

Overview

Icelandic people enjoy health care services of one of the highest quality standards in the industrialized world. Patient satisfaction is high as the health system provides universal access to a comprehensive range of services. It is primarily financed by general taxation.

Iceland spends a high percentage of its national budget on health care. In 2000 total health care expenditure as a proportion of GDP was 9.3%, this figure ranging well above the EU average of 8.7%.

Recently, the Icelandic health care system has undergone significant reforms in the management of primary health care, hospitals and pharmaceuticals.

Introduction

Government and recent political history

Iceland has a written constitution, adopted in 1944, when full independence from Denmark was attained and the republic was established. It is currently a parliamentary democracy with a prime minister, cabinet, and parliament.

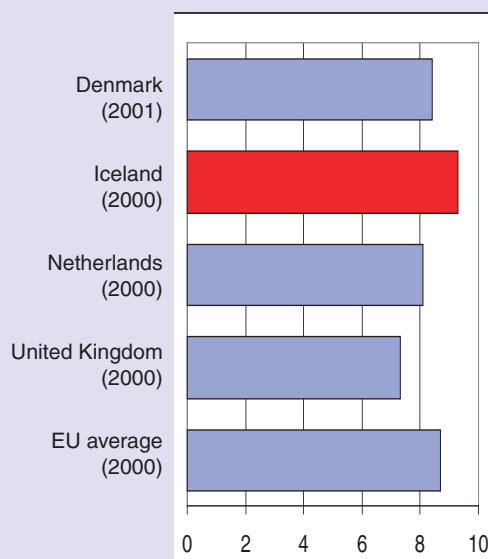
Population

The current population is 290 000. The fertility rate is high when compared to other European countries (2.08 children per woman in 2000).

Average life expectancy

Life expectancy increased steadily throughout the twentieth century. In 2001, it was 82.2 years for women and 78.2 years for men, which then was the highest rate in the world.

Fig. 1. Total health care expenditure as % of GDP, comparing Iceland, selected countries and EU average



Source: WHO Regional Office for Europe health for all database.

Leading causes of death

Cardiovascular diseases are the most frequent cause of death in Iceland. Another important cause of death is cancer. According to a forecast made in 2002 the annual incidence of cancer is predicted to rise to over 1700 by 2020, or approximately 70%.

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Recent history of the health care system

In the beginning of the 20th century health insurance funds were established throughout the country and in 1936 they were confirmed by law and became part of the welfare system. The importance of these funds was reduced in 1972 when funding through taxation was introduced; in 1989 they were abolished altogether. As of 1989 their responsibilities were assumed by the State Social Security Institute (SSSI).

Organizational structure of the health care system

The Ministry of Health and Social Security is responsible for the administration of health services.

There are seven departments responsible for the administrative aspects of the key functions of the health care system as well as social security issues. These divisions guide and harmonize all activities of the health sector.

The Medical Director of Health is an adviser to the minister and the government on all health issues. This office is responsible for the supervision of health care provision. In cooperation with the other ministerial departments it collects statistical reports and is in charge of the publication of the country's health statistics.

There is a State Epidemiologist who is responsible for infectious disease control and prevention. In accordance with the Social Security Act the State Social Security Institute (SSSI) is in charge of the administration of pension, occupational injury as well as health insurance.

State-run health care centres are spread throughout the country providing primary health care. The establishment of the latter represents the implementation of a major reform initiative

foreseen in the Health Service Act of 1974. Most specialist ambulatory care is provided by practitioners running private practices. The latter work on a fee-for-service basis negotiated by the Medical Association and the health authorities. These practices present the most rapidly growing sector of the health system.

Planning, regulation and management

The Icelandic health care system can be described as universal, comprehensive and primarily financed by general taxation. The Health Service Act of 1974 accorded all citizens access to the best health services possible.

In 1999 the Ministry of Health issued a plan regarding the quality of the health services. The overall goal was set for all health care institutions to routinely use formal quality control methods by 2003. The assessment of the work is still underway.

Decentralization of the health care system

Historically the health care system has been characterized by administrative autonomy of individual institutions. The original idea of the Health Care Act of 1974 was to give local people and their representatives a greater say in the operation and control of the local health services. However, decentralization initiatives have been difficult to implement in a country with a very small population at the same time trying to meet demands for increased specialization and the efficient use of resources. In recent decades the Icelandic health services have therefore in fact seen increasing re-centralization: for example in 1990 the state took over the financial responsibility for health care centres and municipal hospitals; in 2000 the hospital merger in Reykjavik took place creating Landspítali-University Hospital.

Health care financing and expenditure

The health system is characterized by the dominance of the public sector and it is financed 84.5% by the state, directly from the state budget or indirectly via the social security budget. Tax revenue is derived from the following sources: approximately 30% from personal and corporate income tax, 35% from value added tax (VAT), 10% from social security taxes, 5% from net wealth taxes and the remaining from other sources. The portion of the health care services that are not tax financed, i.e. 15.5% of the total, is almost exclusively comprised of direct household payments, the largest part being private payment for specialist consultations, ambulatory operations and dental care, as well as co-payments for pharmaceuticals. Private health insurance hardly exists in Iceland and health services provided by employers are very limited.

Health care benefits and rationing

Hospitalization is fully covered by the SSSI, and includes when deemed appropriate treatment abroad. Health insurance covers general outpatient care provided by a physician officially contracted by the Minister of Health and Social Security. Any co-payments paid by the patient for consultation and for laboratory services are regulated. Home care and rehabilitation services are also covered by the SSSI. Partial dental coverage is available for children under 18 years of age.

Complementary sources of finance

The only complementary source of finance in the health care system are out-of-pocket payments, in recent years amounting to approximately 16–17% of total health expenditure. Approximately 35% of the total out-of-pocket payments are made for pharmaceuticals, about the same percentage for dental care and around 20% for the patient co-payments for GP services, outpatient specialist services and physiotherapy.

Health care expenditure

Iceland operates a comparatively expensive health care system. Total expenditure on health care has doubled during the 1970–2000 period; in 2000 total expenditure on health care was 9.3% of GDP, ranking fourth in the WHO European Region after Switzerland, Germany and France (WHO HFA database) and above the EU average of 8.7%. Regarding health care expenditure in US \$PPP (United States dollar purchasing power parity) Iceland's figure of \$2608 rated among the highest in the world in 2000.

Health care delivery system

Primary health care (PHC)

Primary care is provided in well-equipped health care centres that can be found in each designated area of the country.

The first health care centre was constructed some 30 years ago. During the 1970s and early 1980s the main emphasis was on health care centres in rural and sparsely populated areas. Depending on the number of physicians permanently working in the centres three types of health care centres can be distinguished: in 2002 38 centres were registered employing at least two physicians, 18 operated with at least one physician. In the 28 centres of the third category a nurse or a midwife is present with a physician coming in for regular consultations. A study by the University of Iceland (Vilhjalmsson et al. 2001) shows that people in general have good access to primary care: the study of 1998 revealed that 95% of the population lived less than 20 km from the nearest health care centre and 94% reported that they were able to reach it within 20 minutes. Geographic access, traditionally not the most important indicator, is critical in Iceland because the island's rugged topography makes access to health care in many rural areas a challenge.

According to WHO data the number of outpatient contacts per person in Iceland is

close to the EU average. In 1998 Iceland had 5.7 outpatient contacts per person, the EU average then being 6.2.

Public health services

Health education and promotion, disease prevention, and public health interventions are a significant part of the Icelandic health care system. For example, in 1999 Iceland had one of the highest vaccination rates in the WHO European Region: for polio, diphtheria and pertussis it was approximately 98% and for measles 90%.

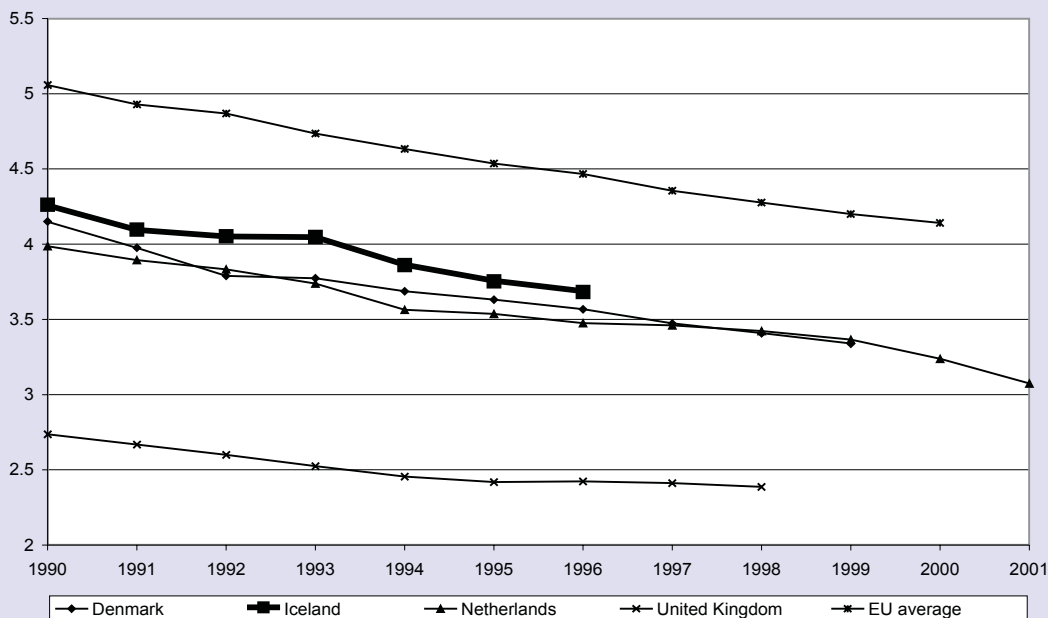
There are also a number of institutions established to protect particular aspects of public health, such as the Icelandic Medicines Control Agency, the Icelandic Radiation Protection Institute, the Environment and Food Agency, the Administration of Occupational Safety and Health, the State Diagnostic and Counselling Centre, the Icelandic Low Vision and Rehabilitation Clinic and the National Speech and Hearing Centre.

Secondary and tertiary care

Hospitals are divided into seven categories, but only three are hospitals according to the usual meaning of the word. These three are regional hospitals, hospitals with several departments and general hospitals with specialists in surgery, internal medicine or general practice. Many of the general hospitals are now primarily used as nursing homes with only a few beds for observation and simple medical therapy. Other categories include nursing homes, rehabilitation centres, homes for the chronically ill and institutions for rehabilitation of alcoholics and drug addicts. Institutions in these categories are mostly owned and run privately, but financed by the SSSI or directly by the state. Approximately 94% of the rehabilitation facilities as well as 60% of institutions and services for old people outside acute hospitals are run privately.

Most specialists in ambulatory care work on a fee-for-service basis in private practices. This is now the fastest growing sector in the Icelandic

Fig. 2. Hospital beds in acute hospitals per 1000 population, Iceland, selected countries and EU average, 1990–2001



Source: WHO Regional Office for Europe health for all database.

health system. Agreements with specialists made in 1998 tried to take account of the growing number of interventions that can be performed at lower cost in an ambulatory setting.

Social and community care

The Icelandic welfare system is based on the principle that every citizen is entitled to an acceptable minimum standard of living. In this way it is comparable to the systems in the other Nordic countries, but it is generally less generous since payments are more means tested. The Ministry of Finance, the Ministry of Health and Social Security and the Ministry of Social Affairs all contribute to various programmes intended to provide social benefits. Included in these benefits are maternity/paternity leave, child benefits, an old age pension system, invalidity (disability) pension, and occupational injury insurance.

Public spending on social care in Iceland (health care excluded) is with 19% of GDP relatively low, compared to approximately 33% in Sweden, the highest in Nordic countries. The

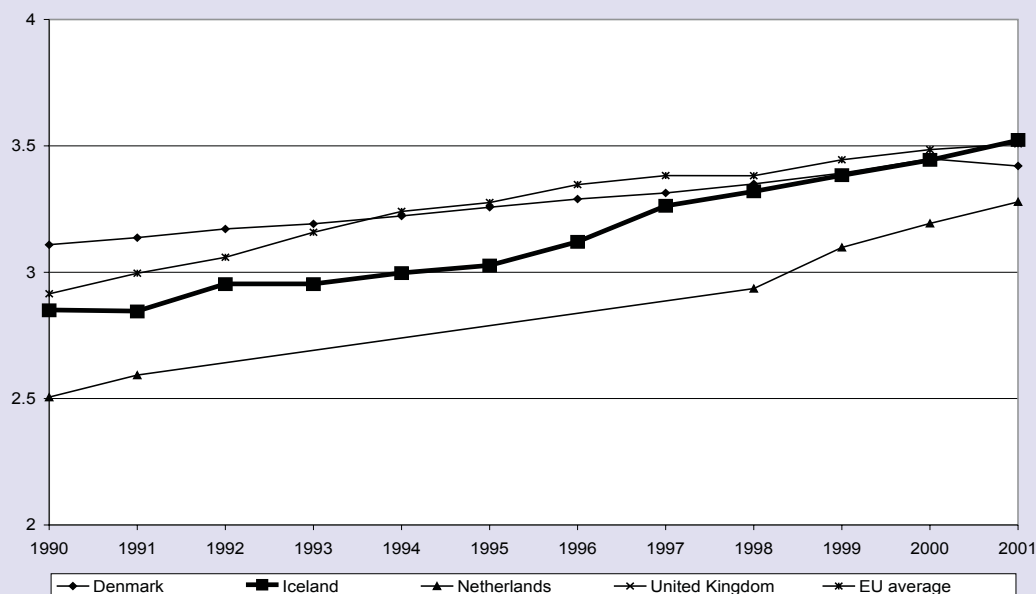
lower expenditure on social care in Iceland may be explained by the younger population structure, a low unemployment rate and well-functioning family and social networks.

Human resources and training

The number of practicing doctors was 3.4 per 1000 inhabitants in 1999. This figure was the fifth highest among the OECD countries and, together with Denmark, the highest relative number among Nordic countries. Most doctors seek their specialist training abroad, mostly in the Nordic countries and the United States and in 2002 there were 450 Icelandic doctors working abroad.

In general there is a good balance between the supply and demand of doctors – only in some specialties such as surgery and psychiatry a relative shortage of doctors can be noticed. Furthermore, with a large number of GPs approaching retirement age a shortage in this speciality may be coming up in the near future. In 2000 278 dentists (204 men and 74 women) were registered in Iceland.

Fig. 3. Physicians per 1000 population, Iceland, selected countries and EU average, 1990–2001



Source: WHO Regional Office for Europe health for all database.

Nursing is, by legislation, a self-governed profession. The total number of nurses was 3130 in 1999; of those 160 were living abroad, 300 were pensioned and 400 of working age were not practising. This accounted for a ratio of 8 nurses per 1000 inhabitants. Women account for 98% and the median retirement age is 63.3 years. According to official figures there is a 14% shortage of qualified nurses.

Physiotherapy is a licensed health profession in Iceland. The Association of Icelandic Physiotherapists has about 350 members and 300 are active as physiotherapists.

Pharmaceuticals

Measured as the amount of Defined Daily Dose (DDD) per capita Icelandic people use fewer drugs than inhabitants of the other Nordic countries.

Nevertheless, due to higher wholesale prices and a tendency among Icelandic doctors to prescribe new and expensive drugs the drug costs per person are higher than in the other Nordic countries.

Decisions regarding the reimbursement of new drugs are made by an expert committee made up of three members, one representative of the Ministry, a doctor and a pharmacist appointed by the SSSI.

Health care technology, information technology and research

In recent years the total expenditure on research and development as a percentage of GDP has increased rapidly; so has the total number of scientific articles involving Icelandic scientists.

Since Iceland has been enjoying the reputation to be well suited for genetic research several companies have established themselves in Iceland carrying out population-based genetic research.

Electronic health record systems have been introduced to the Icelandic health care system.

All health care centres use the same software, and efforts have been made to harmonize electronic records in hospitals and health care centres. The first telemedicine project in Iceland started in 1993. The Ministry of Health issued a plan for routine telemedicine services as an integral part of the health care services. Telemedicine is seen as a powerful tool to provide equal access to health services, especially in the rural parts of the country.

Financial resource allocation

Public taxation on individuals and companies accounts for 83–84% and out of pocket payments for 16–17% of health-related expenditures. More than four fifths of public expenditure is spent on fixed budget items for hospitals, primary health care, nursing homes and rehabilitation as well as administrative expenses. One fifth of the tax revenue is channelled through SSSI primarily as payment for specialists and dentists as well as pharmaceuticals.

Payment of hospitals

From 1977 on the largest hospital, Landspítali, had a fixed budget system and was financed directly by national taxation. During the following years other large hospitals were gradually moved to a similar fixed budgetary system. A new payment system for hospitals is now in the trial phase.

Until recently nursing homes were financed in three separate ways. Some had a fixed budget like the acute hospitals, others had fixed payments according to a service contract and some received payment on a per diem basis. This changed in January 2003 so that now all nursing homes are paid per diem rates according to the Resident Assessment Instrument, the RAI system.

Payment of health care professionals

Most Icelandic health care professionals are salaried employees. The main exceptions are medical specialists providing ambulatory care in private practices, as well as dentists and most physiotherapists. These practitioners get paid by the SSSI on a fee-for-service basis and out-of-pocket by the patients.

Pharmacies are private enterprises with the owners being obliged that service provision is handled by licensed pharmacists.

Health care reforms

In recent years the Icelandic health care system has undergone significant reforms in the management of primary health care, the hospital and pharmaceutical sectors. Primary care, previously provided by practitioners working independently, is now available in well-equipped health care centres throughout the country with specially educated general practitioners and nurses.

Recently, incentives have been adopted for patients as well as specialists to channel the consultation process through a GP. At the same time the government places great emphasis on patient choice.

The results of the merger of Reykjavik's hospitals and the subsequent creation of Landspítali-University Hospital in 2000 were reported in 2003. The average length of stay in 2003 was similar to 1999 (5.2 and 5.3 days respectively); the length of waiting lists had also remained unchanged. The number of inpatient days decreased as there was an increase in day surgery and ambulant services in 2003. The total output of the new hospital is estimated to be similar to the combined output of the two former hospitals.

In 1996 a law was enacted that changed the licensing system for the pharmacies. The law states that any individual can own and run a pharmacy, but that he or she has to enter into a contract with a pharmacist who is to be held professionally responsible for the services provided. Technically, the license is subject to approval of the municipal council, in practice there are no longer any restrictions on the number and locations of pharmacies.

Table 1. Inpatient utilization and performance in acute hospitals in the WHO European Region, 2001 or latest available year

| Country | Hospital beds per 1000 population | Admissions per 100 population | Average length of stay in days | Occupancy rate (%) |
|----------------|-----------------------------------|-------------------------------|--------------------------------|--------------------|
| Denmark | 3.3 ^b | 17.9 | 5.2 ^a | 83.5 ^a |
| Iceland | 3.7 ^e | 18.1 ^f | 6.8 ^f | — |
| Netherlands | 3.1 | 8.8 | 7.4 | 58.4 |
| United Kingdom | 2.4 ^c | 21.4 ^e | 5.0 ^e | 80.8 ^c |
| EU average | 4.1 ^a | 18.9 ^b | 7.7 ^b | 77.4 ^c |

Source: WHO Regional Office for Europe health for all database.
Notes: ^a 2000, ^b 1999, ^c 1998, ^d 1997, ^e 1996, ^f 1995.

HiT summary

Iceland

Conclusions

The Icelandic health care system can be regarded as fulfilling its purpose quite satisfactorily at a high financial cost. According to the traditional crude indicators used for measuring health the Icelandic health status is among the best in the world and in line with those of neighbouring countries. The main challenges the Icelandic health system will face in the future will include:

- Clarifying the relationship between general practice and specialists
- Addressing dissatisfaction among general practitioners concerning their position within the health care system

- Strengthening ambulatory care in hospitals
- Reducing over-spending in hospitals
- Addressing the need to establish more nursing homes.

As health policy assumes a more important place on the political agenda of Iceland it is certain that these issues will be addressed. Nevertheless, the aims of the health care system in Iceland, i.e. to provide universal access to health care services and to maintain the highest possible quality of health care have already been fulfilled and various studies have shown that the population is very satisfied with the health care provision.

The Health Care Systems in Transition (HiT) profile on Iceland was written by Matthias Halldorsson (Deputy Medical Director of Health in Iceland) and edited by Vaida Bankauskaite (European Observatory on Health Systems and Policies). The research director for the Icelandic HiT was Richard Saltman.

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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 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.