



Reportable diseases in the autumn of 2017

Sexually transmitted diseases still on the increase

The increase in the number of cases of gonorrhoea and syphilis over the past three years continued in the autumn of 2017. The number of chlamydia cases in 2017 was similar to that of the previous years, and the number of HIV infections was also similar to that of 2016, a year when an unusually great number of HIV cases was diagnosed (see figures 1–4).

Syphilis

The increase in the number of syphilis cases detected in 2017 (see figure 3) is far beyond what has been reported in recent years. In 2017, a total of 38 individuals were diagnosed with syphilis, 30 men (79%) and eight women (21%). The proportional number of men diagnosed with the disease is similar to that of recent years. The average age of those infected was 34 years (age range 20–70 years). Eleven individuals were foreigners (29%). Although the disease is primarily associated with men who have sex with men it is also diagnosed among women, two of whom were diagnosed in maternity care. This serious disease may, among other things, cause fetal injury.

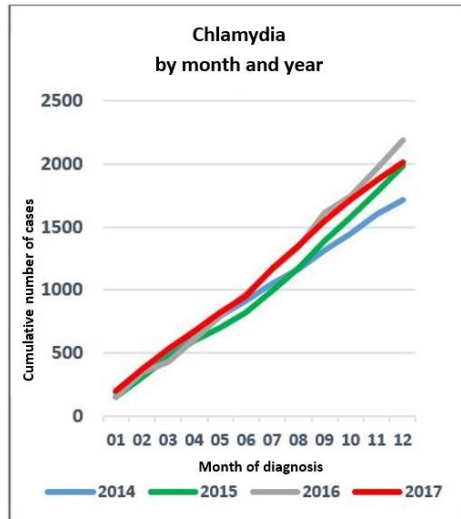


Fig. 1

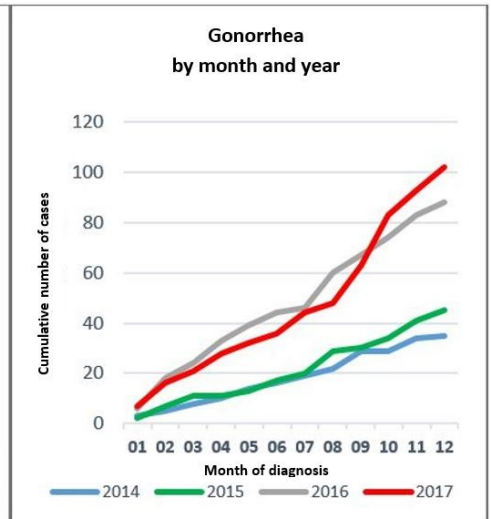


Fig. 2

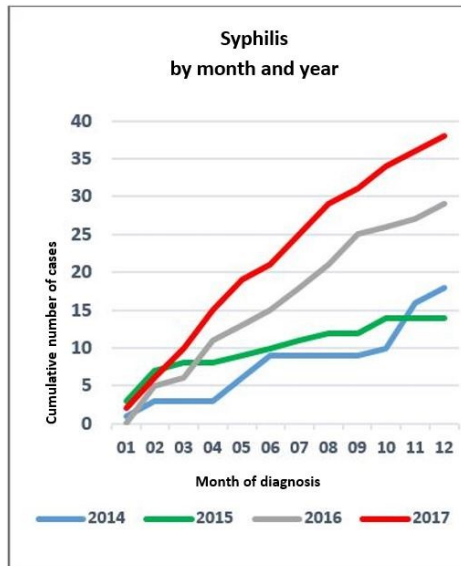


Fig. 3

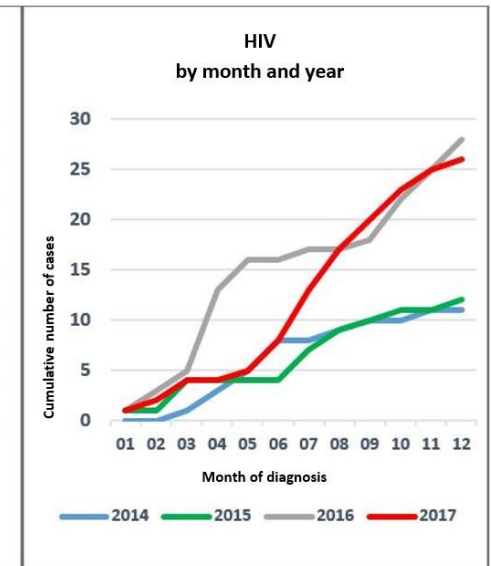


Fig. 4

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HIV infection

A total of 27 individuals were diagnosed with HIV infection in 2017. The average age of the infected was 35 years (age range 16–59 years). Among those diagnosed during the year three were women and 18 were foreigners (67%). Risk behavior associated with the infection involved homosexuals in 13 cases, heterosexuals in eight cases and drug users in five cases. In one case risk factors were unknown.

Working group on measures against STDs in Iceland

As previously mentioned in Epi-Ice, the Minister of Health appointed a working group in March 2017 with the task of making proposals for measures to contain the spread of sexually transmitted diseases (STDs) in Iceland. The working group has now completed its work and has submitted its proposals to the Ministry of Welfare. Hopefully, it will soon be possible to implement the many recommendations proposed by the group.

Measles

In the spring of 2017, measles were detected in Iceland in a nine-month-old child who had travelled to Thailand. A number of people had to a varying degree been in close contact with the child during his illness. The majority of these individuals were vaccinated, but unvaccinated subjects were offered vaccination that most of them accepted.

The baby's twin brother fell ill with measles in Iceland two weeks after his brother was taken ill. The two brothers were unvaccinated because of their young age. This is the first time in about a quarter of a century that a measles transmission has occurred in Iceland. The brothers recovered and no



Measles
Picture: CDC

further transmission related to these patients took place in Iceland, an indication that herd immunity in Iceland is acceptable.

An Icelander working in Bangladesh was taken ill at the end of October 2017 with respiratory symptoms, but recovered in a few days. After returning to Iceland in November 2017, there was a rash on his face, throat and chest without any other symptoms. The measles virus could be diagnosed in the patient with the help of polymerase chain reaction (PCR). The patient had a history of adequate vaccination against measles and the antibody response was potent, leading to mild non-characteristic clinical picture. No transmission of the virus from the patient was detected in Iceland.

Dengue

In November 2017, a young man returned to Iceland after staying in the Philippines. He became ill on his way back home with fever, tremor, diarrhea and general weakness. There was no noticeable bleeding, but the patient complained about occasional numbness in both legs below the knees. Dengue was confirmed by blood test. The disease has been diagnosed once before in Iceland in a pilot who had

stayed in the Philippines and Papua New Guinea in 2013.

Dengue is a virus disease transmitted by mosquitoes and is endemic in tropical countries and regularly appears in epidemics. The disease causes a great disease burden, infects tens of millions of people and draws tens of thousands of people to death every year. As mosquitoes do not thrive in Iceland, the disease is not transmitted in Iceland. There is no vaccine against the disease, nor is there a specific drug treatment. It is important to avoid mosquito bites as much as possible and helpful to know that the mosquitoes (*Aedes aegypti*) carrying this disease bite by day.



Aedes aegypti
Picture: ECDC

Hepatitis A

In 2017, five people were diagnosed with hepatitis A in Iceland, a disease that had not been diagnosed in anyone in the last four preceding years. Four of them were men who had sexual contacts with other men. Those cases were associated with an epidemic of hepatitis A which is currently taking place in Europe, especially among men who have sexual

contacts with men. Hepatitis A is transmitted through fecal contamination of foods or liquids and there is no treatment available for the disease. The best prevention against the disease is vaccination plus general hygiene in food

and fluid intake. The Chief Epidemiologist encourages all those travelling abroad, and especially men who have sex with men, to be vaccinated. Hepatitis A is usually a harmless disease

that is cured without treatment, but occasionally it may cause severe liver damage.

Gastroenteritis in the autumn of 2017

Outbreaks of gastrointestinal infections were pronounced in 2017. In August, there was an outbreak caused by norovirus among scouts. Of more than 180 people who camped at the Outdoor and Scout Centre at Úlfjótuvatn, 81 became ill. The virus was not found in the environment and therefore the disease was probably transmitted between people because of the crowded conditions at the centre.

At the end of August, there were outbreaks of gastrointestinal infections among 130 employees of two primary schools in the capital area that were believed to be caused by the bacterium *Aeromonas hydrophila*. The infection was considered traceable to unwashed salads that were served with meals at the two schools.

In mid-November 2017, there was an outbreak of gastrointestinal disease among employees of an international company with headquarters in Reykjavik. Out of about 200 employees, 50 suffered from diarrhea, abdominal pain, fever and in some cases vomiting. The symptoms usually lasted for three to six days and no one needed hospitalisation.

Detailed bacterial, parasitic and viral studies did not reveal the cause of the disease. A case-control study was initiated by the Chief Epidemiologist to investigate whether the illness was related to a particular food or drink. At

the same time, the Reykjavik Sanitation Inspection examined conditions within the company. These studies did not reveal any cause that could explain this outbreak.

Salmonella infections

Infections caused by salmonella increased considerably in 2017 compared to previous years.

Part of the explanation is that ten people with gastrointestinal infections caused by the bacterium *Salmonella typhimurium* were identified during that year, which is an increase beyond what is to be expected. Eight of them were identified in the autumn of 2017, and the infections appeared to be of domestic origin. Studies of these bacteria revealed the same strain in seven of the cases, while one patient (a three-year-old child in the town of Mosfellsbær) had another salmonella strain which had been detected earlier in a pig farm in Iceland. These bacterial strains are not related to *S. typhimurium* infections found in the Nordic countries at the same time.

An explanation of the domestic cases has not yet been identified with the exception of the infection in the above-mentioned child, which may possibly be attributed to the pig farm already referred to.

The Icelandic Food and Veterinary Authority is investigating that matter.

In early November 2017, infections caused by *Salmonella poona* were found in a family in the capital area. The father was infected but asymptomatic, whereas his wife and daughter had diarrhea and the daughter had to be admitted to hospital. The family had not been staying abroad and were therefore infected in Iceland. In August 2017, this salmonella was grown in a dust sample from soya meal that may have been given to pets. However, this contamination could not be connected to the infection of the family. The most recent diagnosis of *S. poona* occurred in 2008 among in the residents of a group home for the elderly in the capital and its employees.

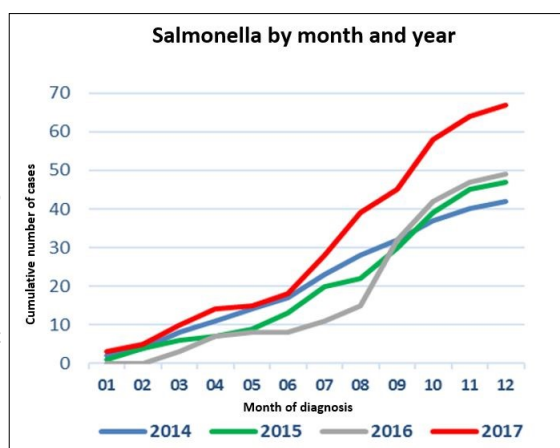


Fig. 5

Listeriosis

Unusually many, or seven individuals, were diagnosed with listeriosis in 2017, which is caused by the bacterium *Listeria monocytogenes*. Four of these patients died, three of them elderly people with underlying conditions, while one was a newborn child. The infections were considered domestic in six of these cases.

The bacterium can be found in unpasteurized milk and its products, in raw fish and in vegetables. The infection may severely affect people with an impaired immune system, neonates and older people. The first case of listeriosis was described in Iceland in 1978. In 1997, listeriosis was declared a reportable disease. In the years 1997–2016, the number of cases was 19, or about one case per year on

average, although the distribution was uneven. In the years 2015 and 2016, no one was identified with the disease. An investigation into the causes of these infections is ongoing.

According to information obtained from the European Centre for Communicable Disease Control and Prevention (ECDC), listeriosis caused by genetically related *L. monocytogenes* strains has been identified in Austria, Denmark, Finland, the UK and Sweden.

It seems likely that the infections in Europe can be traced to frozen pre-packaged vegetables that have been in circulation since 2015, but further results from investigations are expected. Efforts are being made to investigate if the Icelandic bacterial strains are related to the European strains.

Shigellosis

At the end of November 2017, a child was diagnosed with shigellosis (infection due to *Shigella sonnei*) infiltration in a preschool in Grindavík. At that time some of the children and employees at the school had gastrointestinal symptoms, mostly vomiting, but the cause could not be identified. The Sanitation Inspection of Suðurnes Region explored the preschool and advised on hygiene. The origin of the shigellosis could not be traced and the child in question had not been abroad. Shigellosis has now become rare in Iceland. In 2014 and 2015, one case was diagnosed each year, both of foreign origin.

Influenza in the autumn of 2017

In the last two weeks of 2017, there was an increase in the number of reports on influenza-like symptoms from primary health care centres and emergency wards. At the same time, admissions of patients with confirmed influenza to Landspítali University Hospital (LUH) increased.

The first cases of the seasonal influenza were diagnosed in August and September at LUH. This was a limited outbreak and influenza cases were few until mid-December. In the beginning, the influenza virus of the A (H3) strain dominated but by the end of the year, influenza of B-strains were increasingly detected.

It is possible that the antigens in the vaccine that has been used in this country against some of the B-strains are inadequate.

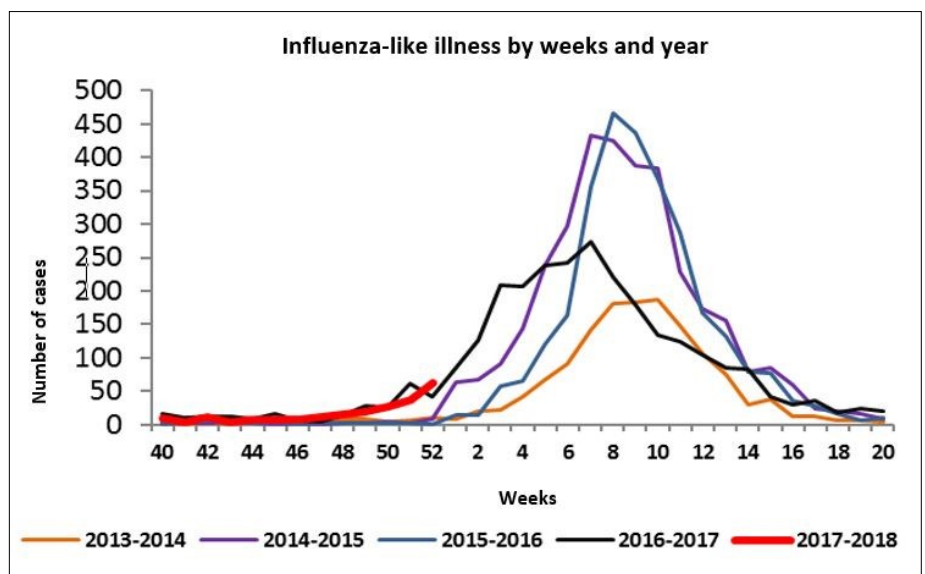


Fig. 6

Impact of imports of fresh food on human health

The Consumers' Association of Iceland and the Federation of Trade and Services held an open breakfast meeting on 7 December 2017 on the outcome of the EFTA Court on food imports and its impact on consumers.

At the meeting, Thorolfur Gudnason, the Chief Epidemiologist for Iceland, discussed the potential risks to human health that may arise from the import of fresh food.

The Chief Epidemiologist concluded that it was difficult to claim that the health risk in Iceland from fresh food imports was high and pointed out that the incidence of salmonella and campylobacter infections in humans was

not significantly lower in Iceland than in some European countries. Furthermore, he said that antimicrobial resistance was not noticeably lower in Iceland than in some European countries. There was no direct link between food contamination and the incidence of infection, based on available data.

Nevertheless, there is reason to worry about campylobacter contamination in fresh chicken and salmonella in eggs that would be imported to the country.

It is important for Iceland to implement the European Union Decision No. 2013/652/EU on the control of

fresh foods such as meat and vegetables. Should there prove to be a higher level of pollution in imported food than in domestic food, resources must be made available for reassessing those imports.



Response and response plans

The national emergency response plan *Communicable Disease Control for International Airports* was recently launched on the website of the Directorate of Health, a publication that has been under preparation since April 2017. The plan covers the international airports in Iceland, i.e. Keflavik, Reykjavik, Egilsstaðir and Akureyri airports. Implementation of the plan took place in October 2017, followed by a short desk-top exercise.

The emergency response plan is based on a plan that was made for Keflavik Airport in 2015 and practised that same year.

The main changes from the earlier plan involve defining the role of aviation operators as well as the roles of the regional sanitation authorities, the Icelandic Tourist Board, the Icelandic Food and Veterinary Authority, the Icelandic Radiation Authority, the Environment Agency of Iceland and the Icelandic Transport Authority.



Template for health care preparedness and response plans

Templates for health care preparedness and response plans are tools that help health care institutions develop their own action plans.

A template for a health care response plan in case of mass casualties was published in 2009. The project was awarded a quality grant from the Ministry of Welfare, and subsequent health care response plans have been made in accordance with this first template.

A new and restored version has now been published, a project that was conducted in collaboration with the Chief Epidemiologist, the Department of Civil Protection of the National Commissioner of the Icelandic Police and Landspítali University Hospital.

The new template is much broader in

scope than the previous one and addresses response by health care institutions in case of mass casualties, natural hazards, pollution, epidemics, poisoning, interruption of operations and events of unknown causes. Health care institutions are encouraged to save these response plans to the home page of their public websites.

Preparations for potential volcanic eruptions

Since the Department of Civil Protection has declared an uncertainty phase due to a potential eruption in Öraefajökull, it was decided to update guidelines on ash fall and public health in cooperation with organisations with an interest in this matter.

These guidelines were first made in the spring of 2010 when ash from the eruption in Eyjafjallajökull covered the nearby settlement.

According to these guidelines, residents in areas affected by ash fall are encouraged to prepare themselves and their homes, for example by collecting equipment in special bags, such as masks or “buffs”, goggles and water bottles, since there is a possibility of water contamination during ash fall.

Healthcare institutions are encouraged to save response plans to the home page of their public websites.



Child vaccination day

On 1 November 2017, a Child Vaccination Day was held at the Grand Hotel in Reykjavik for health care workers in Iceland. The importance of child vaccination, its legal basis and the introduction of new vaccinations were discussed. Other topics included adverse reactions of vaccinations and contraindications, the registration of child vaccinations and attitudes of expectant parents to their child's vaccination as well as the education of parents in this respect. There was a great deal of discussion on measures needed to improve still further the participation of children in the childhood vaccination programme.

The vaccination day was very well attended, with some 140 health care workers participating.



Infection Control Day 2017

On 10 November 2017, the Infection Control Day was held for the second time, marked by a meeting of regional and local epidemiologists and the staff of the Chief Epidemiologist.

Various issues relating to disease prevention and control were discussed, among them the powers of the Chief Epidemiologist, antibiotic resistance and participation in the childhood vaccination programme. Other topics discussed were Response plans and guidelines regarding the investigation of food and waterborne infections.

The response to the infection outbreaks in late summer 2017 was reviewed, on one hand the outbreak among scouts at the Úlfjótsvatn scout centre and, on the other hand, the food borne infections at two primary schools in the capital area,

cf. above, p. 3.

Measures to improve work processes, networking and collaboration between the Chief Epidemiologist and the regional and local epidemiologists also came under discussion.

The first Infection Control Day was held two years ago, but in future it is planned to hold such a day once a year.



Actions to promote the prudent use of antimicrobials

In recent years, the consumption of antimicrobials has been high in Iceland in comparison with the other Nordic countries, although about average with regard to all European countries.

Non-prudent use of antimicrobials is believed to cause antibiotic resistance in bacteria. Therefore, it is important to promote sensible use of antibiotics.

In 2017, an effort was launched within the Primary Health Care of the Capital Area in collaboration with the Chief Epidemiologist



and the Department of Microbiology at the Landspítali University Hospital with the aim of promoting the prudent use of antibiotics. The initiative is inspired by a Swedish model (*Strama*) and will also cover other health care areas and medical specialists in the coming months. The Chief Epidemiologist will monitor the success of the effort in the coming years.