10 pilot districts of the World Bank-assisted health project showed that SUBs cover, on average, 20,000 people, which would qualify as a hub of a PHC network and a center for specialized outpatient-based care (Western World Consultants, “Evaluation Survey,” 2005).
A district-level mapping exercise must be undertaken to determine the appropriate size of central district hospitals and to redefine the scope and complexity of their services. These determinations should be made with a view toward minimizing patient referrals to Baku hospitals. All future investments in physical upgrades and medical equipment by these facilities should be based on the outcome of this exercise, together with the definition of specialist-physician training needs.

The number of specialized hospitals, dispensaries, sanatoria and “rest establishments” needs to be significantly reduced. This reduction would require a change of policy vis-à-vis their role in the healthcare system, the extent to which their services should be covered out of the public budget in general and by MOH in particular, and which of their services could be integrated into the existing healthcare network.

The vast hospital network in Baku deserves separate analysis to better understand the demand side of the services provided by it. This means ascertaining what proportion of patients served by these facilities are from Baku and what types of services attract patients from outside the capital. The analysis should propose an optimal reconfiguration of the Baku hospital network, using an integrated model with a hierarchy of care levels. A special committee will need to be put in charge of the consolidation. A similar approach could be adopted for the health facilities of NAR, given its geographical separation from the rest of Azerbaijan and separate healthcare administration.

3.2.2 Management of Health Facilities

Primary Healthcare

The first step in refocusing the healthcare system on primary healthcare is to define an essential package of services that would be provided free of charge to the entire population, regardless of their status, employment, income level, or place of residence. This service package could be based on the services that are technically free today, but the cost of these services must first be established. A fee policy and schedule for services provided outside the basic package should also be developed.

Second, the composition of PHC teams and the job descriptions of team members must be redefined with a view toward encouraging teamwork, complementarity of skills and tasks, and provision of the basic service package.

Third, the training needs of PHC team members should be defined and a training plan costed, timed and implemented. The training program should cover both clinical practice and basic tenets of community-based, primary and family healthcare (i.e., comprehensiveness of care, continuity of care, psycho-social aspects of care, the patient-provider relationship, etc.). The program should first be piloted, based on previous experience, then scaled up after two to three years.

These changes would require a revision of the current practice environment of the primary healthcare level and substantial capital investment in the medium term.

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Finally, the terms of employment of PHC teams should be revamped. (This task will be dependent on general civil service reform.) Efforts must be made to introduce flexible employment conditions, such as contractual agreements with MOH or local authorities. Employment arrangements should encompass fund holding, managerial responsibilities, modes of payment, such as unweighted per capita, risk-adjusted per capita, etc., (dis)incentives for patient referral, case management of chronic conditions, home-based care, etc.

**Inpatient Care**

**Decentralization of hospital management is the key to improving inpatient care.** Decentralization must specifically address the extent to which hospitals can make their own decisions on strategic issues (e.g., capital investment in infrastructure, equipment, change in the scope and mix of services, etc.), directly procure goods and services, manage their accounts, decide on human resource needs, and set their own employment conditions and personnel policies. One model, already tested on a small scale, would be to retain MOH ownership of hospitals, but allow individual hospitals greater management autonomy and pluralism-at their own financial risk. While this strategy might improve technical efficiency, large-scale application of this model would likely reduce access to inpatient care, increase inequalities and quite possibly exacerbate allocative inefficiency.

A more appropriate model for Azerbaijan is a management structure involving local authorities, community representatives and MOH. These stakeholders would oversee a professionally trained hospital manager who would have the authority to purchase and contract out goods and services within the limits of a global budget. This budget would be broadly determined on the basis of a costing exercise and fine-tuned over time. Hospitals should also be allowed to define a fee schedule and retain revenues for services provided outside of the essential package.

Such a model would require information disclosure, independent financial and technical auditing of hospital accounts and a regulatory framework for contracting, all responsibilities that, in the short term, belong to the MOH as part of its stewardship role.

While it may be too early to expose hospitals to the market in terms of raising capital, subleasing and/or liquidating assets, or investing in high-cost medical equipment, in the short term, they could be allowed to hire or lay off staff and make minor investments to upgrade facilities.

**3.2.3 Funding of Facilities and Payment of Providers**

Primary Healthcare

Depending on how PHC providers are renumerated (see discussion in section 3.2.2), PHC teams could receive a capitation payment that would be adjusted according to qualifications, seniority or area of practice. Alternatively, the capitation could be weighted on the basis of the demographic and morbidity profile of the catchment area served. This amount could be supplemented by a fee-for-service scheme for specific
services, based on output (e.g., number of children immunized) or outcome (e.g., no diabetic comas, high blood pressure under control, etc).

While these proposed changes may not be possible under the current personnel regime, they are nevertheless crucial. Organizational changes and training alone will not improve the accessibility and quality of PHC services. The recent significant increase in the pay scale of healthcare staff is welcome, but remains insufficient to improve their motivation and performance. Indeed, contractual agreements with PHC teams are becoming more prevalent as many FSU and Eastern European countries move away from salary to capitation payments at the PHC level. Examples to date include Bulgaria, Moldova, Kyrgyz Republic and Bosnia Herzegovina, to name a few.

Inpatient Care

**For proposed managerial changes to be effective, line-item budgeting based on input norms must be discontinued.** Most other transition countries have opted for some variant of output-based funding, be it on a per case, per day, per admission or diagnosis-related groups (DRGs) basis. Others countries have opted for capitation or global budgets as their primary mode of funding. Changes in the system of financing would need to be introduced over a certain experimental period, beginning with a costing of inpatient services to determine real costs, followed by a trial-and-error period of cost-based budgeting. The behavior of hospitals could then be tested and fine-tuned by adjusting fee schedules and profit margins.

The distinction between private and public ownership should eventually blur as hospitals come to be financed by a mixture of public and private funds, with payments based on output. The challenge of this new financing framework will be to ensure a level playing field in terms of regulation, quality assurance and control. MOH will need to assume this responsibility until a mandatory health insurance system is created and the service delivery and financing functions of the healthcare system are separated.

### 3.2.4 Cross-cutting Issues

Three additional actions are needed to enhance the effectiveness of proposed organizational reforms: (i) reform of medical education and specialty training; (ii) realignment of public health and clinical practice in accordance with emerging healthcare priorities and contemporary trends in epidemiology; and (iii) strengthening of the San-Epid network.

The current status of medical education in Azerbaijan and recommendations for its reform are addressed in Chapter 5 of Volume II. In short, **three issues need to be addressed in medical education reform:**

- The human resources development plan for the healthcare sector needs to be revised and updated in accordance with the projected supply of physicians and the demand for healthcare. The update should be supplemented by a review and revision, if necessary, of the personnel policy governing the medical profession. It
would be preferable if the update addressed other professions, especially feldshers, nurses and midwives, so that the new plan is based on a thorough view of healthcare in its entirety.

- A detailed analysis of the roles and responsibilities of all institutions and stakeholders involved in medical education is needed. If required, the institutional foundation of the medical profession should be strengthened, a strategy that may entail establishment of a medical research council and a stronger physicians' association (to better respond to changing needs and preferences of the medical community).

- *The entire process of medical education, from educational entry to post-graduate practice, must be critically reviewed.* This review should identify the relative importance of various determinants, financial or otherwise, that make the system amenable to policy change in favor of evidence-based medical practice. The review should specifically focus on: (i) input, or the selection process; (ii) throughput, or medical education program management and its components (faculty, curriculum, teaching methods and infrastructure); (iii) output, or board examination and licensing; and (iv) teaching institutions themselves, including research as an integrated educational activity.

Notwithstanding high infant and maternal mortality rates, the burden of disease in Azerbaijan, as in many countries of the FSU, falls heavily on the adult population. The current disease burden consists mostly of largely preventable non-communicable diseases (NCDs), a reality that calls for a new public health paradigm which emphasizes lifestyle changes. The following actions are needed:

- The MOH should establish, properly staff and fund a new unit in charge of health promotion. Such a unit should develop an NCD strategy and action plan.

- In-service training of PHC physicians and relevant specialists should include communication and counseling skills specifically geared towards NCDs and their main determinants (e.g., smoking, nutrition, exercise, etc.).

- Training should also include evidence-based case management of NCDs in line with modern diagnosis and treatment protocols.

- A similar approach is needed to ensure prevention and control of tuberculosis, STIs and HIV/AIDS at the primary healthcare level.

*Finally, the San-Epid network is in dire need of reform.* Its capacity for system intelligence, disease surveillance, outbreak detection, rapid response, and maintenance of the cold chain and laboratory network must be strengthened. These goals require the following actions:

- Core public health functions that fall under MOH (e.g., immunization, bacteriology laboratories, etc.) should be separated from those that fall under
municipal authorities (e.g., food hygiene, environmental health, water quality, etc.).

- A convincing case should be made to increase the financing of San-Epid facilities, with significant capital investment, preferably through donor funding.

- A training plan in modern methods of epidemic surveillance and control methods should be prepared, timed and costed.
CHAPTER 4. THE WAY FORWARD

At present, the health status of Azerbaijan’s population is poor, both in absolute terms and relative to other countries at a similar level of socioeconomic development. However, two caveats need to be made. First, unlike many other countries, the Azeri health sector could not be considered an underachiever per se because major structural and financial obstacles currently prevent the healthcare system from functioning properly. To put it differently, governance and financing of the system is anachronistic in view of the significant progress made towards a functioning market economy and major reforms in other areas of the public sector.

Second, the amount of funding allocated to the healthcare system by the state is so meager that it barely covers the wage bill. Wages are, moreover, well below any reasonable pay scale that one would expect in a relatively well-endowed healthcare system. In short, the question is not whether efficiency can be improved in any significant way, or better value obtained for current investment. Rather, the question is what volume of funding, in addition to organizational and financial restructuring, is needed to make the system function again.

Given the close relationship between health and the economy, a phased reform is proposed to foster a virtuous cycle of investment and improved health.27

Phase I would focus on programmatic issues. Specifically, it would concentrate on defining healthcare priorities and improving the day-to-day functioning of the system to enhance access and quality of care. Affordability would cease to be the major impediment that prevents people from seeking healthcare. This phase would involve establishing a package of essential, cost-effective clinical and public health interventions and building the mechanisms and tools to deliver these interventions effectively.

The essential service package would mainly include services provided at the primary-care level, but include case management of chronic diseases that require occasional inpatient care. Effective delivery of such a package would require identifying the major causes of the current disease burden; standardization of diagnostic, treatment and referral protocols; costing of interventions; training and certification of primary-care physicians and allied personnel; establishing mechanisms for quality control and assurance, including an information management system; and establishing the legal and regulatory basis to assign roles and responsibilities, as well as the necessary financial and non-financial incentives to ensure effective delivery.

If implemented properly, the main advantages of Phase I would be:

- public health interventions that are easier to design, pilot and implement, with a potentially high impact in a decentralized setting;

minimum disruption to the current organizational setup, making the initial reform phase more politically palatable;

- an opportunity to build on ten years’ experience in PHC;
- an opportunity to showcase real improvements in access to care;
- a pro-poor orientation;
- affordability (minimal capital investment would be required and only modest recurrent costs incurred);28 and
- momentum for more comprehensive reform in the medium term would be preserved, while gradually strengthening the stewardship capabilities of MOH.

Disadvantages could include a public perception of “too little too late” and tinkering at the edges of the system without commitment to comprehensive reform (i.e., redefinition of the roles and responsibilities of MOH and other key institutions, as well as financial reform). Phase I would, in fact, retain current system segmentation; the better-off would continue to be privately insured and/or use private facilities. The initial phase of reform would, however, allow the GoA to begin experimenting with contracting service delivery to the burgeoning private sector—the so-called “public contract model.”29

Phase II would still be programmatic, but wider in scope. It would encompass the reform of both inpatient and primary-level healthcare facilities and services. This phase would focus on improving allocative and technical efficiency. It would include all elements of Phase I, albeit with additional capital investment in hospital infrastructure and equipment aimed at rationalizing inpatient care facilities. Additional investment would, in all likelihood, require a sharp reduction in the number of hospitals on the basis of a nationwide mapping exercise. Such an exercise should be preceded by a thorough assessment of inpatient and outpatient healthcare needs and the existing supply and utilization of hospital beds and other inpatient services.

Subsequent changes will, however, still be needed. Specifically, payments must become output-based, at least initially, until sound cost-accounting practices are developed and implemented, and the real cost of a comprehensive set of hospital services can be determined. In addition, sound decentralized management practices need to be instituted in hospitals, together with a referral chain from the primary to secondary level of care. Overall, the system must adopt a family medicine organizational model, including changes in the way family physicians are employed and compensated.

The advantages of Phase II are:

- a more complete organizational overhaul of the healthcare system and its provision of healthcare services;

28 Phase I would be in line with the proposed mandatory health insurance system that would cover essential services.
• the potential for improved efficiency in the medium and long term;
• stronger support from providers, most of whom are specialists accustomed to working in a hospital-based delivery model;\textsuperscript{30}
• stronger popular support, as the population perceives a far-reaching attempt to improve quality of care; and
• endorsement by stakeholders who seek greater autonomy in the management and funding of healthcare facilities.

The disadvantages of Phase II include the need for major investment in the hospital sector; the complexity of changes in hospital management and funding; the likelihood that additional public outlays may be needed as a result of potential increases in the volume and intensity of services;\textsuperscript{31} a longer time frame; and the added complexity of reforming formal medical education and in-service training. It is imperative to properly sequence Phase II to rebuild system authority. In addition, Phase II would require much stronger, sustained political will to see the implementation process through and ensure much-needed regulatory changes in hospital accreditation and provider licensing.

Phase III would be more systemic, encompassing all reforms undertaken under previous phases, plus a restructuring of the existing institutional framework. More concretely, MOH would revise its mandate and business processes and define its functions, roles and responsibilities within a new institutional framework. Accordingly, MOH would mainly become a policymaking, planning, regulating and monitoring agency without direct involvement in the financing and provision of curative services. However, MOH would retain its responsibility for the provision of public health services, including disease prevention and health promotion (which would be provided through the reformed primary healthcare level).

In terms of financing, MOF, in coordination with MOH, would design a mechanism to allocate resources according to the needs-based formula described earlier. Ultimately, a separate fund could be established to pool resources and assume the purchasing function of healthcare services as a true Health Insurance Fund. However, this last step may not materialize until the tax base in Azerbaijan becomes broader, or people become more willing to make earmarked contributions to a fund. In any case, more research is needed on potential revenues and expenditures to determine the long-term fiscal sustainability of such a fund.

All phases presented above are implicitly sequenced, so that Phase II cannot be successfully implemented without first undertaking the necessary reform steps required under Phase I, and so on. One may, therefore, view Phase III as the long-term goal of comprehensive reform.

\textsuperscript{30} The extent of support may vary depending on the specialist and where he or she works, e.g., rural hospitals, central district hospitals, or tertiary or specialized hospitals.

\textsuperscript{31} A large portion of these services may have to be financed through a health insurance scheme.
It is noteworthy that Phases I and II do not go beyond the programmatic level and, therefore, would not involve a major realignment of existing government institutions (particularly MOH). Nor would these phases redefine roles and responsibilities within the healthcare system along functional lines, with a strict separation between stewardship and financing on one hand, and financing and delivery, on the other. Equitable access to care would not be guaranteed, nor would a universal health system be instituted. However, the reforms would create sufficient room for the private sector to flourish, given a level playing field.

However, the first two phases, especially Phase II, would pave the way towards eventual system pluralism. MOH would build its regulatory capacity, especially vis-à-vis the private sector. The government would define the boundaries of its involvement in healthcare based on its fiscal capacity and abandon a centralized command and control structure. Providers would organize themselves in effective interest groups to play a greater role in future policy- and decision-making. Finally, given the limited scope of changes envisaged in overall system governance, as well as the constrained environment for consensual policymaking in Azerbaijan, the proposed reconfigurations are more realistic, and therefore, more likely to be implemented.32

Successful implementation of all phases of healthcare reform requires proper sequencing. The first step of the process would be to re-activate the Health Reform Commission and give it an explicit mandate and timetable to prepare the white paper discussed earlier in this volume, followed by a consensus-building exercise among all stakeholders in the healthcare system. The second step would be to issue the White Paper, followed by a timed-delimited, costed implementation plan. (This crucial step is already envisaged in the upcoming PRSC, a step to which the GoA has explicitly committed itself).

Both of these steps, which are mainly political in nature, should have the backing of the President and should be supported by an Inter-Agency Steering Committee and technical groups. The main task of the committee and technical groups would be to synthesize the wealth of information on unmet healthcare needs and their determinants, specifically those related to weaknesses of the healthcare system that are amenable to intervention, and then identify specific courses of action. The array of reform options should be fed back to all stakeholders to facilitate agreement on the timing, sequencing and financing of their implementation, as well as pre-requisites for their introduction (e.g., required legislation, regulation and training). Recommendations should include a cost-effective essential service package, pilot projects in family medicine, and revised hospital payment modalities, among others. Four or five districts that have demonstrated a high level of commitment to the reform process should then be selected to pilot the reforms.

32 In their paper, “Structured Pluralism” (1997), Londoño and Frenk classify four policy configurations: (i) “isolated” strategies that have a low level of consensus and are partial in scope, which they deem irrelevant; (ii) “piecemeal” strategies that have a high level of consensus but are partial in scope, which they deem inconsequential; (iii) “non-consensual comprehensive” strategies, which they deem non-implementable; and, finally, (iv) “fully consensual comprehensive” strategies. The challenge, then, is to find a middle ground, or balanced configuration, that is both consequential and implementable.
Finally, a public information campaign, preferably conducted through the media, should be developed and properly financed. The campaign should explain to the populations of the five pilot regions the main tenets of the reform, the nature and timetable of reform activities and emphasize those actions likely to produce tangible results in the short run (e.g., improved access to and quality of care, as well as reduced out-of-pocket expenses for essential services). This step is very important to galvanize public support and help people understand and endure the distortions that are likely to occur during implementation of the reforms. A similar approach will be needed to fully inform health professionals and thus lessen misconceptions, alleviate fears, mitigate bureaucratic and professional resistance and assure their cooperation. Last but not least, collaboration with international partners throughout the process will be needed to secure their political, technical and financial support.
EPILOGUE

Despite politically more stable and macro-economically austere conditions, the reform options proposed in this Sector Review remain largely untried in Azerbaijan, except for a number of minor reforms in primary healthcare. While the government’s State Program on Poverty Reduction and Economic Development (SPPRED) does not directly address the healthcare sector, the program envisages an increase in public outlays for the health sector, including wage increases followed by a certain amount of downsizing. The government recognizes that there is a need to redirect health outlays to improve primary healthcare. It also needs to recognize the need for flexible budgeting and improved targeting of the poor.

The most contentious issue of healthcare reform in Azerbaijan is whether the government has the capacity and/or political will to deliver on its commitments. Granted, some reform initiatives will depend largely on the availability of additional resources. Other initiatives will require difficult policy decisions, with implications for how the budget is allocated to improve efficiency, governance and utilization of available resources. To be successful, the goals of restructuring the healthcare system and strengthening public health in Azerbaijan must become central development objectives of the government.

The proposed reform agenda is clearly ambitious in scope and timing. If willing and ready to reform, Azerbaijan can greatly benefit from the experiences and lessons learned in other countries where similar reforms have been implemented.
## Annex 1. Achievement of MDG Goals in Azerbaijan

### Table A-1. Azerbaijan’s Prospects for Achieving the Millennium Development Goals

<table>
<thead>
<tr>
<th>Millennium Development Goal</th>
<th>Present Situation</th>
<th>Prospects for Achievement by 2015</th>
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<tr>
<td>Cut income poverty in half</td>
<td>About 50 percent of the population of Azerbaijan lived in poverty in 2001. Among these, 1.3 million persons, or 17 percent of the total population, lived in extreme poverty.</td>
<td>With projected high annual GDP growth for the period 2001–2010, the poverty rate should drop from 50% to 30%, assuming no change in income distribution. <strong>Azerbaijan is thus on track for halving income poverty by 2015.</strong> With better-targeted social programs and stronger job creation, this goal could be met sooner.</td>
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<td>Achieve universal primary education</td>
<td>Enrollment rates in basic education (grades 1–9) are fairly close to 100%, although dropout rates are higher for the poor than the non-poor. Sector concerns relate more to the quality of education, including the need to build the skills and knowledge necessary to meet the challenges of an increasingly globalized economy.</td>
<td>The country inherited an education system that provides nearly universal basic education. Sector issues relate more to quality than access.</td>
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<td>Achieve gender equality in primary education</td>
<td>Surveys show no significant gender differences in enrollment rates for basic education (grades 1–9). Concerns relate more to girls’ access to upper secondary and higher education, particularly in rural areas.</td>
<td>Although girls drop out of secondary school earlier than boys and fewer enroll in post-secondary education, especially in rural areas, there is no evidence of gender inequality at the primary level.</td>
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<td>Reduce under-five mortality by two-thirds</td>
<td>According to official data, under-five mortality was 23.1 per 1,000 live births in 2002, and infant mortality, 12.8 per 1,000 live births. However, estimates based on surveys indicate that in 1990, the baseline for MDG goals, U5MR and IMR, were 106 and 84 respectively, and dropped to 96 and 76, respectively, by 2002. However, in the pilot districts participating in the World Bank-assisted Health Reform Project, UNICEF reports an 11% decline in infant mortality, from 73.2% in 2002 to 63.7% in 2004. If sustained and generalized to the rest of the country, this reduction would put Azerbaijan back on track to meet the goal of a two-thirds reduction by 2015.</td>
<td>There is a large discrepancy between survey and administrative data, making assessment of progress toward this goal highly uncertain. To reduce under-five mortality by two-thirds, a 4.4% annual reduction would be needed between 1990 and 2015. Azerbaijan’s progress has been slower, about 0.9% annually between 1990 and 2000. Thus <strong>Azerbaijan is at risk of not meeting this MDG without a concerted effort to strengthen primary healthcare and make it accessible to the poor.</strong></td>
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<td>Reduce maternal mortality by three-quarters</td>
<td>The estimates of the UNICEF MIC Survey place maternal mortality at 79 deaths per 100,000 births in 1990, and 94 in 2000. According to the State Statistical Committee, the MMR was 19.9 deaths per 100,000 births in 2002, compared to 37.6 in 2000, a 52% reduction.</td>
<td>Again, there are significant differences between survey and administrative data. Based on trends provided by survey estimates alone, Azerbaijan is unlikely to meet the MDG goal of reducing MMR by three-quarters by the year 2015. However, maternal mortality is a rare event, resulting in unstable estimates with wide confidence intervals. A World Bank survey carried out in December 2004 did not find any maternal mortality in the pilot districts.</td>
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<td>Reverse the spread of HIV/AIDS</td>
<td>The prevalence rate of HIV infections among Azerbaijani citizens is believed low by regional standards, although newly reported cases doubled between 1999 and 2000. The actual extent of infection is not known because of the limited coverage of sero-prevalence surveys and lack of behavioral surveys.</td>
<td>Although the prevalence rate is considered very low, an estimated 600,000 IDUs in the country account for 63% of HIV/AIDS cases. There is a need for both sero- and behavioral surveillance and greater attention to HIV/AIDS prevention and care. As of December 1, 2004, MOH launched an HIV/AIDS project funded by the Global Fund to Fight AIDS, Tuberculosis and Malaria.</td>
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<td>Reverse the spread of tuberculosis</td>
<td>In 2003, tuberculosis prevalence and mortality rates were 50 cases and 12 deaths per 100,000 population, respectively. The 14% case fatality rate is high. The case detection rate remains around 25%, much lower than the international standard of 70%, with only a small fraction of cases detected through DOTS. However, the cure rate was 84%, close to the target of 85%.</td>
<td>According to the WHO Global Tuberculosis Control Program, DOTS population coverage was 48% in 2003. Political commitment and additional resources are needed to expand current coverage to 100% in order to meet the MDG goal of reversing the spread of the disease.</td>
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<td>Ensure environmental sustainability (including halving the proportion of people without access to safe water)</td>
<td>According to available estimates, around 76% of all households in Azerbaijan have access to an improved drinking water source: 93% in urban areas and 58% in rural areas.</td>
<td>Achieving this MDG is feasible if the government gives sufficient priority to rural water in its public investment program, consistent with the SPPRED program.</td>
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Note: Where no 1990 baseline data exists, the value for the closest year for which data exists was used to calculate the MDG target on a pro-rata basis. The 2015 target was determined in relation to the available base year.
Table A-2. Likelihood of Achieving the Millennium Development Goals in Selected Countries

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**Key**
- **Likely** MDG target likely to be achieved
- **Maybe** Hard to tell whether MDG target will be met or not
- **Unlikely** MDG target unlikely to be achieved
- **No data** Inadequate data to predict whether or not MDG target will be met
BIBLIOGRAPHY


