



Sexually transmitted diseases

In the first five months of 2019, 727 people have been diagnosed with chlamydia infection, of whom 329 were males and 398 were females, 56 were diagnosed with gonorrhoea, of whom 49 were males and 7 were females, 19 were diagnosed with syphilis, 17 males and two females. Nine people were diagnosed with HIV infection, seven of whom were males and two were females, all of them foreign born.

The incidence of chlamydia infections is currently lower compared to previous years, and HIV infections were mainly diagnosed among foreigners. Many of those diagnosed upon arrival in the country have a known HIV infection and are already on anti-retroviral treatment before they arrive.

It is noteworthy that gonorrhoea and syphilis are on the rise and that both diseases are especially noticeable among males. As often observed before, these sexually transmitted diseases (STDs) are different from chlamydia in terms of sex ratio as women form the majority of those diagnosed with chlamydia. If success is to be achieved in reducing the number of STDs, the number of sexual partners

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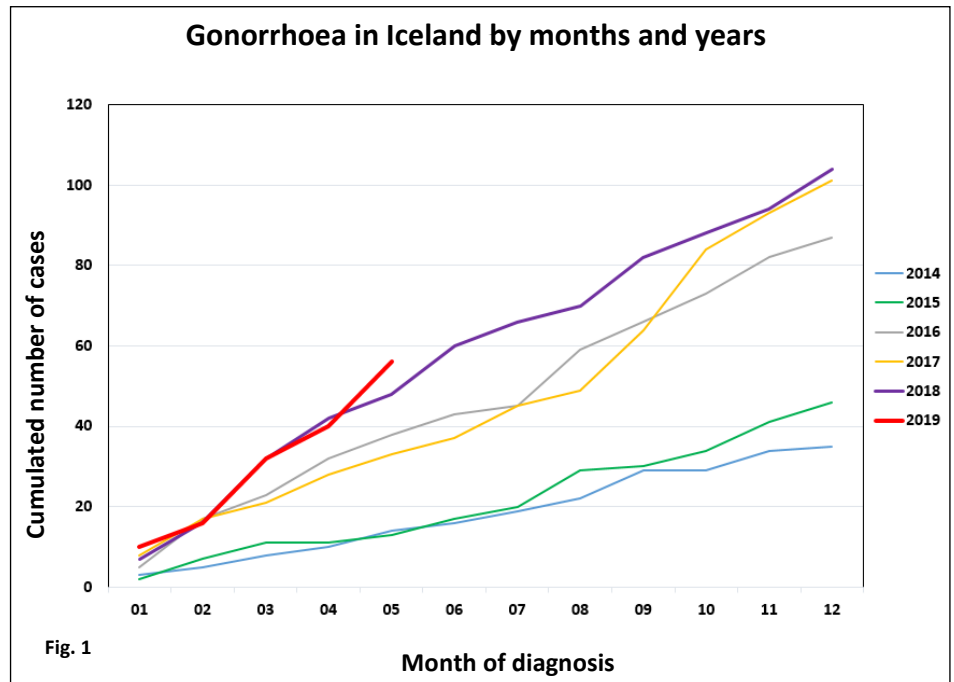


Fig. 1

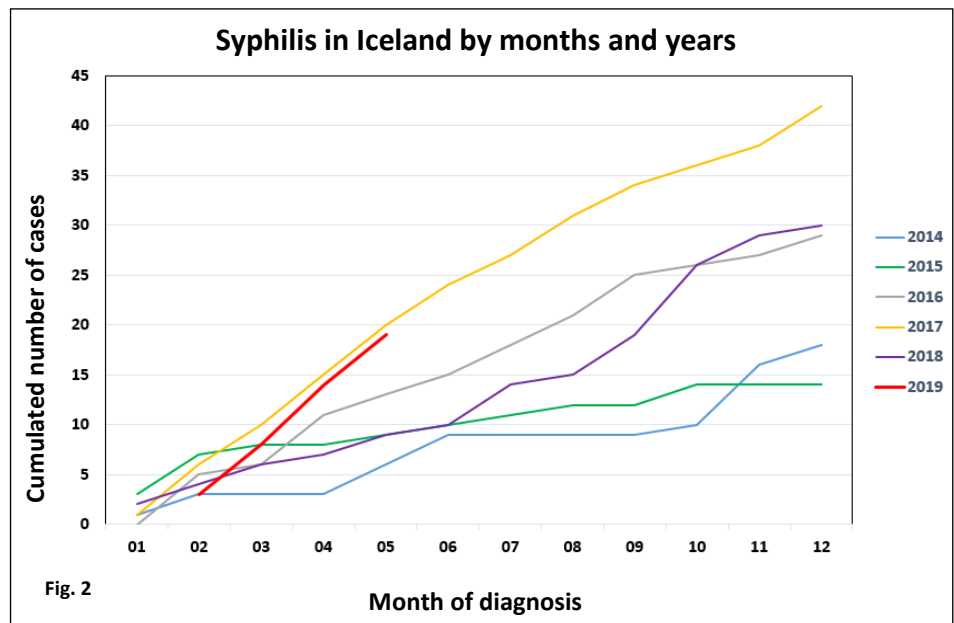


Fig. 2

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must be reduced, condoms must be used for sexual intercourse and, on suspicion of an STD infection, medical advice must be sought immediately, so that treatment can be started as soon as possible, thus reducing the time of the communicable period. An action plan is being worked on to respond to the spread of sexually transmitted diseases.

Changes in notification and reporting of communicable diseases

The Minister of Health has made some amendments to Regulation No. 221/2012 on reporting on communicable diseases and other threats to public health. The entire regulation with amendments can be accessed on the [website of the Directorate of Health](#). The Regulation specifies infectious diseases or diseases due to toxic chemicals or radioactive substances that are subject to notification (notifiable diseases) and, should they pose a threat to public health, they are also subject to reporting (reportable diseases). In accordance with the International Health Regulations (IHR-2005), any events that could have serious health consequences among the world's nations, including events of unknown cause or origin, are to be registered.

The obligation to notify a disease refers to the obligation to send data on illnesses to the Chief Epidemiologist without personally identifiable infor-

mation, while the obligation to report an illness means the obligation to submit data on the illness with personally identifiable information. Notifications and reporting of such illnesses form the basis for monitoring and, where appropriate, for the response to them by the Chief Epidemiologist. The amendments made to the regulation this time included the transfer of reportable health care-associated infections to the category of notifiable diseases. A few diseases have also been added to the category of diseases subject to reporting, such as zika-virus infection, dengue and chikungunya, which is in accordance with the European Union's definition of a disease that applies in the European Economic Area.

HIV infection is subject to reporting as before. Attention is drawn to the fact that AIDS, which is the final stage of HIV infection, is a condition subject to reporting.

Additions to the childhood vaccination programme in Iceland

Vaccination against pertussis during pregnancy

The Chief Epidemiologist now recommends the vaccination of pregnant women against pertussis (administered with a vaccine combined with diphtheria and tetanus vaccines). The vac-

cination shall be free of charge.

Pertussis is quite common in Iceland, despite good participation in the national childhood vaccination programme. It is diagnosed here to some extent most years, but slight peaks occur every two to five years. However, this is far from the big epidemics that occurred in Iceland until after the middle of the last century, before the childhood vaccination programme against pertussis was introduced. For the past 10 years, children under the age of 6 months have been diagnosed with pertussis cough most years, over half of them under the age of 3 months when falling ill, and some of them have been admitted seriously ill to hospital.



The last dose of pertussis vaccine given as part of childhood vaccinations in Iceland is at the age of 14 years. The vaccine now used, the so-called acellular vaccine, usually provides 5–10 years of protection and therefore most adult individuals in this country are susceptible and can transmit the infection to new-borns who have not been vaccinated.

Pertussis infection in older children and adults is usually in the form of common colds with little to indicate a potentially dangerous infection, although the typical cough attacks often

accompanying the disease facilitate a diagnosis. However, very young children may experience severe coughing with life-threatening respiratory arrest that causes them to succumb to the disease so that they need respiratory assistance in an intensive-care or emergency room. If a mother has been vaccinated during the second or third trimester, she forms a protective antibody that the placenta transfers to the child from the age of 32 weeks. The antibodies can protect a child from birth until about 6 months of age, at which time most children that are vaccinated according to the childhood vaccination programme in Iceland have formed their own protection against whooping cough. Antibody production following a pertussis vaccination gradually fades and therefore it is not desirable to vaccinate pregnant women very early in their pregnancy.

Vaccination against chickenpox

The Chief Epidemiologist is now preparing to start general childhood vaccination against chickenpox, also called as varicella, in 2020. It will be offered free of charge for all children born 1 January 2019 or later. Chickenpox is a very common childhood disease in this country. Results of a study published in 2009 showed that almost all Icelandic children have had chickenpox by the age of ten and about half by the age of four. The disease is caused by a virus that persists in the body after the disappearance of any symptoms of the disease and can spread later in the form of shingles, a rash that can cause severe pain, sometimes for weeks. If shingles appears in the eye, it can cause blindness. Shingles may occur repeatedly in the same person.

Most children do not become seriously ill from varicella but usually the disease lasts for about a week with subsequent parental loss of work. It is also quite

common for the ulcers after the varicella to become infected, leading to medical visits and medication costs. Some children get the virus in the brain, liver or lungs and the disease can become much more severe with such infections. Deaths are rare among previously healthy children, but they do occur. Vaccination against varicella significantly reduces the risk of the disease and thus the likelihood that a vaccinated person will develop shingles in the future.

Vaccine against varicella has been on the market in Iceland for over 20 years but it was used in a small measure to begin with. In recent years, however, parents have increasingly bought this vaccine for their children and by now over 10% of preschool-aged children have completed varicella vaccination. It is too low a proportion to reduce the regular epidemics that we see in Iceland, but through national childhood vaccination it is hoped that the epidemics will be significantly reduced and may disappear over time if participation is good.



Antibiotic-resistant bacteria

There has been much discussion recently about the danger that antibiotic-resistant bacteria in fresh foods can pose to humans. Although it is known that bacteria (antibiotic-sensitive and antibiotic-resistant) can be transmitted from food to humans, the measure of the risk is unknown. Discussion on the subject in recent years has centred on the risk being limited to antibiotic-resistant bacteria in food produced abroad and not in Icelandic production. Up to now, however, it has not been known to what degree antibiotic-resistant bacteria are present in fresh foods produced in Iceland or in foreign foods entering the local market. Recently, results have been published of studies that highlight the presence of antibiotic-resistant bacteria in freshly imported as well as Icelandic foods.

The results of a study conducted in June 2018 revealed that antimicrobial resistance was slightly higher in imported than in Icelandic vegetables, while no resistant bacteria were found in imported or Icelandic berries. According to a report from the Icelandic Food and Veterinary Authority published in May 2019, antibiotic-resistant bacteria have been found in recent years in 4.7–7.3% of Icelandic pig carcasses (appendices), and in 0.6–6.2% of chickens. In addition, these resistant bacteria were found in almost 4% of Icelandic lamb carcasses. In 2018, however, no antibiotic-resistant bacteria were found in pork in the market (domestic and foreign production). In Icelandic chicken meat, the above resistant bacteria were found in

over 1% of cases while foreign production was not investigated. However, no resistant bacteria were found in domestic or foreign beef. According to the same report, more than 5% of cats and dogs in this country carry these resistant bacteria and almost 10% of all animals originating from abroad were found to carry the bacteria. These



results show that antibiotic-resistant bacteria are not restricted to foreign food production alone, although their frequency may be slightly higher than in Icelandic production. It is therefore important to monitor antibiotic-resistant bacteria in both foreign and domestic production.

Measures against the spread of antibi- otic-resistant bacteria

Various international organisations have declared that antibiotic resistance is one of the major health threats to the human race today. Although there is less antibiotic resistance in Iceland than in most countries, it is important that all available remedies in Iceland are taken as soon as possible in order

to counter further dissemination.

In 2017, a Working Group appointed by the Minister of Health submitted proposals for measures aimed at curbing dissemination of antibiotic resistance in Iceland. In February 2019, the Minister of Fisheries and Agriculture and the Minister of Health signed a declaration stating that the Working Group's proposals constitute a public policy in this issue.

Last May, the Prime Minister announced that the government had adopted comprehensive measures aimed at curbing the spread of antibiotic resistance. The actions were carried out by a Steering Committee, which included the Chief Epidemiologist, Chief Veterinary Officer and a representative from the Ministry of Agriculture. The group's main proposals were:

- Form a team of experts across organisations dedicated to the defence of antibiotic resistance.
- Establishment of an "Antimicrobial Resistance Fund" which would have the role, among other things, to facilitate the screening and monitoring of antibiotic resistance in animals, food, environment and feed.
- The Database "Health" should be updated to keep records from veterinarians on the use of antibiotics in livestock.
- Two specialist groups of experts should be appointed who, on the one hand, should prepare contingency plans when antibiotic-resistant bacteria are detected in animals, slaughter products and foodstuffs and, on the other hand, prepare guidelines for the sensible use of antibiotics in animals, including drugs against parasites.
- Ensure the co-operation of ministries in policy-making aimed at reducing the risk of spreading antibiotic-resistant bacteria through tourists.

- Spend ISK 45 million on the above projects in 2019 and the government will secure the funding for these projects in the future.

With this approval of the government, the Icelandic authorities have made an ambitious commitment to prevent the spread of antibiotic resistance. These measures are also well in line with those carried out internationally, in which Iceland is an active participant

