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## Health Security and Infection Control, What is up?

### Publication of Epi-Ice resumed and changes in personnel

With this issue the publication of Epi-Ice has been resumed after an interval of four years. In February 2005, the Chief Epidemiologist started publishing a newsletter called Epi-Ice. It was published for seven years until October 2011, to begin with as a monthly publication while less frequently towards the end. The plan is to make the newsletter a quarterly publication from now on. The reason for the disruption in the publication of Epi-Ice was a shortage of manpower at the Centre for Health Security and Communicable Disease Control at the Directorate of Health after the merger of the Public Health Institute of Iceland with the Directorate of Health in 2011. The disruption in the publishing of Epi-Ice has been criticized by many, among them the ECDC.

This year has seen a number of changes in personnel at the Centre. Dr Thorolfur Gudnason has been appointed Chief Epidemiologist for Iceland, succeeding Dr Haraldur Briem who retired 1 September 2015. Dr Briem will continue as Special Advisor to the Chief Epidemiologist. Ms Thorbjörg Gudmundsdottir, RN, MSc, who has worked on the implementation and



Thorolfur Gudnason



Haraldur Briem

supervision of the National Vaccination Programme, and Ms Sigurlaug Hauksdottir, MA, Chief Social Worker, who worked with people living with HIV/AIDS and on education on STDs, have also terminated their positions after many years of successful employment. Ms Iris Marelsdottir, physiotherapist, MSc, was engaged early this year to work on preparedness plans for health security and communicable disease control.

In spite of a reduction in the number of the Chief Epidemiologist's staff it is hoped that organisational changes at the Directorate of Health will make the resumption of the publication of Epi-Ice sustainable.



From a symposium held in honour of Dr Haraldur Briem on the occasion of his leaving office.

The symposium was held at Landspítali University Hospital 22 June 2015.

To Briem's left is Birgir Jakobsson, the Director of Health, and to his right his successor, Thorolfur Gudnason.

*According to the new order, there are now seven Regional Epidemiologists serving the same number of Regions for Containment of Communicable Diseases.*

### Regional Epidemiologists

In the beginning of this year, a new order of Iceland's police districts was adopted, reducing their number from fifteen to nine. Previously, the regions for containment of infectious diseases were identical to the police districts because of the cooperation between the Regional Epidemiologists and the District Police Commissioners regarding public health measures.

In accordance with this change of the police districts, the Minister of Health has appointed seven Regional

### Regions for Containment of Communicable Diseases



Epidemiologists who report to the Chief Epidemiologist.

### Preparedness plan for epidemics, toxic and radioactive substances, and other unexpected events at Keflavik International Airport

A preparedness plan for health security and infection control for Keflavik International Airport was signed on 9 July 2015. The plan was made in cooperation with Isavia, the company providing services in the air and on the ground, and the Department of Civil Protection at the National Commissioner of Police. The aim of the plan is to ensure systematic and coordinated response when it comes to public health security measures.

The Chief Epidemiologist is responsible for activating the plan and, under certain circumstances, also the Regional Epidemiologist of the Health Care Southwest and the Department of Civil Protection at the National Commissioner of Police. In November 2015, a command centre exercise will be held at Keflavik Airport to test the response to a suspected infectious disease on board an airplane arriving in the country or at the Keflavik Airport terminal.

*The Chief Epidemiologist is responsible for activating the preparedness plan for health security and infection control for Keflavik International Airport.*



Cover of the Preparedness Plan for Health Security and Infection Control for Keflavik International Airport, published in July 2015.

*According to figures from WHO, 28.280 patients were diagnosed with Ebola and of these 11.295 had died as of 21 September 2015.*

### Preparedness plan for pandemic influenza

A comprehensive preparedness plan for pandemic influenza was made in 2006. The plan covered the health care sector and important activities supporting social infrastructure. The preparedness plan was activated on high alert in the second half of 2009 due to the influenza pandemic AH1N1. Presently the second edition of

the plan is being prepared. The editorial board consists of representatives of the Chief Epidemiologist and the Department of Civil Protection at the National Commissioner of Police. The final edition of the plan will be revised in November and signed in the beginning of 2016.

### Epidemiological reports

Epidemiological reports for 2013–2014 will be available on the website of the Directorate of Health shortly. The reports give

an overview of epidemics in the past years and decades with historical information as appropriate.

### Epidemics and other events in 2015

#### Ebola

The Ebola epidemic started in West-Africa in December 2013. Guinea, Liberia and Sierra Leone were hardest hit by the epidemic which peaked in October 2014. According to WHO, 28.280 patients were diagnosed with the disease and of these 11.295 had died as of 21 September 2015. Liberia is now considered (for the second time) free from the disease as of 4 September 2015. Sporadic cases are still being diagnosed in Guinea and Sierra Leone.

Ebola epidemic was ongoing. This was done in cooperation with their respective health authorities.

A considerable preparedness effort was made in Iceland in case the disease should be diagnosed in the country or should an ill person arrive in the country. In January 2015, eight Icelanders left for Liberia to assist with communication setups. The Chief Epidemiologist and the Ebola team of Landspítali University Hospital followed the team closely during and after the visit to Liberia. A number of foreign individuals were closely monitored in Iceland after having lived in the countries where the



As part of Ebola preparedness measures in Iceland a poster with information for passengers travelling from West-Africa to Iceland was put up at a prominent place in Keflavik Airport.

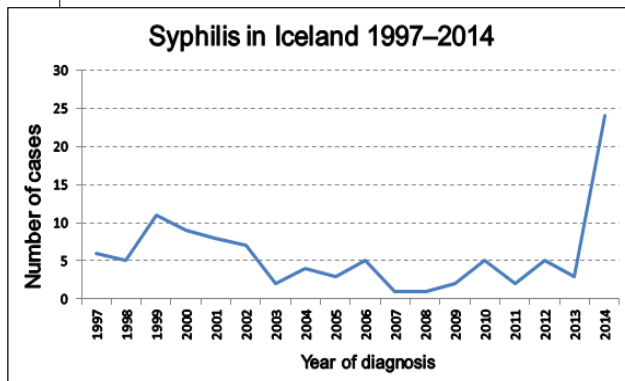
**Sulphur dioxide, SO<sub>2</sub>**

In the end of August 2014, a volcano erupted in Holuhraun, north of the glacier Vatnajökull. The eruption ended in February 2015. Ash fall was not significant, however, the eruption was followed by significant gas contamination, mostly due to sulphur dioxide (SO<sub>2</sub>), appearing like a blue mist and observed in many parts of the country, especially in the Northeast. The highest value of SO<sub>2</sub> in habituated areas was 21.000 µg/m<sup>3</sup>, observed in the town Höfn in Hornafjörður in the Southeast of Iceland.

examinations of the policemen and the scientists before and after staying in the vicinity of the volcanic eruption conducted in January 2015 did not indicate significant health effects.

**HIV**

On 30 September 2015, nine individuals had been diagnosed with HIV infection from the beginning of this year, two women and seven males. Six of those diagnosed were foreigners. One of those diagnosed with HIV infection had AIDS.



**Syphilis**

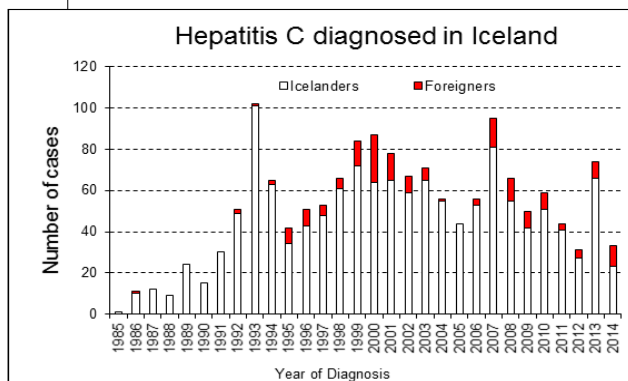
During the last decades few individuals have been diagnosed with syphilis in Iceland. The origin of most of the cases could be traced to other countries. A sudden increase in the number of cases was observed in 2014 (see figure). The majority of those infected were males who had had sex with other males. This increase was consistent with the increase of syphilis cases in Western Europe. During the first nine months of this year seventeen individuals, all of them males who have had sex with other males, have been diagnosed with the disease, with the exception of one woman

**Hepatitis C**

The epidemic of hepatitis C virus (HCV) emerged in Iceland in the 1980s in parallel with increased intravenous drug use. Others at risk of infection due to HCV, before antibodies to the virus could be detected, were haemophiliacs needing blood factors and blood recipients. The number of individuals diagnosed with HCV infection is shown in the figure below. During the first six months of this year, 24 individuals have been diagnosed with the disease.

According to law, the Chief Epidemiologist is obliged to investigate the health effect of sudden threats due to toxic substances. The investigations related to the Holuhraun eruption have focused on two aspects, on the one hand the gathering of information on recorded diagnoses within the Health Care Services and, on the other hand, an examination of the lung function of the scientists and policemen working close to the volcanic eruption. These investigations are being carried out in collaboration with the Centre of Public Health Sciences at the University of Iceland, pulmonary specialists at Landspítali University Hospital, the Environment Agency of Iceland and the Icelandic Met Office. Final results are not available yet, but there are indications of increased use of asthmatic drugs in the autumn of 2014, especially in the eastern part of the country. Medical

*Medical examinations of policemen and scientists, conducted in January 2015, before and after their stay in the vicinity of the volcanic eruption, did not indicate significant health effects.*



*A recent agreement on a nationwide treatment effort to eliminate Hepatitis C in Iceland is an important milestone for infectious disease control.*

Infection with HCV becomes chronic in 70-80% of cases. It is rare for HCV infection to cause acute symptoms, but those who develop a chronic infection may have reduced quality of life and, in some cases, will develop cirrhosis of the liver and are in danger of further development to hepatocellular carcinoma. HCV is the most common cause of cirrhosis of the liver in Western countries and the most common reason for liver transplantations. It is estimated that approximately 1000 individuals in Iceland are presently living with HCV infection. Drug treatment has progressed substantially in recent years and it is now estimated that the disease may be cured in 95% of cases. The problem is that the treatment is very expensive and beyond the capacity of most nations, unless they prioritise in favour of patients with the most advanced disease.

Therefore, it was an important milestone when the government of Iceland, at its meeting on 6 October 2015, authorised the Minister of Health to finalise an agreement on collaboration with the pharmaceutical company Gilead on a nationwide treatment effort to eliminate Hepatitis C in Iceland. The Icelandic health care authorities are preparing this treatment program in cooperation with Gilead which will provide the drug Harvoni in an epidemiological trial setting with the aim of treating all infected individuals, thereby breaking the

chain of infection in the community. If successful, that would be an important milestone for infectious disease control. The project falls under the [Act on Health Security and Communicable Diseases, No. 19/1997](#), Art. 5. The Chief Epidemiologist, on behalf of the Ministry of Health, will oversee the project. Landspítali University Hospital will carry out the project and supply the necessary manpower, facilities and diagnostic tests.

**Procedures of the Chief Epidemiologist concerning applications for residence permits to Iceland**

In the summer of 2015 it became evident that an applicant for asylum in Iceland had not attended the medical examination required in the application process for immigration. Applicants for residence permits/work permits are usually keen on completing the examination in order to get their permits. Some of the asylum applicants may not have this incentive, however. A third group of immigrants in Iceland are refugees who have been invited to stay in Iceland by the government. Health care services for this group of people are very important, not only for the detection and treatment of reportable infectious diseases but also because of the psychological and physical trauma they may have suffered.

The Chief Epidemiologist has now published new improved procedures for the medical examination of applicants for residence and work permits, asylum seekers and refugees. These procedures are fundamentally similar to the older ones but further clarify certain aspects. The Icelandic government has also announced that amendments to the law concerning immigration will soon be presented in Althingi, the Icelandic parliament.