

ANNUS MEDICUS 2008

ICELAND

**EXTRACT FROM
THE ANNUAL REPORT OF
THE DIRECTORATE OF HEALTH 2008**

August 2009

FROM THE MEDICAL DIRECTOR OF HEALTH

The year 2008 was the first whole year of the operation of Directorate of Health under the Medical Director of Health Act enacted in 2007. The new legislation (No. 41/2007) contains a number of new and more precise provisions than the earlier legislation besides providing the Medical Director of Health with increased authority of implementation

Accordingly, the Medical Director of Health can, as before, issue general professional recommendations regarding procedures, measures and responses of various kinds and at the same time has the authority to issue instructions that are equivalent to regulations as soon as they have been confirmed by the Minister of Health. The new legislation also provides that parties intending to launch the operation of a health care service are not permitted to do so unless the Directorate of Health has confirmed that the service meets the minimum professional standards set by the Directorate. Also, the Directorate of Health is now obliged to maintain a registry of health service operators.

Monitoring role of the Medical Director of Health

According to the new act, the Medical Director of Health is to carry out regular monitoring to ensure that the health care service provided in the country meets the minimum professional standards for its operation and other provisions of the Health Service Act.

The Medical Director of Health has permission to demand information and data from health care professionals, health care institutions and other health care providers that he deems necessary for his function of surveillance and monitoring, and the parties concerned are under obligation to meet those demands. Increasingly, health care services that used to be provided by hospitals are now performed in clinics operated by self-employed practitioners. At the same time, there is a correspondingly growing need for information from these practitioners by the health care system, since their operation is paid for primarily by the State. However, the main hindrance to meeting the minimum data recording requirements seems to be the variety of computer systems at the clinics involved, which prevent them from easily supplying the required data.

Licences to practice

As of 1 April 2008, the Directorate of Health was made responsible for licensing of all health care professionals, a function which up until then had been in the domain of the Ministry of Health. At the same time, one ministry employee was transferred to the Directorate of Health to take care of the licensing work and a lawyer was also employed to support the licensing work and perform other legal tasks. The application procedure, however, remains more or less the same as before.

Preadmission nursing-home assessment (PNHA)

A new regulation on PNHA for permanent care in nursing homes entered into force on 1 January 2008. The regulation entrusts the Medical Director of Health with the supervision of applying PNHA in Iceland. The supervision includes giving guidelines to the PNHA committees and monitoring their work. The country's seven health service regions each have one such PNHA committee.

Position of Medical Director of Health

In October 2008, Medical Director of Health Sigurður Guðmundsson resigned from his post to become president of the University of Iceland School of Health Sciences, a new position at the University. The Minister of Health decided to postpone advertising the post of Medical Director of Health. In the meanwhile, the undersigned has been acting as Medical Director of Health until further decisions are made.

National catastrophes

Earthquake in Southern Iceland

The year 2008 turned out to be a year of traumatic events for the Icelandic people when two major catastrophes hit the nation. On 29 May, an earthquake occurred in the western part of Southern Iceland. Already the next day, when it was clear that nobody was seriously injured, the Directorate of Health, together with the Icelandic Red Cross, the Landspítali University Hospital and a special consultation group for trauma assistance was formed at the Civil Protection Coordination Centre whose main function was to give advice to institutions and local council concerning the organisation of psychiatric trauma assistance in the earthquake areas. This assistance was available throughout the summer.

Economic collapse

The last quarter of 2008 was severely affected by the economic disaster that hit the country in the beginning of October. The health services were required to take immediate measures to save 6.7 billion ISK, no less. Already in October, the Medical Director of Health submitted to the Minister of Health his ideas regarding vulnerable aspects of the health care service that would need to be protected as far as possible, especially primary and mental health care. He particularly emphasised the need for protecting geriatric health services and proposed instead that overtime and similar items be cut down. There is every indication that demands for cut-downs in the next fiscal year will be more difficult and will result in some reduction in the health services.

In October, the Medical Director of Health summoned a group of health care managers and scholars in order to monitor closely the attendance rates in health care services following the financial collapse. This group of 10-12 experts have met regularly since then. To begin with there were rumours of an extensive increase in the consumption of sleeping medication and in suicide. This, however, turned out to be untrue. It has come as quite a surprise that the collapse has not caused an increase in primary health care attendance nor attendance at mental health clinics. The only increase in attendance rates was detected at a specialized emergency ward for cardiac and abdominal problems during a period of two weeks in October. The increase, although short-lived, was significant.

Good results in the health care service

It is vitally important that our fine health care service will be spared as much as possible during the economic crisis at hand. Fortunately, the year 2008 saw some good results in the areas taking the greatest health toll in terms of lost years of life, i.e. cardiovascular diseases and cancer.

The Icelandic Heart Association issued data on the development of cardiovascular cases since the year 1981. The number of deaths caused by cardiovascular diseases increased at a rapid rate until 1970, but they have fallen sharply since 1980. Such risk factors as smoking, too high cholesterol, hypertension and lack of physical activity have been greatly reduced while overweight and type 2 diabetes, on the other hand, have been on the increase.

Statistics from the Cancer Registry published last year for the years 1957—2006 reveal that survival rates have remained almost unchanged in spite of a 50% increase in cancer incidence, a fact that reflects the improved survival rates of people diagnosed with cancer. This can primarily be attributed to improved cancer diagnosis but also to progress in cancer treatment.

Matthías Halldórsson
Medical Director of Health

I. THE DIRECTORATE OF HEALTH

Legal framework - management - employees

A number of new regulations were adopted following the enactment in 2007 of the Medical Director of Health Act and so the legal and regulatory framework of the Directorate has been completely changed in a short period of time. The organisation chart for the Directorate of Health, however, has been in force since the beginning of 2006. According to the chart, the activities of the Directorate are divided into four professional and administrative divisions. The divisions are headed by general managers who form the Executive Board of the institution together with the Medical Director of Health and the Deputy Medical Director of Health.

Some new functions were moved to the Directorate of Health in 2008, calling for additional employees and larger facilities. The offices have remained the same since 2003 so that now each employee has considerably less office space than before. In the course of 2008, the Directorate of Health had 38 employees, 10 men and 28 women, in just over 29 full-time equivalent positions, in addition to three contractors and a few temporary employees.

Activities in 2008

Formal reports on bills and regulations

The Directorate of Health gives opinions on parliamentary bills and proposals for parliamentary resolutions which concern health issues and other issues within its scope. The Directorate is also asked to comment on government regulations.

Information and education activities

General educational role

Education and lectures are a part of the tasks of some of the Directorate's employees and so is the provision of information to the media. The Directorate's employees are also involved in the formal instruction of various groups and professions, particularly in the health services, both in the course of their regular studies at universities and other educational institutions and in courses organised by the Directorate itself.

The Directorate's web site

A large part of the educational and promotional activities consists in the operation of an informational web site at www.landlaeknir.is. The importance of the web site as a channel for information from the Directorate is growing continually, and there has been a steady increase in visits in recent years.

In late 2007 an additional web, www.influenza.is, was opened to provide education and information to the public and professionals about influenza. This web site is a joint undertaking of the Chief Epidemiologist, the Civil Protection Department of the National Commissioner of the Icelandic Police, the Icelandic Food and Veterinary Authority and the Environment Agency, the organisations that need to co-ordinate their actions in the event of an influenza pandemic. In 2008, the new web was developed further.

On 7 October 2008, yet another web site, www.umhuga.is, was launched in connection with the Icelandic *Alliance against Depression* project. It contains information relating to children's mental health and the various aspects affecting mental well-being during childhood. The material is directed both at parents and professionals.

Linked to the main web site of the Directorate, a fourth web was introduced in November with the specific aim of improving accessibility to the prescribed classification systems that are used for health data registration in Iceland.

Publication

In 2008, as in recent years, the Directorate of Health published several reports and pamphlets, as well as circulars, clinical guidelines and health care classification systems. The Directorate also publishes two newsletters in Icelandic and one in English on a monthly basis.

The Directorate's publications are currently issued primarily on the web site, but some literature is also published in printed form.

Meetings and events hosted by the Directorate of Health

The Directorate of Health sponsored 14 conferences, meetings, courses and other events during 2008, either alone or in partnership with other institutions and organisations. The specialists employed at the Directorate of Health also participated in a number of conferences and meetings sponsored by other bodies, both in Iceland and abroad. Their contributions varied from key-note speeches to presentations of research findings on posters.

Visits

The Directorate of Health received visits from a number of foreign guests in 2008. Visitors included nurses from the United Kingdom and Scotland and a public health official from India.

Every year, the Directorate's employees also visit various local institutions, either to conduct their regulatory monitoring of health care facilities or to familiarise themselves with their activities as needed. Regular monitoring visits were paid to 12 institutions, in addition to visits to other institutions. The Medical Director of Health and the Chief Nursing Officer, e.g., paid visits to all health care institutions in the region hit by the earthquake on 29 May to get an overall picture of the situation.

Collaboration on research and education

Studies based on the Pharmaceuticals Data Bank (PDB)

The data bank is being used for a steadily growing number of research projects. To name a few examples, a study was started in 2008 on the consumption of psychopharmica before and after the earthquake in Southern Iceland, and on drug consumption in connection with the economic crisis in the autumn. A study was also carried out to investigate the effect of stimulating medication on the school performance of children with ADHD.

Collaboration with the University of Iceland

Since the autumn of October 2006 there has been collaboration between the Directorate of Health and the University of Iceland concerning teaching and research at the Faculty of Public Health Sciences at the University of Iceland. The contribution of the Directorate of Health consists primarily in supplying expertise and providing access to its numerous data bases for research purposes. Two of the Directorate's employees are currently studying for a PhD at the faculty.

Survey of services to women with breast conditions

Collaboration on the study "Future vision of women diagnosed with breast conditions and their relatives of desirable specialised services" continued and two of the Directorate of Health's employees acted as consultants to the survey.

Survey on the need for and effectiveness of psychological assistance and trauma aid

The Directorate of Health, together with the Icelandic Red Cross, the Landspítali University Hospital and the Office of Bishop of Iceland decided to sponsor an investigation into the need for psychological assistance following the earthquake in Iceland in early summer 2008 as well as an assessment of the attitude of the local people towards such service and its effectiveness.

Survey based on the Icelandic Accident Registry

In 2008, the Directorate of Health, in co-operation with the Public Health Institute of Iceland, worked on a study of home and leisure accidents, school accidents and sports accidents in 2005. Preliminary findings were presented in October at a EuroSafe conference in Paris.

HOUPE study

Collaboration on the HOUPE study (study of *Health and Organisation among University Physicians in four European countries*) in Iceland began in 2004 and in 2007 results from the first part of the study were processed. In 2008, these were presented at a number of conferences, both in Iceland and the rest of Europe.

International co-operation

The Directorate of Health co-operates extensively with related organisations and associations in the Nordic countries, Europe and internationally. The Directorate has participated in the work of the World Health Organisation (WHO) for many years. In 2008, the Chief Epidemiologist for Iceland represented the Directorate at the 61st World Health Assembly in Geneva in May. In addition, the Directorate participates in various international collaboration projects, e.g. the OECD work on health service quality indicators.

There is an established tradition of collaboration with corresponding organisations in the Nordic countries. The meeting of the Nordic Medical Directors of Health was held in Mariehamn in Åland on 21–22 August 2008. The Directorate also participated in Nordic co-operation on medical devices, on data processing based on Nordic pharmaceutical data bases, and in the work of the Nordic Council of Ministers on common Nordic quality indicators.

Furthermore, the co-operation of the Directorate of Health with institutions of the EU is steadily on the increase, especially with European Centre for Prevention and Disease Control in Stockholm.

II. CLINICAL QUALITY AND SAFETY

The enhancement of quality and safety in the health services is one of the principal functions of the Directorate of Health as reflected in the recent Medical Director of Health Act. These issues are also the focus of health policies across the world. To fulfil this role the Directorate issues, among other things, recommendations and guidelines, monitors the fulfilment of professional requirements everywhere in the health services and supervises health care institutions and health care workers. For this purpose the Directorate has also selected certain quality indicators that reflect clinical quality and safety in measurable terms.

Safety in the health services

Registration of incidents

According to the Medical Director of Health Act all health care institutions, independent health care professionals and providers are obliged to keep a record of unforeseen adverse events, mistakes, negligence or other incidents that have or may have caused harm to a patient.

The Directorate sent a circular regarding this notification obligation in February 2008 with instructions on how to respond to incidents in a manner that would lead to improvements.

No information is available on the frequency of unforeseen adverse events in the Icelandic health services, but by extrapolating from the results of foreign studies, some 50–100 incidents of this kind may be estimated to prove fatal in the national health services every year. The Directorate of Health

applied once again in 2008 for a grant to carry out some research into these issues, both to the Icelandic Centre for Research and to the World Health Organization (WHO) without result.

Clinical quality

Quality indicators

The Directorate continued its work on the selection and development of quality indicators in co-operation with various bodies in Iceland and abroad, such as the Ministry of Health and the Nordic Council of Ministers, OECD and the Nordic Nurses' Federation (SSN). Towards the end of the year a *Regulation on the production of quality indicators for monitoring and assessing the quality of health care services* (No. 1148/2008) was issued.

Clinical quality advisory boards

A geriatric nursing clinical advisory board completed guidelines for nursing-home care. Also, a clinical advisory board of midwives administering home care continued their work on clinical guidelines for home care provided by midwives.

Minimum professional standards

According to law, parties intending to launch the operation of a health service are required to notify the Medical Director of Health and obtain confirmation from the Directorate that certain professional standards have been met before they are permitted to start the operation. In 2008 the Directorate of Health received 150 notifications from health service operators.

The Directorate of Health initiated co-operation with a few health care professions to prepare minimum professional standards with regard to the operation of private clinics and specific health care services provided by institutions.

Clinical quality monitoring

The monitoring of health care facilities and health care professions is a major function of the Directorate of Health according to law. Several hundred health care units operating in Iceland fall within the scope of this monitoring system. The Directorate uses various methods to perform this function, among them clinical quality standards issued by the WHO. Clinical quality monitoring audits were performed in ten health care facilities in the west and north of Iceland in 2008.

Monitoring of facilities for the elderly

Resident Assessment Instrument (RAI) 2.0 in nursing homes for the elderly

A new regulation on the *Resident Assessment Instrument* (RAI) was issued in 2008. The regulation contains only minor amendments to the earlier 1995 version. It provides for a regular assessment of the accommodation and health of residents in facilities for the elderly based on the international instrument RAI.

The purpose of RAI assessment is to promote better care and nursing in all facilities for the elderly. In 2008, thirteen courses were held by the Directorate of Health for nurses and nursing assistants involved in the RAI assessment, both in Reykjavik and in other parts of the country.

Preadmission nursing-home assessment (PNHA)

As of 1 January 2008, the professional monitoring and supervision of the application of PNHA in Iceland was transferred to the Medical Director of Health from the Ministry of Health. There are seven PNHA committees in the country, one in each Health District. The supervision of these committees also involves consultation on data collection and the production of the assessments themselves.

In the first year of the new arrangement the cases processed were altogether 1156, resulting in 562 admissions to nursing homes. At the end of the year 392 people were on waiting lists for nursing-home admission as compared with 464 at the end of 2007.

Health care professionals

Licences to practice

Following the legislative amendments of 2007 the Directorate of Health was made responsible for licensing of all health care professionals. The change took effect as of 1 April 2008 but until then licensing had been in the hands of the Ministry of Health.

There are 32 licenced health care professions in Iceland, each subject to different laws and regulations regarding the issue of licences. In nine months, from 1 April to the close of 2008, the Directorate of Health issued 699 licences, 69 of which involved specialist licences. The largest professions receiving licences were physicians (72) and registered nurses (117).

Before the change took effect the Directorate of Health had for a long time been responsible for giving formal opinions on applications for licences to practice for 26 of the health care professions. In the first three months of 2008, 38 licence applications were processed at the Directorate, half of them from physicians.

Foreign nurses

In recent years the number of registered nurses from abroad has increased considerably. The Division of Nursing at the University of Iceland has deemed it necessary to set up formal procedures for handling applications from nurses that do not meet the EU nursing education requirements. A collaboration committee was appointed in 2008 to deal with this problem with representatives from the University, the Icelandic Nurses Association and the Directorate of Health.

Resignations and strikes among health care professionals

Surgical and anaesthetic nurses employed at the Landspítali University Hospital (LUH) resigned their jobs as of 1 May 2008. The Directorate of Health followed their action closely as the date drew near, particularly with respect to patient safety. The nurses involved reached an agreement with their employer in time so that surgical services at the hospital did not suffer.

The Icelandic Midwives' Association went on two-day strikes twice in September. The Directorate of Health kept close watch on the situation and, among other things, paid several visits to the maternity ward of the LUH. As it turned out, the lives of mothers and babies were not threatened although the service was naturally reduced to quite some extent.

Shortage of staff in the health services

Shortage of health care professionals, both currently and in future, was a matter of concern during the year. For the sake of clinical quality and safety in the health care services the Directorate of Health considers it urgent to find some means to reduce the effects of this problem. This applies in particular to nursing assistants and the Directorate of Health set up a working group already in 2007 to examine their education and possible changes in the application of their skills. The group had not submitted its proposals by year end 2008.

Clinical guidelines

The Directorate of Health Work has issued clinical guidelines since January 2000. Courses based on the guidelines have now become a permanent feature of the studies of physicians and pharmacists and will have an increased role as a teaching tool in the future. The clinical guidelines were presented at various meetings in Iceland and abroad and through mailing lists to Icelandic physicians. Work on clinical guidelines is now acknowledged as the equivalent of review article published in an Icelandic peer-reviewed magazine.

Four new clinical guidelines were published in 2008 and seven other guidelines were revised besides two guidelines issued by other bodies in collaboration with the CG steering group.

There has been extensive collaboration with similar committees at LUH in Reykjavík, both as regards preparation of guidelines and their presentation. During the year productive co-operation has also been maintained with the Regional Hospital in Akureyri, the primary health care services, the Maternity Care Centre in Reykjavík and the Public Health Institute of Iceland.

Internationally, partner institutions abroad include the Scottish Intercollegiate Guideline Network (**SIGN**) in Scotland, **NICE** in Great Britain, **NZGG** in New Zealand, **NHMRC** in Australia and **SBU** in Sweden. In addition, co-operation with EUnetHTA (www.eunethta.net) has been on a formal basis since the beginning of 2007. Participation in the Cochrane Collaboration continued.

Since 2004 emphasis has been increased on presenting clinical guidelines from the above foreign institutions and bodies. By the close of 2008, approximately 120 such guidelines had been recommended on the Directorate of Health web site.

Pharmaceuticals and pharmaceutical monitoring

Pharmaceuticals Data Bank

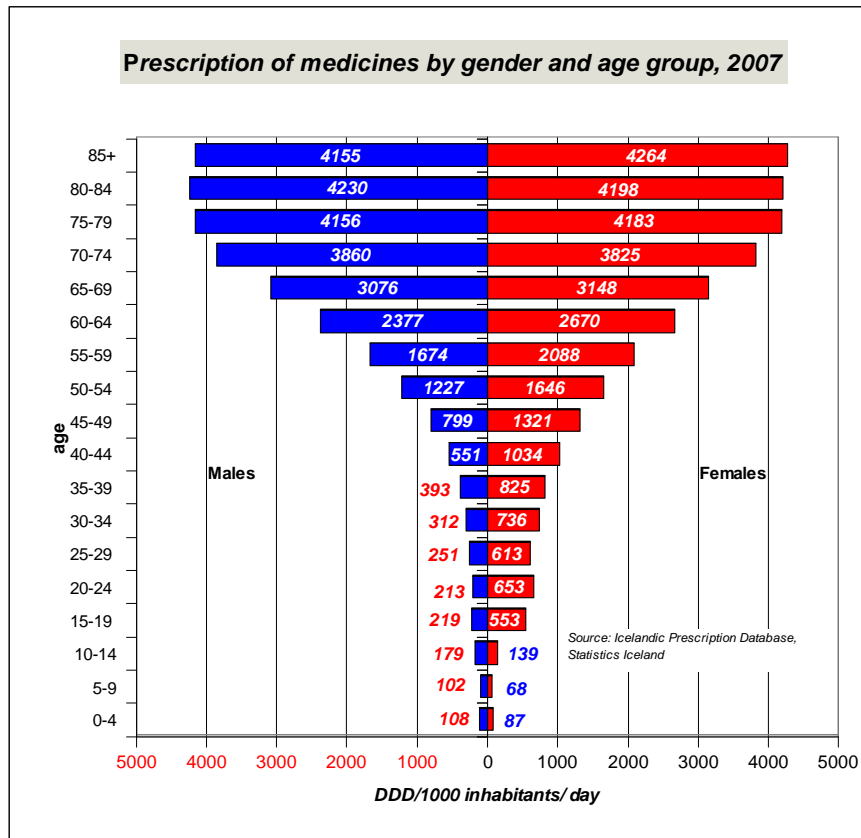
The Directorate of Health began the operation of a Pharmaceuticals Data Bank (PDB) in 2005, in accordance with Act 89/2003, for the purpose of monitoring prescriptions issued by physicians, in particular for addictive drugs, as well as monitoring trends in the use of pharmaceuticals.

Choice and use of pharmaceuticals

Monitoring of addictive drug prescriptions has steadily been tightened by making use of data from the PDB. It is believed that the data base has already had significant preventive effects; for instance in the decreased use of amphetamines and morphine in the age groups predominantly abusing those drugs.

Research based on the Pharmaceuticals Data Bank

As mentioned already there has been considerable research based on data from the PDB. The first annual report on pharmaceutical drug consumption in Iceland was prepared in 2008 for publication in 2009. The Icelandic data on sales and consumption of pharmaceuticals were compared with comparable data from Norway and Denmark since these countries operate PDBs corresponding to the Directorate of Health data base. The first results are presented in the figure below:



Medical devices

According to a law, the Directorate of Health is the competent authority in matters concerning medical devices and is responsible for policy making, inspection and market surveillance of medical devices in Iceland.

In 2008, the Directorate received a total of 2490 notifications and other documents concerning medical devices. Notifications of defects in medical devices were 600 in total, of which 428 were notifications from competent authorities in other countries and 172 were notifications from Eudamed (European Database on Medical Devices). New queries from competent authorities in EU countries totalled 55 and other related documents received were 592. The Directorate also received 205 notifications concerning devices and methods marketed in Europe for the assessment of biological samples in vitro. Other notifications, queries etc. on various aspects of medical devices were altogether 1093.

Medical treatment and health care services

Health care in prisons

The Directorate of Health participates in a consultation group on prisoners' affairs to promote improved services to prisoners and provide information to professionals and the general public on prisoner's health. The group organised a meeting on these issues in January under the title "Children and punishment". The group also worked with prison authorities on various improvements in health services for prisoners.

Home nursing

The Ministry of Health signed an agreement with the City of Reykjavik on the supply of home nursing. The aim of the agreement was to integrate the social and health care services for the benefit of clients in Reykjavik requiring assistance in the home. The Ministry and the Directorate of Health co-operated on conducting a survey on home nursing provided by the Primary Health Care of the

Reykjavik Capital Area before the transfer took place.

Immigrants

The Directorate of Health participated in the Government's work on devising a policy on immigrant affairs in 2008 as in previous years. The Directorate also co-operated with the Multicultural and Information Centre in the Westfjords peninsula on preparing information on antenatal care for immigrants.

Future vision in geriatrics

The Directorate worked with professional bodies on an elaboration of proposals regarding the organisation of geriatric issues. The principle underlying this work is to enable the elderly to live in their homes for as long as possible. To make this possible, the emphasis is on integrating the services of primary health care, hospitals, nursing homes, social services and associations of the elderly. Because of the social conditions in Iceland in the last quarter of 2008 this work was delayed.

Civil Protection

In June 2008, new Civil Protection Act entered into force involving certain changes in the functions of the Directorate of Health and the Chief Epidemiologist. According to the new Act both the Medical Director of Health and the Chief Epidemiologist are members of the Security and Civil Protection Board. The Medical Director of Health is also a member of the board of the Civil Protection Coordination and Control Centre, which is responsible for the organisation and operation of official response in emergency situations. In 2008, the Directorate of Health and the Civil Protection Division of the National Commissioner of the Icelandic Police completed a template for response plans of all health care institutions.

Until mid 2008 the Directorate of Health was responsible for supplying health professionals to work in the Civil Protection Coordination Centre. This function was by agreement with the LUG transferred to the emergency ward of LUH in June.

Earthquake in 2008

On 29 May, an earthquake occurred in the western part of Southern Iceland. The authorities responded swiftly and the Medical Director of Health visited the struck areas already the next day. Very soon it was clear that nobody was seriously injured, although damage to property was extensive. The Directorate of Health, together with the Icelandic Red Cross, the Landspítali University Hospital, the Office of the Bishop of Iceland and local councils in the region provided psychiatric first aid and other forms of support. Various measures and support by local councils and the government were immediately organised.

A consultation group for trauma assistance was formed already on 30 May 2008. Its main function was to give advice to institutions and local councils in the earthquake areas concerning the organisation of psychiatric trauma assistance and coordination in general. A survey on the need for and effectiveness of psychological assistance and trauma aid was initiated very soon after the earthquake.

III. COMMUNICABLE DISEASE CONTROL

In 2008, the communicable disease control efforts in Iceland were enhanced by various means in order to comply with changes in the legal framework that were put into effect the year before. Among such measures were improvements to relevant data banks and information systems even though

these were somewhat slowed down because of the economic situation in Iceland.

Legal framework of communicable disease control and new regulations

In 2008, a new regulation on communicable disease reporting was adopted under the amended Communicable Diseases Act of 2007, which provided for an extended scope of communicable disease control to include the impact on health of radioactive and toxic materials and all unexpected events posing a potential global threat to public health. Accordingly some diseases, their pathogens and certain health-threatening events were added to the list of notifiable diseases, i.e.

- Acute symptoms from radioactive and toxic materials,
- Methicillin-resistant *Staphylococcus aureus* (MRSA), and
- Vancomycin-resistant Enterococci

Communicable diseases registry

A new data bank on communicable diseases, launched in 2007, was developed further in 2008. It contains data on all recorded cases of reportable and notifiable diseases. Its main purpose is the surveillance of communicable diseases, which now cover any emerging health threats. This task, which could be termed *epidemic intelligence*, is intended to detect early signs of potential health threats and assess the risks involved with respect to responses.

Epidemic intelligence includes traditional surveillance of notifiable diseases but also unconventional methods such as monitoring attendance rates and reasons for visits at emergency wards and outpatient health services. For this reason, attendance rates at all emergency units of the LUH are now monitored regularly. Also death rates in the country are followed closely.

Communicable diseases

Reportable diseases

The obligation to report so-called reportable communicable diseases involves submitting data to the Chief Epidemiologist on these diseases without information on personal identity or on contact tracing. Twenty five diseases or syndromes are reportable. The reporting on these diseases, however, is far from complete and some primary health care centres do not submit any such reports. Following are examples of reportable diseases or conditions.

Influenza

The influenza outbreak in the winter of 2007-2008 did not arrive until early 2008 and subsided already in March. In the beginning most cases were of subtype A H1N1 while later in the outbreak subtype H3N2 was also diagnosed. Strains A and B were diagnosed in an equal number of cases. Towards the close of August and beginning of September two cases, one of strain A and the other of strain B, were detected. For the remainder of the year, no cases were identified until one case of influenza A was diagnosed in December. The influenza outbreak during the year was mild.

Reportable enteric infections

Norovirus is a very common cause of enteric infections in the community and in recent years such outbreaks have occurred in many hospital wards and geriatric institutions, particularly in winter. In the first part of 2008, cases of noroviral gastroenteritis were quite numerous in one Reykjavik hospital and another such outbreak in a hospital in the Northeast of Iceland lasted for quite a while. Still another outbreak occurred in eastern Iceland in November.

Head lice

A number of pre-schools, primary schools and individuals have sought assistance and advice at the DH because of head lice. Reports of head-lice infection from school nurses and primary health care centres numbered 132 in 2008.

In November, a Nordic meeting was held at the Swedish Institute for Infectious Disease Control in Stockholm to discuss issues related to head-lice and its containment. A Nordic co-operation group was established at the meeting to coordinate treatment guidelines and sponsor common research into the phenomenon.

Notifiable diseases

The obligation to notify certain diseases or conditions involves submitting identifiable data to the Chief Epidemiologist, including data on cases, pathogens and special acute events threatening public health. Forty six diseases or conditions are notifiable. Following are examples of such diseases or conditions.

Methicillin-resistant Staphylococcus aureus (MRSA),

MRSA was made a notifiable disease in 2008, cf. above. The objective of the notification is twofold, the surveillance of MRSA spread in the community and reducing the likelihood of MSRA gaining foothold in hospitals and nursing homes. Should the pathogen become widespread in the country it is important to have a rapid reporting system to inform physicians about the infection

When MRSA is diagnosed in hospitals and nursing homes the staff must respond immediately with increased infectious disease control as well as other appropriate measures to contain its spread. In 2008, a working group prepared guidelines on the surveillance and response to MSRA that will be published in 2009.

Campylobacteriosis

Altogether 98 cases of campylobacteriosis were diagnosed in Iceland in 2008 according to notifications from the LUH Department of Microbiology, which is similar to the year before. Of these 26 were infected in Iceland, 48 had been infected abroad but in 24 cases the origin was not known. An sudden outbreak of six cases in May in the East was never traced. The number of cases increased during summertime as in previous years.

Salmonellosis

Altogether 136 cases of salmonellosis were diagnosed in Iceland in 2008. The infections were in most cases, or 88, acquired abroad while 23 cases were determined of domestic origin. A small outbreak occurred in a residential home for the elderly in the capital area in June among residents and staff. Several domestic salmonellosis cases were detected in August but an increase in late August and September, involving 22 cases, was traced to salmonella transmission at a hotel in the Greek island of Rhodes.

Chlamydia trachomatis

A total of 1834 chlamydia cases were diagnosed in Iceland in 2008, a similar number as in recent years. The infection was most common in people between 15–29 years and was diagnosed more often in females than in males.

According to the annual report of the [European Surveillance of Sexually Transmitted Infections \(ESSTI\)](#) for 2008 (No. 3), Iceland had the highest proportion of diagnosed cases compared with other European countries. Part of the explanation for this is, in all likelihood, improved diagnostic methods and a higher number of samples sent for testing than before.

Gonorrhoea

In 2008, 26 individuals were diagnosed with cultures positive for *Neisseria gonorrhoeae*, whereof 12 were females and 14 were males, aged between 19–63 years. Gonorrhoea was rare in Iceland until 2005, when an increase in the number of cases was observed. Since then the highest number of

confirmed cases in one year was 31, in the year 2006.

HIV and AIDS

In 2008, ten individuals were diagnosed with HIV infection in Iceland, seven men and three women. No one was diagnosed with AIDS, the final phase of the disease. At the end of 2008, a total of 218 individuals had been diagnosed with HIV since the disease was first detected in Iceland, of whom 60 have developed AIDS and 37 have died. Only one of the individuals diagnosed in 2008 was of Icelandic descent, the others were applicants for residence permits.

Vaccinations

Childhood vaccination programme

The present arrangement of the immunisation programme has been unchanged since the beginning of 2007, see table.

| Age | Contents | Name | Producer |
|-----------------|-----------------|-------------------------------------|-----------------|
| 3, 5, 12 months | DTaP, Hib, IPV | Infanrix Polio Hib | GSK |
| 6, 8 months | MCC | NeisVac-C | Baxter |
| 18 mon., 12 yrs | MMR | Priorix | GSK |
| 5 years | dTaP | Boostrix | GSK |
| 14 years | dTaP, IPV | Boostrix Polio (ein sprauta) | GSK |

Vaccination coverage

In recent years the coverage of vaccinations has been estimated on the basis of sales figures of the relevant vaccines since a centralised registration of vaccinations has not been available. The estimated coverage of the primary vaccination against diphtheria, tetanus, pertussis, Hib and polio is over 95% while the coverage of the vaccination against mumps, measles and rubella is estimated at 90–95%.

Centralised Vaccination Registry

In the course of 2008, the connection of almost all primary health care facilities in the country to the centralised vaccination data base of the Chief Epidemiologist was concluded. By the first quarter of 2009 all facilities making use of the SAGA registration system are expected to have joined the registry. The new registry will make it possible to obtain reliable data on the participation of Icelandic children in the Childhood Vaccination Programme in addition to data on almost all vaccination performed in Iceland.

Assessment of the cost-effectiveness of vaccinations and cancer screening

In 2007 work began under the auspices of the National Committee on Communicable Diseases Control on the cost-effectiveness of vaccination against Human Papilloma Virus (HPV). The working group submitted a report in the beginning of 2008 and concluded that vaccination against HPV in Iceland was cost-effective. The Committee subsequently recommended to the Minister of Health that such a vaccination should be initiated in Iceland for girls at the age of 12. The decision to do so has not yet been made.

The Minister of Health asked the Chief Epidemiologist to conduct a general feasibility study on vaccinations and screening against infections and cancers. A report was delivered in October 2008 recommending that vaccination against HPV and pneumococcal infection should be initiated in the general vaccination programme as well as general colorectal cancer screening in the age group of 60-69 year.

Antibiotics consumption

The consumption of antibiotics in Iceland can be assessed based on sales figures, prescriptions outside hospitals and antibiotic consumption in hospitals and nursing homes. The consumption in 2008 in defined daily doses (DDD)/1000 inhabitants) is shown in tables below.

Fig.1 Prescriptions for antibiotics (J01) in Iceland 2003–2008

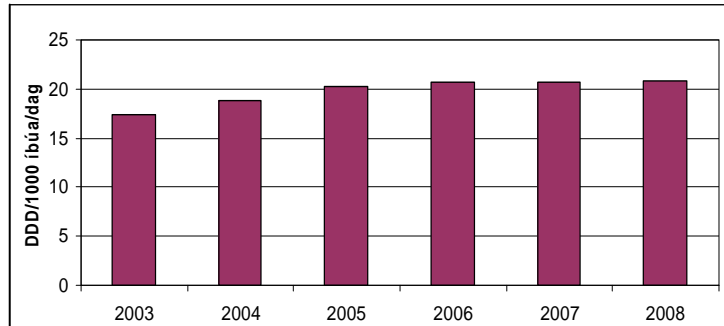
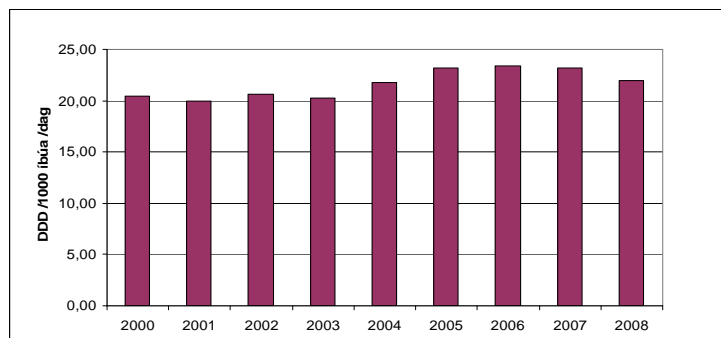


Fig.2 Sale of antibiotics (J01) in Iceland 2000–2008



Communicable disease measures by the authorities

Monitoring applicants for residence permits in Iceland

Since 2005, the Chief Epidemiologist has processed health certificates with regard to temporary work or residence permits. The number of such certificates has gone greatly down, from 1751 certificates in 2005 to 171 in 2008. This substantial decrease in numbers is due to a marked decline in the construction industry in Iceland.

Emergency inventory

The Chief Epidemiologist supervises the emergency inventory in Iceland. In 2008, the Chief Epidemiologist signed a lease contract for a facility to store the country's stockpiles of stockpiles of personal protective equipment for the whole country. Training courses in the use of personal protective equipment were held for veterinarians, employees of poultry farm and the police.

Measures against an influenza pandemic focus on ensuring adequate supplies of antivirals, vaccines, antibiotics and drips. In 2007, 104,000 doses of influenza medications were available in Iceland, including 82,000 doses of oseltamivir (Tamiflu®) and 22,000 doses of zanamivir (Relenza®). The target is to increase the supplies to 150,000 treatment doses.

National Preparedness Plan for Pandemic Influenza

On 28 March 2008, a National preparedness plan for pandemic influenza was formally signed in Reykjavik. The plan was made at the instigation of the government under the leadership of the Chief Epidemiologist and the National Commissioner of the Police in Iceland. The report itself was prepared by some 30 working groups across the country, including a project group and steering committee, in all about 100 people. The plan was successfully tested in December 2007.

Education on AIDS and other sexually transmitted diseases

In 2008, education on sexually transmitted diseases (STDs) was provided through lectures, newspaper and magazine articles and television programmes as well as discussions on sexual health, HIV and AIDS in schools. A pamphlet on STDs targeting young people was prepared but publication was delayed until 2009.

The project manager for STD education visited Uganda in November 2008, interviewing young girls, orphaned because of AIDS. The visit was part of a research project on the conditions of HIV-positive girls in a developing country.

Newsletter in Icelandic and English

Farsóttufréttir, a newsletter in Icelandic on communicable disease, was published on a monthly basis in 2008 on the Directorate's web site and so was its English version, *EPI-ICE*. This was the fourth year of its publication.

International communicable disease measures

The Chief Epidemiologist and his staff take part in international cooperation at the Nordic, European and international level.

At the Nordic level, Iceland has participated in the Nordic cooperation on health preparedness for disasters and crises since the autumn of 2001. In 2008 Iceland chaired the Nordic working group and sponsored a conference in Reykjavik in the end of September on health security and preparedness in the North Atlantic and the Barents Sea. The effect of climate change on the North and security-political aspects were discussed as well as the health security of Nordic citizens stationed in foreign countries in times of catastrophes and crisis.

Sweden headed the Nordic Council of Ministers in 2008 and the Ministry of Health decided to put emphasis on pandemic influenza preparedness. A conference on the subject was held in Sigtuna 22—

22 October, where the main topics were emergency stockpiling of antiviral drugs and various preparedness measures. Iceland was supposed to head this cooperation in 2009 and continue the work on preparedness issues.

At the European level, the Chief Epidemiologist communicates regularly with the European Centre for Disease Prevention and Control (ECDC) and represents Iceland on the Advisory Forum of ECDC. He also takes part in the communicable-disease work of the European Commission (EC) and in the EC Health Security Committee in Luxembourg. Iceland contributes to the EU Early Warning and Response System (EWRS) and takes part in networks on specific reportable diseases.

The staff of the Chief Epidemiologist is responsible for supplying Icelandic data on notifiable diseases to *The European Surveillance System (TESSy)* which belongs under ECDC.

At the international level, the Chief Epidemiologist is designated as the National Focal Point for Iceland as provided for in the International Health Regulations (IHR) and participates in other international forums of the World Health Organization.

IV. Health statistics

One of the main functions of the Medical Director of Health is to collect and process data on health and health services. The new Medical Director of Health Act (No. 41/2007) provides for the Medical Director's function to organise and maintain national registers on health, diseases, accidents, prescriptions, births, and the work and performance of the health services. The aim of these registers is, among other things, to provide an overall picture of the health of the Icelandic people and the utilisation of the health care services, keep up monitoring and assess the quality and efficiency of the service.

Health registers and their processing

Register of hospital admissions

In 2008, data on hospital admissions in 2006 were processed. Statistics for the years 1999–2006 were published on the web site of the Directorate of Health. At the same time data for the year 2007 were collected to be published in early 2009.

Waiting lists

In February, June and October of 2008, data on waiting lists for selected surgical procedures in hospitals were collected. The results were published in the newsletter of the health statistics division (*Talnbrunnur*) and on the Directorate's web site, showing the number of individuals waiting at each time and the proportion of these same individuals waiting over 3 months. Statistics on the number of surgical procedures carried out were also published.

Contact register of the primary health care services

The Directorate of Health has maintained a contact register since the beginning of 2004. Once a year, the Directorate collects data the contacts of individuals with health care centres according to recommendations on minimum data recording. Among the data registered are date of contact, type (consultations, visits, telephone calls or other), age of patient, reasons for contact, diagnosis and resolution.

Data on contacts in 2007 were processed in 2008. The total number of contacts with primary health care centres in 2007, including telephone calls, was approximately 2.140.000. Recorded contacts with primary health care centres in 2007, i.e. medical consultations, house calls and other contacts numbered about 1.570.000, or 5.0 per inhabitant. Contacts with general practitioners were 595.141, or

1.9 per inhabitant, and contacts with registered nurses/midwives were altogether 328.078, or 1.1 per inhabitant.

Contact register of self-employed specialist physicians

While detailed data on contacts in the primary health care services have been collected for several years, corresponding data from self-employed specialist physicians have been meagre. In 2007, however, the Medical Director of Health decided, pursuant to the Medical Director of Health Act, to start collecting certain data on recorded contacts of patients with specialist physicians at their clinics. The data gathered is based on the minimum data recording requirements described in the Medical Director of Health's recommendations.

In the autumn of 2007, the Medical Director of Health had obtained confirmed information that 307 physicians were self-employed in their own establishments, of whom 65 operated at two different establishments and 12 at three different establishments.

There was strong reaction among the physicians involved to the Medical Director of Health's demand for supplying data from their patient medical records. Part of them responded positively relatively soon whereas others made objections. The Directorate of Health intends to continue its efforts to improve the contact register.

The Icelandic Accident Registry

The Icelandic Accident Registry is a data bank administered by the Directorate of Health. The registration began in October 2001 with the objective of collecting and co-ordinating the registration of accidents taking place throughout the country in order to get an overall view of their number and the nature of the accidents. The data is gathered from many different sources and the number of parties supplying data has increased rapidly following the enactment of the Medical Director of Health Act in 2007. There are now close to 40 health service facilities submitting data to the Icelandic Accident Registry besides three institutions outside the health service.

Processing

Statistics from the Icelandic Accident Registry were published regularly on the web site of the Directorate of Health, as in previous years, in addition to a weekly publication of the number of accidents. In July 2008, figures for the number of accidents entered into the Accident Registry in 2007 were published, a total of 38,901 accidents.

In 2008, the Directorate of Health, in co-operation with the Public Health Institute of Iceland, worked on a study of home and leisure accidents, school accidents and sports accidents in 2005. Preliminary results were presented on a poster at a conference sponsored by EuroSafe (*European Association for Injury Prevention and Safety Promotion*) in Paris in October.

Induced Abortion and Sterilisation Registry

A total of 877 induced abortions were performed in Iceland in 2007 as compared with 893 the year before. The Directorate of Health also collects data on sterilisations pursuant to Act No. 25/1975. A total of 486 sterilisations were performed in 2006, 296 on men and 190 on women.

Registers of opt-outs

Pursuant to legislation dating from 1998 the Directorate of Health is in charge of the registration of opt-outs from the Health Sector Database. By the close of 2008, just under 20,500 had opted out of the database, and close to 50 of these had withdrawn their opt-out.

Opt-outs from biobanks are also registered at the Directorate of Health. At the close of 2008, altogether 239 opt-outs had been registered.

Registries of health care professions

The Directorate of Health maintains electronic registries on various health care professionals. So far, registries of physicians, dentists, nurses and midwives have been compiled. With specific limitations certain data from these registries are accessible on the web site of the Directorate of Health, where they are regularly updated. In addition, more detailed data are distributed on a regular basis to health service institutions and pharmacies. The registries are useful, for example, for registration at health care facilities, for monitoring, planning and statistical analysis.

By the end of 2008, a total of 2001 physicians and 367 dentists had been issued a licence to practise in Iceland. At the same time 3.989 nurses and 427 midwives had been granted a licence to practise. However, these numbers do not indicate how many people were actively employed in each profession in Iceland during the year.

Registry of health service operators

The Medical Director of Health is required by law to maintain a register of health service operators. Anyone who wishing to launch an operation as a health care provider must notify this to the Medical Director of Health and report any changes in the operation or its cancellation.

A registry of health service operators was created in 2008 and a new procedure for the method of registration and maintainance was adopted. In certain cases the same health care provider may operate at more than one establishment. In such a case each establishment is registered as a separate health service unit.

At the close of 2008, establishments providing health care services were 231.

Register on preadmission nursing home assessment (PNHA)

Management and monitoring of the PNHA register was transferred from the Ministry of Health to the Directorate of Health in late 2006. As of 1 January 2008, the PNHA committees (see Ch. II) have been responsible for entering data into the register. The items entered in the register include date of assessment, social status, physical and mental health, abilities, illnesses, the applicants preferences, etc. Various statistics can be retrieved from the register, e.g. the number of individuals on the waiting list for residence in nursing homes at each time, classified by region, age, gender etc.

Issuing health statistics

Health Statistics Web Browser (*Heilsuvelsja*) – Health data warehouse

The development of a data warehouse containing health statistics continued in 2008. The warehouse mainly uses data from the Directorate of Health data bases but data from Statistics Iceland and the Ministries of Health and Social Affairs and Social Security is also included. *Heilsuvelsja* presents data on maps and in tables in order to facilitate geographical comparison. It also allows some flexibility in data presentation as users can choose to view information by years, age groups, gender and even institutions. The web browser was officially launched in May 2009.

Talnabrunnur, a newsletter in Icelandic on health statistics

A monthly newsletter in Icelandic on health statistics has been published by the Directorate of Health since October 2007 under the name *Talnabrunnur*. The newsletter is intended to supplement the statistics issued by the Directorate, mainly on the Directorate's web site, but also in occasional printed versions.

Recommendations on minimum data recording requirements in health care centres and private physicans' clinics

In the beginning of 2008, the second edition of *Recommendations on minimum data recording requirements in health care centres and private physicans' clinics* was published. It contains more detailed definitions of registration items than the older version of 2002. The Minister of Health confirmed the recommendations, thus giving them the status of instructions as prescribed in the Medical Director of Health Act.

Classification systems

The international classifications of the World Health Organisation (WHO) are used to co-ordinate registration and processing of health data. The Medical Director of Health is responsible for the supervision of classification systems in Iceland.

An update of the NCSP-IS was completed in 2008 as was NANDA, the diagnosis code for nursing. Updates of other classification systems were prepared, all of which require extensive consultation with medical professionals, both physicians and nurses.

Maintaining classification systems involves considerable translation work. The translation of the *International Classification of Functioning, Disability and Health, ICF*, was completed in 2008 after several years of work by a contractor. The translation of part of the *International Classification of Primary Care, ICPC*, was under way.

Classifications browser

The biggest project in 2008 was the design and testing of software for a new way to access classification systems on the web by means of an independent web browser (www.skafli.is) that offers a centralised access to all the health care classifications. The new web browser was opened in late November and will soon be connected to hospital information systems.

V. COMPLAINTS

According to law the Medical Director of Health Act is required to address complaints concerning the dealings of the public with health care providers. The role of the Medical Director of Health is to render a professional opinion in cases that arise. The public has several other channels for complaints concerning health services. Decisions of the Medical Director of Health may be referred to the Minister of Health.

A complaint is registered as such if it leads to an investigation by the Directorate of Health. A total of 282 complaints were received by the Directorate of Health in 2008, as compared with 274 in 2007.

The cases involved vary in scope and seriousness, ranging from minor communication problems to serious medical errors. The greatest number of complaints involved wrong or insufficient treatment, in all 89 complaints.

Solutions and actions

In the beginning of February 2009, resolutions had been reached in 207 cases from the year 2008, while 75 of the 2008 cases were still in progress. Of the completed cases, 49 had been partly or fully substantiated.

In 2008, no health care professional was subjected to licence suspension, while four received a formal reprimand. Reprimands from the Medical Director of Health were 21. The most lenient action by the Medical Director of Health is a reminder that improvements are called for, an action that was applied in 38 cases. In 127 cases no action was taken.

VI. PUBLIC HEALTH AND PRIMARY CARE

The Directorate of Health is responsible for policy making and advising the health authorities with regard to public health. Among other things, the Directorate has developed guidelines in this respect in co-operation with primary health care professionals and the Icelandic universities. In addition, the Directorate co-operates with the Public Health Institute of Iceland in matters concerning first-stage prevention and health promotion. The Medical Director of Health sits on the National Public Health Committee.

Collaboration projects on prevention and public health

Among projects of the Directorate of Health on prevention and public health in 2008

1. *Antenatal care.* Clinical guidelines on antenatal care of healthy pregnant women were published in July.
2. *School health care.* Emphasis on health education to promote and encourage a healthy lifestyle among school children. The campaign stressed health, rest, physical activity, cleanliness, happiness, and courage and sexual health.
3. *Primary health services for infants and toddlers.* A draft manual on primary health services for infants and toddlers was published in October. It had been under preparation for several years in co-operation with child care experts. It recommends certain changes in the organisation of infant and toddlers' care, mainly concerning key age examinations. The draft manual was published on the Directorate' web site and will be finalised when experts have given their opinion on its contents.
4. *Child obesity.* Following a conference in 2007, an advisory board was appointed to submit proposals on measures to prevent child obesity and give treatment to overweight and obese children. The advisory board submitted proposals in June 2008.
5. *Advice on physical activity.* The Directorate co-operated with the Public Health Institute of Iceland and a number of experts to publish evidence-based advice on the importance of physical activity.
6. *Tanning beds.* An awareness campaign to warn youngsters and their parents of the dangers of using tanning beds was kept up for the fifth year in a row, with particular aim at children aged 13–14 years, just before they have their confirmation. Surveys have shown that there has been a reduction in tanning-bed usage among young people in the past few years and local councils have stopped offering tanning-beds in their public sports facilities. It is hoped that the continued campaign will further reduce tanning-bed usage.
7. *Mental health.* The Directorate of Health took part in two events arranged to raise awareness on suicide prevention and mental health promotion. The first one was the World Suicide Prevention Day on 10 September 2008 and the second one a month later, on 10 October, was a conference focusing on the mental health of young people on the occasion of the World Mental Health Day.

Suicide prevention - the Icelandic Alliance against Depression

The prevention programme *Icelandic Alliance against Depression* has been operated since 2002 with the aim of reducing the rate of suicide in Iceland, increasing the skills and knowledge of professionals concerning depression and suicide, and raising the awareness of the public on depression and suicidal behaviour with the objective of reducing prejudice.

It was decided in 2007 to focus on the mental health of children and adolescents. In co-operation with several organisations in this field a new web site was prepared with education and information on the psychological welfare of children and their families. The web site (www.umhuga.is) was officially opened in early October. At the same time posters and other printed material to promote the web site were published.

Education

The basic courses designed and developed by the project manager and advisory board of the *Icelandic Alliance on Depression* continued to be provided to physicians, nurses, psychologists, social workers, ministers of the church and the police, in addition to educational and vocational counsellors

and teachers. *Train the Trainers* is another type of training programme intended for professionals to prepare them for disseminating specialised knowledge within their local communities. Courses continued to be held in co-operation with the Red Cross, the Bishop's Office and other interested parties.

In collaboration with the psychiatric unit of the Landspítali University Hospital (LUH), the first a one-year course was completed in 2008 for training employees of the psychiatric division in using systematic support measures for children living with parents (one or both) suffering from mental disorders. The course was based on the teachings of child psychiatrists W. Beardslee and Tytti Solantus.

For educating the public, articles from members of the advisory board appeared in newspapers and magazines and members also appeared on radio and television programmes to discuss mental health issues. Finally, lectures were held at conferences and symposiums, both in Iceland and abroad, on the prevention of suicide, depression and other mental disorders.

International co-operation

The Icelandic Alliance Against Depression is a founding member of the *European Alliance Against Depression* (EAAD), an organisation of 16 European nations. The Alliance has received a grant from the European Union for the prevention of depression. During the year, the *Icelandic Alliance Against Depression* participated in a Nordic collaboration project designed to enhance the services available to parents with mental disorders and their children.

Grants

At the close of 2008, the Ministries of Health and of Social Affairs and Social Security and two labour unions allocated handsome grants to *the Icelandic Alliance Against Depression*.