

Introduction

Government and recent political history

Azerbaijan became independent in 1991. The country is divided into the autonomous Republic of Nakhichevan and the main territory, separated by Armenian territory. Since 1988 there has been civil strife in the Nagorno-Karabakh region, followed by war in 1992–1994; this conflict remains unresolved. The head of state is the president, elected by popular vote for a 5-year term. The president appoints the prime minister, confirmed by the unicameral parliament (*Milli Mejlis*). The Supreme Court, formed in 1998, heads the judicial branch.

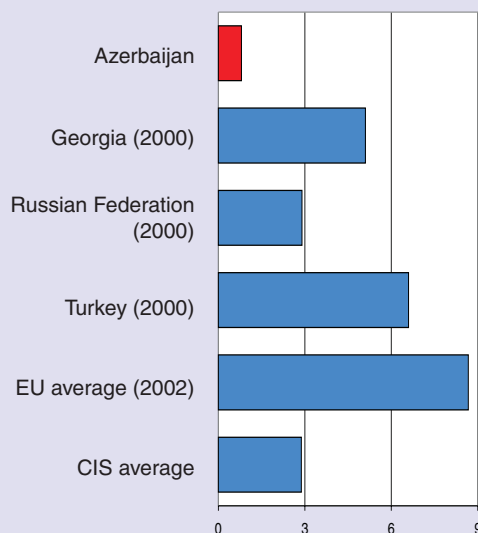
Population

In 2002 the population was estimated to be 8.2 million of which about 12% are refugees and internally displaced persons resulting from the Nagorno-Karabakh conflict. Since 1990 many households have experienced increasingly severe economic hardship; a typical Azerbaijani family now spends around 70% of its disposable income on food. Recognizing the complexity of transition, Azerbaijan has joined the 2002 CIS-7 Initiative in an effort to reduce poverty and promote economic development.

Average life expectancy

On the basis of official data, life expectancy appears to have dropped from 71.4 years in 1990 to 67.9 years in 1994, but has since improved,

Fig. 1. Total health care expenditure as % of GDP, comparing Azerbaijan, selected countries and EU and CIS averages, 2003



Source: WHO Regional Office for Europe health for all database, January 2005.

displaying a pattern common to most former Soviet republics. In 2002, life expectancy was reported to have reached 72.4 years; however, the true figure is believed to be substantially lower. According to World Bank estimates, life expectancy at birth in 2001 was about 62 years for men and 68 years for women and thus among the lowest in Europe, especially for women.

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Leading causes of death

The leading causes of premature death are circulatory diseases, cancer, injuries and poisoning, and infectious diseases. It is likely that the war in Nagorno-Karabakh contributed to the dramatic rise in injury-related deaths in the early 1990s (which have subsequently fallen). In 2002, infant mortality was reported to be 12.8 per 1000 live births although the true figure is probably up to six times higher; approximately 75 per 1000. Likewise, reported trends in maternal mortality need to be interpreted with caution; in 2000, international agencies estimated this figure to be as high as 94 per 100 000.

Recent history of the health care system

During the Soviet period, the health care system was organized according to the Semashko model, with centralized planning and administration, and after independence it faced increasingly serious economic challenges. With its inflexible design and severe funding shortages the health system has proved incapable of meeting even the essential health needs of the population. During 1992 and 1993, basic public health services such as immunization were practically suspended. As a result, the country experienced outbreaks of diseases that had once been controlled, and others, such as tuberculosis, began to increase; the health system faced near complete collapse.

Reform trends

Reform is crucial but progress has been slow. As a matter of urgency the government undertook a major evaluation of the health system in 1993 and began to address a range of other factors with implications for the health system, including stabilization of the political system, a ceasefire and the start of a major programme of social assistance for refugees and internally displaced persons. The reform of the health system was envisaged as part of the national strategic plan for redevelopment of the economic and social infrastructure of the country.

Health expenditure and GDP

Since 1991 health care expenditure in Azerbaijan has dropped both as a proportion of overall expenditure of GDP, and in real terms. According to WHO data, in 2003 public spending on health was 0.8% of GDP, the lowest in Europe. This figure does not include private payments (formal and informal).

Overview

The current structure of the health system remains largely that inherited from the former Soviet Union. Since independence, the focus on hospital provision has persisted although it is now seen as inadequate to meet the health needs of the population. Access to the health system for all was a key feature, but the severe lack of funding, and the resulting informal payments by patients, have effectively reduced access for a large part of the population. The situation has been exacerbated by the disruption of the Soviet systems of pharmaceutical and equipment supply following the breakdown in trading relations after independence. The government is now trying to address some of these issues with a number of pilot health reform projects which focus on developing primary care and promoting efficient use of resources. A limited number of health facilities have been privatized but the state remains a monopoly provider.

Organizational structure and management

Health care provision is largely divided between the Ministry of Health and local authorities. The ministry owns the central institutions and some other facilities including republican hospitals, research institutes and the Sanitary Epidemiology System. District administrations and cities own

local hospitals, district polyclinics and specialist dispensaries. Other ministries run parallel health services, serving around 5% of the population.

The Ministry of Finance is responsible for determining the health care budget. This is strongly influenced by the president and parliament, whose decisions are, in turn, influenced by the Science, Culture, People's Education and Social Problems Unit attached to the cabinet. This unit has no formal links with the Ministry of Health, thus constraining its autonomy to some extent. The parliament also establishes the rules under which the private sector is permitted to operate.

Nongovernmental and multilateral organizations also provide input into policy development and play a role in the provision of health care, particularly in areas with large numbers of internally displaced people and refugees.

Planning, regulation and management

Although the formal structure of governance is highly centralized and hierarchical, in practice it is highly fragmented. The Ministry of Health is ultimately responsible for the management of much of the health care system yet it has limited leverage over local hospitals as they are financially dependent on district administrations. These complex lines of accountability complicate the task of local health care managers, while the Ministry of Health is constrained by its limited influence over the majority of health care facilities in the country. However, the Ministry does have some influence with the district administrations as it controls the appointment of District Health Administrators.

Decentralization of the health care system

District administrations play a major role in managing the local health care budget yet their scope for innovation is constrained by the rigid line-item budget structure of the Ministry of Finance and the control by the Ministry of Health of all senior appointments at district level. The

majority of health care facilities in Azerbaijan remain in state ownership although a number of facilities have been privatized.

Health care financing and expenditure

Main sources of financing

Officially, the main source of funds is general tax revenues. The government budget therefore remains the major official source of health care finance. In 2000, 78% comes from the local budget supervised by the district health administrations and 22% from the central (Republican) budget from the Ministry of Health.

In response to the shortages in public funds, in 1998 the government introduced charges for some types of health services. Officially, private financing through private insurance or user charges is thought to make up about 5% of all health care funding. However, the real share is likely to be much higher; in 2001 it was estimated that patients' direct formal and informal payments constituted 57% of total health expenditure. The health care system can therefore be considered a public-private mix.

Complementary sources of financing

Direct out-of-pocket payments include both the formal user charges introduced in 1998 for listed services in public health facilities, and informal payments. The latter include semi-official charges for consumables such as drugs and medical supplies, fees for visiting patients, direct unofficial payments to health care staff for services provided, and fees for positions obtained in medical institutions. Formal fees are used to supplement salaries and purchase drugs. Official charges are thought to generate about 10% of the local health budget.

Voluntary health insurance (VHI) was first introduced in 1995 but it covers less than 0.1% of the total population since private health insurance is far beyond the means of most people.

Innovative health-related projects have been supported by external assistance over the past few years and there are prospects for this to increase. Most donor funds support primary health care, accounting for an estimated 25% of total state expenditure at this level or about 10% of the total Ministry of Health budget. However, it is difficult to be precise about the amount of donor funds.

Health care benefits and rationing

The 1995 constitution maintained the formal guarantees of access to health care as a citizen's right; subsequently specified as health care to be provided free at the point of service or, for some designated services, on a fee-for-service basis. Services which are free to all citizens include maternal health services, child health care, family planning and the treatment of certain diseases such as tuberculosis and diabetes. Several groups are exempt from payments; however, except for internally displaced persons and refugees, poverty is not a criterion for exemption from payment of fees.

Health care expenditure

In 1991 an estimated 4.3% of GDP was allocated to health but this had fallen to just under 1% by 2003. In real terms, official health expenditure in Azerbaijan is estimated currently at US \$25 per capita, about a fiftieth of the average (US \$1341 per capita) in the WHO European Region (2001). This figure includes state and donor funding and direct payments by patients. Government expenditure is projected to remain relatively constant over the next few years and it seems unlikely that external sources will grow greatly. The expanding oil sector should provide additional resources but this cannot be guaranteed.

Health care delivery system

Primary health care

Primary care delivery still largely follows the Soviet model. At village level, basic care is provided through feldsher aid posts (FAPs), ambulatory clinics and rural hospitals. In rural districts and cities there are central district (town) or municipal hospitals and polyclinics. Since 1997 patients have officially had free choice of physician. Often, primary care activity is limited to referring patients on to other levels of care and many patients choose to bypass this level. Furthermore, extensive informal payments are likely to deter people from seeking primary care altogether.

There is no tradition of training in family medicine and continuity of care is poor as patients are often seen by different doctors on successive visits. Many facilities lack basic requirements such as a clean piped water supply, they encounter shortages of drugs and supplies and their equipment is outdated. At the same time primary care is heavily staffed, with an over-capacity of both staff and physical facilities throughout the system.

Azerbaijan has not embarked on a national-level development of integrated family medicine. However, with the support of international agencies and donors several innovative projects are currently being piloted to enhance the quality and accessibility of primary care.

Public health services

Public health remains based on the two basic traditional functions of the state Sanitary Epidemiology Service. Firstly, the Service has responsibility for environmental health through control and regulation of food and water safety and the control of infectious and parasitic diseases. Secondly it organizes and monitors immunization services, providing logistical support for immunizations administered at district facilities.

Health promotion and family planning services are the responsibility of the Ministry of Health, with family planning services designed to be the main provider of advice and supplies. However, supplies are limited in district primary care facilities which are the main point of contact for many people.

Secondary and tertiary care

The secondary and tertiary care sectors are large, accounting for about 65–70% of the overall health budget. There are approximately 740 hospitals in the country, with an average capacity of about 230 beds in central district hospitals and 30 in rural hospitals. In addition, there are around 90 specialized dispensaries and a network of sanatoria providing rehabilitation and post-discharge care. Over 95% of hospitals are state owned and managed but there are at least 25 hospitals in the private sector.

Azerbaijan has a relatively large number of total hospital beds: 827 per 100 000 population

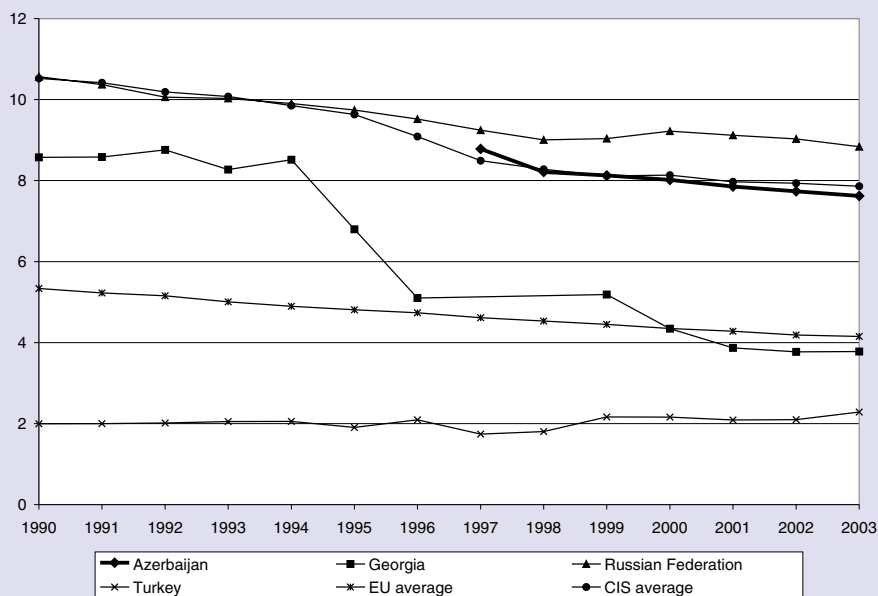
(2003) compared to 611 per 100 000 in the EU (2002), although numbers have fallen since 1990. Bed occupancy has fallen dramatically since independence, from 70–80% in 1980 to under 30%, and particularly in the area of communicable diseases, to under 20%, reflecting failures in capacity planning according to health need.

Several reforms to this sector are planned. These include proposals to integrate specialist and general hospitals, to reduce the number of hospital beds and to shift to a greater use of outpatient care, in particular, strengthening primary health care.

Social care

The current system of social care is highly fragmented, falling under the Ministries of Education, Interior, Health, and Labour and Social Protection. Social care is provided in both residential facilities and in the community, supported by a wide range of financial benefits

Fig. 2. Hospital beds in acute hospitals per 1000 population, Azerbaijan, selected countries and EU and CIS averages, 1990–2003



Source: WHO Regional Office for Europe health for all database, January 2005.

Table 1. Inpatient utilization and performance in acute hospitals in the WHO European Region, 2003 or latest available year

	Hospital beds per 1000 population	Admissions per 100 population	Average length of stay in days	Occupancy rate (%)
Azerbaijan	7.6	4.8	15.8	26.1
Georgia	3.8	4.8	7.4	89.5
Russian Federation	8.8	22.0	12.6	86.0
Turkey	2.3	8.1	5.6	61.9
EU average	4.2	18.0	6.8 ^a	76.9 ^b
CIS average	7.9	19.8	12.1	85.9

Source: WHO Regional Office for Europe health for all database, January 2005.

Notes: ^a 2002; ^b 2001.

and pensions. The state social insurance system pays old-age pensions but institutional care for the needy is very limited.

Care for vulnerable children is the responsibility of three ministries; Health, Education, and Labour and Social Protection. Different forms of institution have relatively large numbers of children, many of whom remain there because of parental poverty or ill-health and have little access to alternative means of support. The system faces a severe shortage of resources, exacerbated by lack of training in modern care and educational techniques.

Human resources and training

A rather high ratio of medical staff per head of population in the early 1990s had fallen to 3.6 per 1000 in 1998 with little subsequent change. Physicians are concentrated in urban areas around the capital, Baku, and the Caspian Sea coast. Numbers of nurses and support staff are declining gradually; in 2002 there was one nurse per 139 people. Staffing levels are based on norms that envisage high staffing ratios, with many specialists whose skills are narrow and limited.

Although nearly all medical staff are formally employed by the Ministry of Health, in practice they are private independent practitioners providing services in a public environment. This, along with a lack of treatment protocols to guide

practice, reduces the scope for action to enhance quality of care.

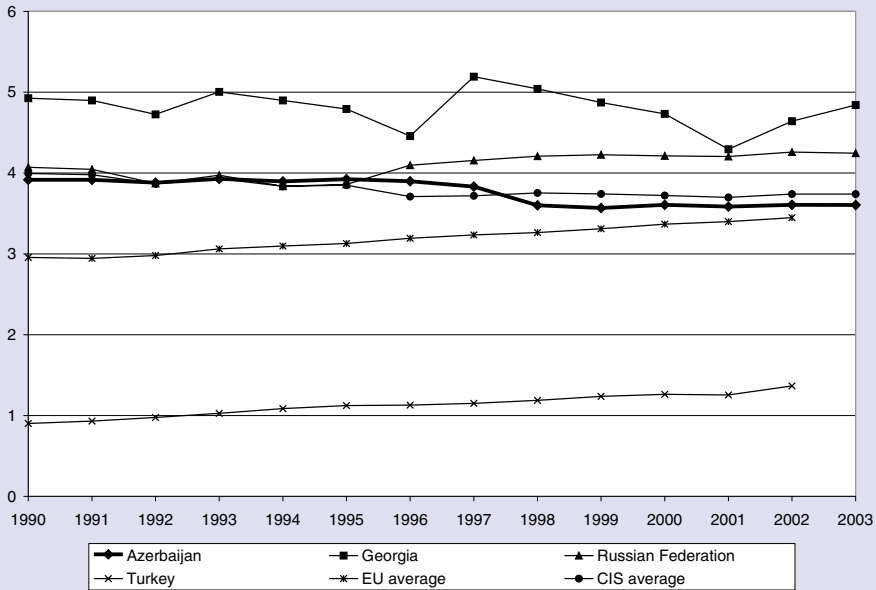
One of the greatest challenges for the Ministry of Health is to maintain a system of continuous professional education. Since independence, in-service training has been minimal and some staff have not received any refresher training for up to 15 years. With the assistance of international donors and agencies, work is now under way to introduce new techniques in areas such as reproductive health, management of common conditions, revolving drug funds, computerization and financial management.

Pharmaceuticals

After independence the pharmaceutical sector was largely privatized although the Ministry of Health retains responsibility for its regulation. However, in addition to state and private pharmacies, there is a major retail outlet via unregulated market traders, accounting for an estimated 50% of all pharmaceuticals. Also, it is estimated that up to 70% of all imports neither pass through customs nor undergo inspection.

About 10% of the state health budget is allocated for the purchase of drugs to be provided free-of-charge. However, this meets only 5–10% of demand and many people are thus required to purchase essential drugs through the largely unregulated private sector. Bulk purchasing of

Fig. 3. Physicians per 1000 population, Azerbaijan, selected countries and EU and CIS averages, 1990–2003



Source: WHO Regional Office for Europe health for all database, January 2005.

generic drugs on the list of essential drugs covers only about 6–8% of the market.

Work is now under way to produce a national essential drugs list, a set of standard treatment protocols and a national drug formulary, with the aim of developing a national drug policy in the long term.

Financial resource allocation

Health care budgets are proposed by districts and reviewed by both the Ministry of Health and local government. Until recently, financing was based on the old Soviet norms of number of beds and attendances at outpatient facilities. While this has now been discarded, a system of historically-based budgets is being retained. However, real staff costs are often underestimated.

Facilities' budget proposals are aggregated by the Ministry of Health and presented to

parliament for approval. This usually results in significant cutbacks, generally to non-salary line items. Actual expenditure is still less than the budget allocated, largely because of strict rules that prevent transfer of funds between line items. Unspent funds are returned to the Ministry of Finance despite the persistence of critical funding shortages in the health care system.

Preliminary estimates suggest that it would cost US \$15–20 per capita just to provide an adequate package of primary care services. However, the allocation of funds between districts is increasingly inequitable. In 1999, 13 districts received only US \$2–3 per capita to cover all health services.

Payment of hospitals

Hospitals obtain most of their funding for central facilities as budgetary allocations from the Ministry of Finance. District administrations provide funds according to line-item budgets. These are intended to cover the major components

i.e. staff salaries, pharmaceuticals, equipment, maintenance and infrastructure. Hospitals also receive direct payments from patients through formal charges for health services; the proceeds from these are divided between the hospital and the Ministry of Finance. Income from fees may be used to supplement salaries and for improvements to facilities. A small number of the most prestigious hospitals in Baku receive payments through patients with private insurance.

Payment of health care professionals

Almost all health care staff are, at least officially, state employees. However, the average state salary for health care workers is the lowest of any economic sector in Azerbaijan and, in 2003, was just 28% of the national average. There are also marked gender disparities, with men earning a salary almost double that of women, largely owing to the large numbers of female nurses with extremely low salaries.

There is unofficial agreement that official salaries constitute only a small proportion of total remuneration and are essentially a type of retainer to link staff formally to the organization and to serve as a quasi-licence to levy informal charges. Appointment to senior positions may require substantial payments; once appointed, medical staff can charge fees (formal and informal). However, not all health care staff benefit from access to informal charges.

Within the State Programme on Poverty Reduction and Economic Development (SPPRED) 2003-2005, the government has now taken the first steps to alleviate these problems by increasing the monthly salaries of state-funded employees in the health sector by 50% as of June 2003.

Health care reforms

Azerbaijan began to enact new legislation in the health sector in 1993 and a large number of

legislative acts have been adopted by parliament. However, there are no clear mechanisms for their implementation not least because of the fragmentation of the system, the absence of coordinated systems of accountability, and perhaps most importantly, the inability to allocate the necessary financial resources.

However, there is scope for a series of local pilot projects to be expanded nationally, including a UNICEF-supported project to restructure primary care with a view to further expansion from 2005. Work is also under way to strengthen public health in certain areas. Examples include the pilot introduction of DOTS (Directly Observed Treatment, Short-course) to combat tuberculosis in 2003, and an educational campaign to reduce smoking. However, the concept that health promotion should be a task for district health authorities has not yet been accepted. In 1996, the government also began a programme in six districts on modern methods of contraception but its long-term future is threatened by the possible withdrawal of donor funds.

Since 1995 the Ministry of Health has begun to address the problem of over-capacity by experimenting with rationalization through closure or merging of facilities and privatization of some, mostly dentistry, facilities. With support from international donors, the Health Reform Project was started in 2001, aiming to strengthen and reform district health care services. Since its implementation, 45 community health councils have been set up, a rationalization plan for the pilot regions prepared and a series of training programmes held for developing the skills of health care staff in the regions.

In 2001, districts began reporting to the Ministry of Health, representing the beginning of more effective financial management. The development of national health insurance system financing has been under consideration for some time but has not yet been implemented. It is anticipated that coverage of services by such a scheme will be gradual and incremental.

Conclusions

Azerbaijan still has a long way to go to build a health system to meet its population needs. Several features of the system in place are likely to reinforce the cycle of poverty leading to poor health outcomes which in turn result in poverty, consequently posing a high burden on society. These features include the continuing heavy reliance on treatment over prevention, with current incentive structures likely to encourage practitioners to delay and prolong treatment at the expense of patients' welfare; lack of incentives and capacity for quality improvement; fragmentation of lines of accountability and lack of financial

transparency; lack of appropriate information systems permitting reliable assessment of the health of the population as the key to efficient management and planning of health services; and finally, gross underfunding of health care. Addressing these key issues as a matter of priority is likely to improve the overall system in the longer term. However, in addition to economic growth, it will require strong political commitment and willingness to invest in the health care sector. Some initial steps in this direction have occurred with the implementation of the State Programme on Poverty Reduction and Economic Development, although the outcome of these recent efforts remains to be seen.

The Health Care Systems in Transition (HiT) profile on Azerbaijan was written by John Holley in collaboration with Oktay Akhundov and Ellen Nolte. It was edited by Ellen Nolte, Laura MacLehose and Martin McKee (European Observatory on Health Systems and Policies). Martin McKee was also research director for the Azerbaijan HiT.

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The Health Care Systems in Transition (HiT) profiles are country-based reports that provide an analytical description of each health care system and of reform initiatives in progress or under development. The HiTs are a key element that underpins the work of the European Observatory on Health Systems and Policies.

The Observatory is a unique undertaking that brings together the WHO Regional Office for Europe, the governments of Belgium, Finland, Greece, Norway, Spain and Sweden, the Veneto Region of Italy, the European Investment Bank, the Open Society Institute, the World Bank, the London School of Economics and Political Science, and the London School of Hygiene & Tropical Medicine. This partnership supports and promotes evidence-based health policy-making through comprehensive and rigorous analysis of health care systems in Europe.