

## *The history of disease control*

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Since I began studying history in the autumn of 1992, my main focus of interest has always been health history; the history of diseases; and the history of health workers, pregnant women, and women giving childbirth. I graduated with a BA in history in 1996, an MA in history in 2000, and a PhD in history in 2016. No doubt, my earlier career has kindled my continuing interest in health history, as I am a certified nurse and have worked as one for many years.

This past autumn, this interest took a new and unexpected form, as I responded to the pleas of health authorities by joining the so-called backup group of health workers to ease the pressure created by the covid-19 epidemic that has taken a great toll on our countrymen. At present, I am working as a nurse in the covid-19 outpatient facility that was established more than two years ago, its existence unique in the world. This facility has helped those who contract covid-19 to stay isolated at home instead of entering the disease control unit of the National University Hospital of Iceland. Those who contract covid-19 can go to the covid outpatient facility and receive medical care. Most often, patients have been allowed to go home after examination and care or have been admitted to the hospital if their condition is serious. It has proved to be a valuable experience for me to get to know and treat covid patients in this outpatient facility. I have, for example, been compelled to wear special protective clothing to protect me from getting sick myself, despite having had three shots against covid-19.

When the virus epidemic began to spread throughout the world at the beginning of 2020, I was actually researching another disease caused by another virus called morbilli. This virus causes measles in people and brought much suffering and death to Icelanders in earlier times. In the years 1846 and 1882, there were large measles epidemics in Iceland, and it is believed that about 3,000 Icelanders, children and adults, died from measles. Though this is the most contagious

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virus disease in the world, it has been nearly eradicated through vaccinations. This measles research of mine was published in a book, *Mislingar*, at the end of November 2021.

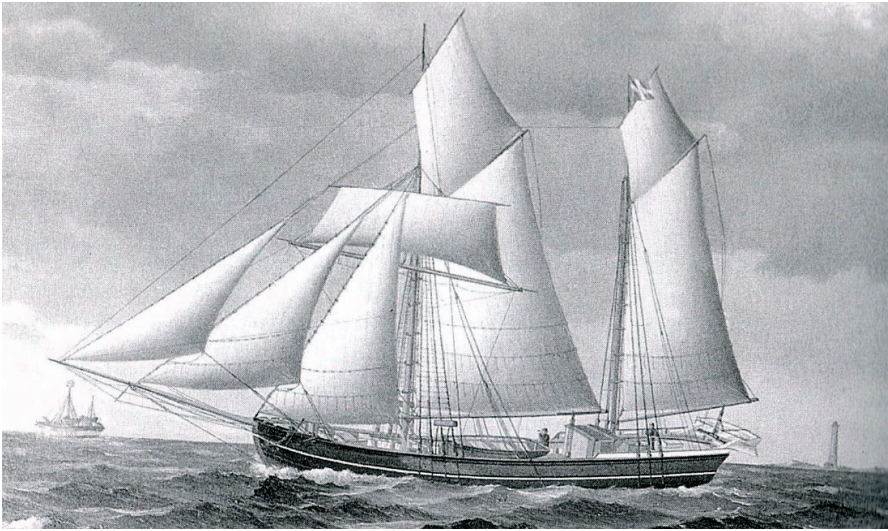
While I was researching measles, I took interest in how preventive measures of the eighteenth century related to the disease control that was established in Iceland in the wake of covid-19. I had not thought of such research before, i.e. to look for the source of disease control in Iceland. I decided therefore to present research myself on the sources of disease control in Icelandic newspapers and other media. The first interview with me was published on 3 April 2020 under the headline ‘Do not greet with a kiss or handshake’ in the newspaper *Morgunblaðið*. The headline refers to the fact that the Icelandic health authorities advised regular *handwashing with soap and water* and encouraged people to eschew *embraces and handshakes* when meeting. This advice was not a new invention; it was taken from an old repository of experience from earlier times showing how it had proved useful in battling contagious diseases in Iceland.<sup>1</sup>

This was the kind of information that I wanted to trace to its source and research as an historian. In earlier times, the health authorities knew of the paths of contagion, although they did not know of viruses or bacteria but rather thought that contagion was in the air that people breathed. Such a focus, to look for the source of disease control in Iceland, has changed the emphasis in my research into health history following the current epidemic.

As an example, I discovered a parallel to quarantine and isolation due to covid-19 in the Act on Separating Lepers from Other People, passed in 1898. There were provisions in the Act with instructions that were to ensure that patients beset with this terrible disease would not infect others.<sup>2</sup>

<sup>1</sup> ‘Wash your hands regularly with water and soap, at least 20 seconds each time’ is written on the advice page of the health authorities on the website covid.is, for covid-19. In 1871, nearly 150 years ago, midwives in Iceland were, for the first time, encouraged to wash their hands with soap and water to avoid infecting women in childbirth with another life-threatening contagious disease, childbed fever. This experience from an old instruction book for midwives was used again for covid-19. Cf. *Levys kennslubók handa yfirsetukonum aukin og endurbætt af A. Stadfeldt*, Íslensk þýðing: Jónas Jónasen (Reykjavík: Einar Þórðarson), 1871, pp. 335–336. (*Levys textbook for midwives, revised and improved by A. Stadfeldt*. Icelandic translation by Jónas Jónasen. Reykjavík: Einar Þórðarson, 1871, p. 335–336). The origin of handwashing comes from Semmelweis, who has been called the saviour of women in childbirth in the world.

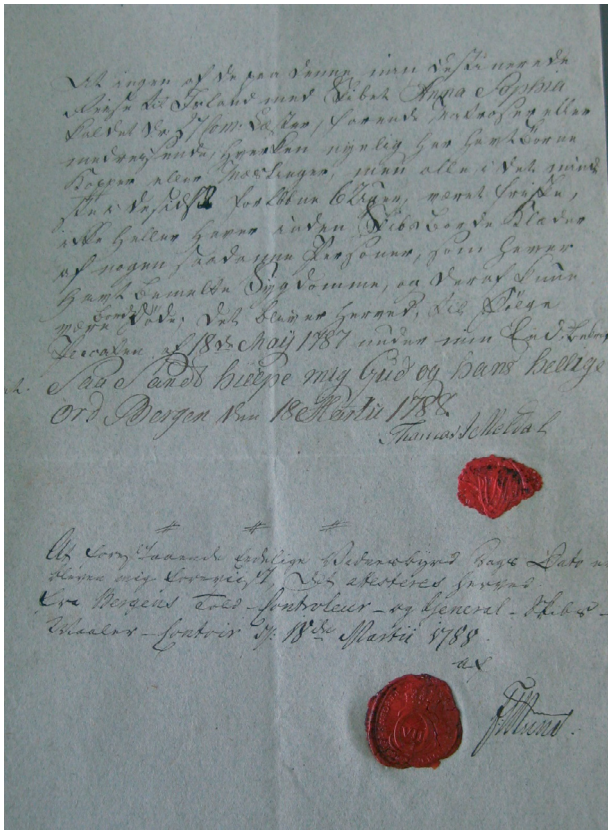
<sup>2</sup> I have written a book on this contagious subject: Erla Dóris Halldórsdóttir, *Óhveinu börnin hennar Evu: Holdsvæiki í Noregi og á Íslandi* (Reykjavík: Ugly, 2020).



*On the way to Iceland with cargoes and passengers, a virus or bacterium could also have been carried along that could threaten the life of people on the island of Iceland. When the monopoly trade with Iceland was rescinded and trade made free for the subjects of the King of Denmark in 1786, measures were taken to prevent measles and smallpox from being carried to Iceland. All captains had to carry health certificates stating that all on board the ship were free of measles and smallpox and had been so six weeks before departure. It also stated that no clothes or bed blankets from such patients were on board. A captain without such a health certificate would be subject to fines. Source; Þorleifsson, Heimir, Póstsaga Íslands 1776–1873. Reykjavík: Þjóðsaga/Íslandspóstur, 1996, p. 378.*

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Past and present has been connected in more ways for me as a researcher during the pandemic. As the Icelandic government took the decision to require passengers from other countries to present certificates at the border to prove that they had tested negative for covid-19, I was sitting in the Icelandic National Archives investigating documents from the Danish treasury (Rentukammer) from the eighteenth century. In this research, I came upon a trove of ancient health certificates from ships arriving in Iceland. As I searched for the origin of such health certificates, I found, much to my surprise, that when trade with Iceland was freed, captains sailing to Iceland were required to produce a health certificate for the crew and passengers on their ships. The oldest of these health certificates were from 1788. They were issued at a time when neither viruses nor bacteria were known,



The first health certificate of a foreign vessel that came to Iceland in 1788 is kept in the National Archives of Iceland. Captain Thomas H. Mendel took an oath to the customs authorities in Bergen that no one on board his ship, *Anna Sophia*, on its way to Iceland with cargo and passengers from Norway, was infected with measles or smallpox and had not had these diseases six weeks prior to departure to Iceland. There were no clothes from such patients on board. The health certificate is dated 18 March 1788. Source: National Archives of Iceland. Rentecammer B12/11. Officials letter book 1789–1790.

but when it was nonetheless known that some diseases were carried between people and could threaten their lives.

I wrote an article in *Morgunblaðið* on 24 February 2021 with the title *Veiruvottorð* (Virus certificate) presenting these findings.<sup>3</sup> As I mentioned earlier, the origin of these health certificates can be traced back to the year 1786 when trade with Iceland was made free for all subjects of the king of Denmark. On 18 August of that year, King Christian VII of Denmark issued a directive that all monopoly trade with Iceland be rescinded. Following the newly found trade freedom, six trading towns were established in the country, each with its own trade area. These trading towns were Reykjavík, Grundarfjörður, Ísafjörður, Akureyri, Eskifjörður and Vestmannaeyjar. Merchants were allowed to trade inside the area belonging to each trading town.

<sup>3</sup> Erla Dóris Halldórsdóttir, 'Veiruvottorð' [Virus certificates], *Morgunblaðið* 24 February 2021.

This newly found freedom of trade meant that Icelanders could trade with all ‘the King’s men’, i.e. with Danes, Norwegians and merchants from the German duchies of Holstein and Schleswig. This licence did not apply to other subjects of the Danish king, such as the people of the Faroe Islands or Greenland. In the wake of this, the Danish treasury in Copenhagen began to investigate what measures could be taken so that two contagious diseases would not be carried to Iceland when the country was opened: smallpox due to the *variola* virus and measles due to the *morbilli* virus. In the eighteenth century, it was not known that these viruses caused these highly contagious diseases.

This newly found trading freedom called for caution to prevent these contagious diseases from being carried to Iceland with foreign seafarers and passengers. People living in Iceland were more susceptible to contagious diseases due to the position of the country and its isolation. This was realized by Jón Sveinsson, the Surgeon General of Iceland, who pointed it out to the Prefect (*Stiftamtmaður*) for Iceland in a letter on 28 February 1787. The Surgeon General proposed that all ships arriving in Iceland should require a health certificate (in Danish *Sundhedsattest*) stating that neither the captain, his crew or passengers carried smallpox or measles and had not had these diseases for six weeks prior to departure to Iceland. Jón, the Surgeon General, knew that smallpox patients could not infect others after six weeks had passed since they were cured. He believed that the body could be free of infection, but the infection, which he called ‘*the poison*’, could be embedded in the clothes of the infected person. The clothes would therefore have to be discarded overboard.<sup>4</sup>

On 18 May 1787, a directive was issued in Christiansborg Palace in Copenhagen on controls against smallpox and measles in Iceland.<sup>5</sup> The directive contained seven rules, such as the one where the captain was not allowed have on board crew or passengers who had for the past six weeks been infected by measles or smallpox. He was required to bring a health certificate whereby he swore that had no such patients aboard his ship. He was also to swear that no one aboard had clothes of people infected by these diseases. If someone were to die on board of measles or smallpox on the way to Iceland, the body and bedsheets of the deceased had to be placed in a coffin and sunk into the ocean.

The certificate was required to be written on paper with the seal of customs authorities in the country from where it came. When the captain came to Iceland, he was required to show the certificate in the port of arrival to the local District Commissioner, who was to pass it on to the Prefect of Iceland and thence to the Danish Treasury in Copenhagen.

<sup>4</sup> Erla Dóris Halldórsdóttir, *Mislingar* [Measles] (Reykjavík: Nýhöfn, 2021).

<sup>5</sup> *Lovsamling for Island* (1784–1791), vol. V, pp. 400–404.



*The author is well protected amongst covid patients. Erla Dóris Halldórsdóttir, the historian and nurse, is clad in special protective gear when working with covid patients at Landspítali, the University Hospital, in December 2021. Such protective gear was invented in the twentieth century to protect staff against contagious diseases, such as the virus SARS-CoV-2 that causes covid-19 in humans. Photographer: Kristinn Magnússon.*

Such measures were a special characteristic of Iceland and unique in the sense that the king of Denmark wished to protect the Icelandic people against contagious diseases in the eighteenth century, just as now when the Icelandic health authorities required passengers on their way to Iceland to produce evidence of being free of covid-19.

It was also a very unfortunate decision when the Danish authorities cancelled this directive on 20 June 1838. It was decided that general rules of disease prevention should apply to measles and smallpox. After that, ‘the captain should be asked if any person who had smallpox is on board, and if so, the ship should be closed to traffic until the ill person could be fetched and brought ashore.’<sup>6</sup> It was also required that the person’s bed and bedsheets should be burned. After that, the ship could continue around Iceland.

<sup>6</sup> *Lovsamling for Island* (1837–1840), vol. XI, pp. 243–246.

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The two-metre proximity rule also aroused my interest in disease control against covid-19 to prevent people from infecting each other. I wanted to see the experience of these limits and found, much to my surprise, that the first proximity rules against contagious diseases in Iceland could be traced back to 1831 when the directive on disease control in Denmark and Norway of 1 March 1805 was translated into Icelandic. It dealt with measures to prevent the peril of contagious diseases to Danish subjects and the temporary quarantine of suspected ships and people carrying contagious diseases with them. This directive stated that if a diseased patient on board on the way to Iceland went ashore due to a shortage of water and food, crew members would be allowed to fetch water and food, but on condition that they would keep at least 50 paces from local people. This is the first time that a proximity rule was required in this country due to contagious diseases.

In conclusion, the pandemic made it necessary for me to work both as a nurse and as a historian. I have publicized my expertise on the history of disease control in media and held lectures on the subject. I have been in radio interviews for my book, *Mislingar* (Measles), and the covid-19 epidemic is always brought into the discussion. In the spring of 2022, a special symposium was held at the History Conference in Iceland, and this symposium was solely devoted to the history of contagious diseases in Iceland. I shall also lecture on leprosy, lepers, and the eradication of this terrible contagious disease in Iceland.