

Iceland

This document is a compilation of all questions, justifications, and sources used to determine the 2021 Global Health Security Index scores for Iceland. For a category and indicator-level summary, please see the Country Profile for Iceland.

CATEGORY 1: PREVENTING THE EMERGENCE OR RELEASE OF PATHOGENS WITH POTENTIAL FOR INTERNATIONAL CONCERN	4
1.1 Antimicrobial resistance (AMR)	4
1.2 Zoonotic disease	7
1.3 Biosecurity	14
1.4 Biosafety	21
1.5 Dual-use research and culture of responsible science	24
1.6 Immunization	27
CATEGORY 2: EARLY DETECTION AND REPORTING FOR EPIDEMICS OF POTENTIAL INTERNATIONAL CONCERN	28
2.1 Laboratory systems strength and quality	28
2.2 Laboratory supply chains	31
2.3 Real-time surveillance and reporting	32
2.4 Surveillance data accessibility and transparency	34
2.5 Case-based investigation	39
2.6 Epidemiology workforce	42
CATEGORY 3: RAPID RESPONSE TO AND MITIGATION OF THE SPREAD OF AN EPIDEMIC	43
3.1 Emergency preparedness and response planning	43
3.2 Exercising response plans	46
3.3 Emergency response operation	47
3.4 Linking public health and security authorities	49
3.5 Risk communications	50
3.6 Access to communications infrastructure	54

3.7 Trade and travel restrictions	55
-----------------------------------	----

**CATEGORY 4: SUFFICIENT AND ROBUST HEALTH SECTOR TO TREAT THE SICK AND PROTECT
HEALTH WORKERS** **57**

4.1 Health capacity in clinics, hospitals, and community care centers	57
4.2 Supply chain for health system and healthcare workers	59
4.3 Medical countermeasures and personnel deployment	64
4.4 Healthcare access	65
4.5 Communications with healthcare workers during a public health emergency	67
4.6 Infection control practices and availability of equipment	69
4.7 Capacity to test and approve new medical countermeasures	70

**CATEGORY 5: COMMITMENTS TO IMPROVING NATIONAL CAPACITY, FINANCING PLANS TO
ADDRESS GAPS, AND ADHERING TO GLOBAL NORMS** **72**

5.1 International Health Regulations (IHR) reporting compliance and disaster risk reduction	72
5.2 Cross-border agreements on public health and animal health emergency response	72
5.3 International commitments	74
5.4 Joint External Evaluation (JEE) and Performance of Veterinary Services Pathway (PVS)	75
5.5 Financing	76
5.6 Commitment to sharing of genetic and biological data and specimens	80

CATEGORY 6: OVERALL RISK ENVIRONMENT AND VULNERABILITY TO BIOLOGICAL THREATS **81**

6.1 Political and security risk	81
6.2 Socio-economic resilience	85
6.3 Infrastructure adequacy	87
6.4 Environmental risks	88
6.5 Public health vulnerabilities	88

Category 1: Preventing the emergence or release of pathogens with potential for international concern

1.1 ANTIMICROBIAL RESISTANCE (AMR)

1.1.1 AMR surveillance, detection, and reporting

1.1.1a

Is there a national AMR plan for the surveillance, detection, and reporting of priority AMR pathogens?

Yes, there is evidence of an AMR plan, and it covers surveillance, detection, and reporting = 2, Yes, there is evidence of an AMR plan, but there is insufficient evidence that it covers surveillance, detection, and reporting = 1, No evidence of an AMR plan = 0

Current Year Score: 0

There is no public evidence on the websites of the Ministry of Health, Directorate of Health, Ministry of Agriculture, National University Hospital of Iceland or the WHO Library of National Action Plans that there is a national AMR plan for the surveillance, detection and reporting of priority AMR pathogens in Iceland [1, 2, 3, 4, 5].

In May 2017, a working group, appointed by the Minister of Health published a report with proposals for halting the spread of antibiotic resistance in Iceland. In the report, current AMR surveillance and prevention efforts are outlined, and the working group recommended that Iceland create a national AMR plan. However, such a plan has not yet been published [6].

In February 2019 the Minister of Health and Minister of Agriculture declared that this report would mark Iceland's policy in these matters [2].

[1] Ministry of Health (Heilbrigðisráðuneytið). [<https://www.government.is/ministries/ministry-of-health/>]. Accessed 25 August 2020.

[2] Directorate of Health (Embætti Landlæknis). [<https://www.landlaeknir.is>]. Accessed 25 August 2020.

[3] Minister of Agriculture (Sjávarútvegs- og landbúnaðarráðherra). [<https://www.stjornarradid.is/raduneyti/atvinnuvega-ognyskopunarraduneytid/>]. Accessed 25 August 2020.

[4] National University Hospital of Iceland (Landspítali Íslands). [<https://www.landspitali.is>]. Accessed 25 August 2020.

[5] World Health Organization (WHO). "Library of National Action Plans". [<https://www.who.int/antimicrobial-resistance/national-action-plans/library/en/>]. Accessed 25 August 2020.

[6] Government of Iceland. May 2017. "Proposal of a workgroup for halting the spread of AMRs in Iceland (Greinargerð starfshóps um aðgerðir til að draga úr útbreiðslu sýklalyfjaónæmra baktería á Íslandi)".

[<https://www.stjornarradid.is/verkefni/allar-frettir/frett/2017/05/15/Greinargerd-starfshops-um-adgerdir-til-ad-draga-ur-utbreidslu-syklalyfjaonaemra-bakteria-a-Islandi/>]. Accessed 25 August 2020.

1.1.1b

Is there a national laboratory/laboratory system which tests for priority AMR pathogens?

All 7 + 1 priority pathogens = 2 , Yes, but not all 7+1 pathogens = 1 , No = 0

Current Year Score: 1

There is evidence that Iceland tests for at least some of the 7+1 AMR priority pathogens. Iceland has a national laboratory that tests for priority AMR pathogens. The pathology and virology department of the National University Hospital of Iceland orchestrates testing and reporting of AMRs [1].

The service manual for Research Services lists the sampling methods available for detection. Tests are specified for E.coli, Salmonellosis, Shigellosis, Mycobacterium tuberculosis and S. aureus [2].

No action plan can be found for Iceland in the WHO Library of national action plans and no public evidence of a national action plan can be found on pages of the Ministry of Welfare, Ministry of Industries and Innovation (under which the Minister of Fisheries and Agriculture operates), the Directorate of Health or the National University Hospital of Iceland [4, 5, 6, 7]. According to the report done by the working group appointed by the Icelandic Minister of Health, yearly reports are sent to the ECDC (European Center for Disease Prevention and Control), with information on national antibiotic use. Whether data on AMR diseases is reported is not specified [3].

[1] National University Hospital of Iceland (Landspítali). "Department of pathology and virology (Sykla og veirufraedideild)". [<https://www.landspitali.is/sjuklingar-adstandendur/deildir-og-thjonusta/sykla-og-veirufraedideild/>]. Accessed 25 August 2020.

[2] Department of Pathology and Virology of The National University Hospital of Iceland (Landspítali Íslands). July 2015. "Quality Manual (Gaedahandbók)". [<https://traveler.lsh.is/focal/gaedahandbaekur/gnhsykla.nsf/>]. Accessed 25 August 2020.

[3] Government of Iceland. May 2017. "Proposal of a workgroup for halting the spread of AMRs in Iceland (Greinargerð starfshóps um aðgerðir til að draga úr útbreiðslu sýklalyfjaónæmra baktería á íslandi)". [<https://www.stjornarradid.is/verkefni/allar-frettir/frett/2017/05/15/Greinargerd-starfshops-um-adgerdir-til-ad-draga-ur-utbreidslu-syklalyfjaonaemra-bakteria-a-Islandi/>]. Accessed 25 August 2020.

[4] Directorate of Health (Embætti landlæknis). [<https://www.landlaeknir.is>]. Accessed 25 August 2020.

[5] Ministry of Welfare (Velferdarraduneytid). [<https://www.stjornarradid.is/raduneyti/velferdarraduneytid/>]. Accessed 25 August 2020.

[6] Ministry of Industries and Innovation (Atvinnuvega og Nyskopunarraduneytid).

[<https://www.stjornarradid.is/raduneyti/atvinnuvega-og-nyskopunarraduneytid/>]. Accessed 25 August 2020.

[7] National University Hospital of Iceland (Landspítali Íslands). [<https://www.landspitali.is/>]. Accessed 25 August 2020.

1.1.1c

Does the government conduct environmental detection or surveillance activities (e.g., in soil, waterways) for antimicrobial residues or AMR organisms?

Yes = 1 , No = 0

Current Year Score: 1

There is evidence that the government conducts some environmental detection and surveillance activities for antimicrobial residues.

In the summer of 2019 the Environment Agency of Iceland conducted sampling in waterways, testing for substances on the European Union (EU)'s watchlist as well as substances on a special Swedish watchlist. The results showed that 4 of the 16 substances on the EU list were detected in samples, as well as 15 of the 20 on the Swedish list. Among the substances detected were Clarithromycin, Diclofenac and Erythromycin [1].

The Environment Agency of Iceland conducts regular surveillance of substances in water and in 2019 surveillance of 45 priority substances, which are defined in regulation 796/1999 on prevention of water contamination, was conducted [2, 3].

Iceland has no documented action plan in the World Health Organization's Library of AMR national action plans [4].

- [1] Environment Agency of Iceland. 27 November 2018. "Pharmaceutical residue found in Iceland's environment". [<https://www.ust.is/umhverfisstofnun/frettir/stok-frett/2018/11/27/Lyfjaleifar-finnast-i-umhverfinu-a-Islandi/>]. Accessed 25 August 2020.
- [2] Environment Agency of Iceland. "Water surveillance (Voktun vatns)". [<https://ust.is/haf-og-vatn/stjorn-vatnamala/voktun-vatns/>]. Accessed 14 October 2020.
- [3] Ministry of Justice. 29 October 1999. Regulation nr. 796/1999 of 29 October 1999. "Regulation on prevention of water contamination". [<https://www.reglugerd.is/reglugerdir/eftir-raduneytum/umhverfisraduneyti/nr/4482>]. Accessed 14 October 2020.
- [4] World Health Organization (WHO). 2018. "Antimicrobial resistance - Library of national action plans". [<http://www.who.int/antimicrobial-resistance/national-action-plans/library/en/>]. Accessed 25 August 2020.

1.1.2 Antimicrobial control

1.1.2a

Is there national legislation or regulation in place requiring prescriptions for antibiotic use for humans?

Yes = 2 , Yes, but there is evidence of gaps in enforcement = 1 , No = 0

Current Year Score: 2

There is evidence that Iceland has national legislation or regulation in place requiring prescriptions for antibiotic use for humans.

Regulation number 545/2018 states that all medicine must be approved by the Icelandic Medicines Agency [1]. The Icelandic Medicines Agency maintains a list of all OTCs (Over-the-counter drugs) and whether they require a prescription [2]. All antibiotics require a prescription. In the review of applications for OTCs, European instructions are used as a guideline [3]. The Icelandic Medicines Agency has active supervision of medicine sales as outlined in the Inspection manual [4].

The Icelandic Directorate of Health publicly encourages the responsible use of antibiotics [5] and there is nothing that suggests gaps in the enforcements of these regulations.

Iceland does not have any publicly available national action plans on antimicrobial resistance [6].

- [1] Ministry of Justice. 2018. Regulation nr. 545/2018 of 11. May 2018. "Regulation on marketing licenses of Proprietary Medicinal Products, labeling and accompanying instructions". [<https://www.reglugerd.is/reglugerdir/eftir-raduneytum/velferdarraduneyti/nr/21092>]. Accessed October 2020.
- [2] Icelandic Medicines Agency (Lyfjastofnun). April 2018. "List of medicine approved for over-the-counter (Lyf med markadsleyfi)". [https://www.lyfjastofnun.is/media/Leyfisveitingar_lyfja/Lyf_med_markadsleyfi_x.xls]. Accessed October 2020.
- [3] Icelandic Medicines Agency (Lyfjastofnun). 6. September 2016. "List of medicine approved for sale without prescription". [<https://www.lyfjastofnun.is/utgefid-efni/frettir/hr/5057>]. Accessed October 2020.
- [4] Icelandic Medicines Agency (Lyfjastofnun). 8 February 2019. "Inspection manual (Skodunarhandbok)". [https://www.lyfjastofnun.is/media/eftirlit/Skodunarhandbok-apoteka-8.2.2019_Loka.pdf]. Accessed 12 September 2020.
- [5] Directorate of Health (Embætti landlæknis). 10. January 2020. "Antibiotic resistance and use of antibiotics". [<https://www.landlaeknir.is/smit-og-sottvarnir/syklalyfjaonaemi-syklalyfjanotkun/>]. Accessed 25 August 2020.

[6] World Health Organization (WHO). "Antimicrobial resistance - National action plans". [<https://www.who.int/antimicrobial-resistance/national-action-plans/library/en/>]. Accessed 25 August 2020.

1.1.2b

Is there national legislation or regulation in place requiring prescriptions for antibiotic use for animals?

Yes = 2 , Yes, but there is evidence of gaps in enforcement = 1 , No = 0

Current Year Score: 2

Iceland has a national regulation in place requiring prescriptions for antibiotic use for animals. National regulation 539/2000, passed on 17 July 2000, states that medicine for animal use must be prescribed by a veterinarian. Article 11 notes that antibiotics fall under the list of medicines that are subject to veterinary prescriptions. The regulation states that the Icelandic Medicines Agency is responsible for the supervision and enforcing of these instructions [1].

There are no evident gaps in enforcement. According to a 2018 EFTA audit Iceland has developed a framework for monitoring AMR supported by well-performing official laboratories, but further improvements are needed to ensure the representativeness of samples [2].

[1] Ministry of Justice (Dómsmálaráðuneytið). Regulation nr. 539/2000 of 17. July 2000. "Regulation on veterinarian warrants to prescribe medicine (Reglugerð um heimildir dýralækna til að ávísala lyfjum)". [<https://www.reglugerd.is/reglugerdir/eftir-raduneytum/heilbrigdisraduneyti/nr/2490>]. Accessed 25 August 2020.

[2] EFTA Surveillance Authority (ESA). 5 December 2018. "Food Safety: Icelandic monitoring of antimicrobial resistance in place, but further improvement needed". [<https://www.eftasurv.int/newsroom/updates/food-safety-icelandic-monitoring-antimicrobial-resistance-place-further>]. Accessed 6 April 2021.

1.2 ZOONOTIC DISEASE

1.2.1 National planning for zoonotic diseases/pathogens

1.2.1a

Is there national legislation, plans, or equivalent strategy documents on zoonotic disease?

Yes = 1 , No = 0

Current Year Score: 1

Icelandic law 25/1993 'On Animal Diseases and Defenses Against Them (Log um dyrasjukdoma og varnir gegn peim)', which was implemented in April 1993, describes regulations, surveillance and strategies regarding zoonotic diseases and animal health and welfare in general. The aim of the law is to promote animal health in Iceland, monitor and prevent animal diseases, and ensure that animal products, produced in Iceland are safe for consumption. The law covers both domestic and wild animals [1]. Specific zoonotic diseases are not mentioned in the document, but it refers to annexes 1A and 1B, which can be found in amendment nr. 31/2001, implemented May 2001 [2]. In these annexes, numerous zoonotic diseases are listed, categorized after type of animal, including rabies, brucellosis, avian influenza, trichinosis, and swine influenza.

Regulation 1048/2011, effective since November 7, 2011, describes the monitoring of zoonotic diseases. It states that the Icelandic Food and Veterinary Authority is responsible for collecting and reporting data on zoonotic diseases and related antibiotic resistance [5].

Regulation 1250/2019, effective since January 1, 2020, further outlines measures for prevention of zoonotic diseases and infected produce in imports [3].

A workgroup released a report in October 2017, which gave recommendations on changes of laws related to zoonotic diseases and veterinarians [4]. They suggested that there should be a list of diseases that qualify as a zoonotic disease and a detailed description of a plan of action, should they spread, in the original law document.

- [1] Parliament of Iceland (Alþingi). Law nr 25 of 7 April 1993. "Animal Diseases Act and Prevention of Animal Disease". [<https://www.althingi.is/lagas/nuna/1993025.html>]. Accessed 26 August 2020.
- [2] Parliament of Iceland (Alþingi). Law nr 31 of 7 May 2001. "Changes of Laws on Animal Diseases Act and Prevention of Animal Disease, nr. 25/1993, with later changes". [<https://www.althingi.is/alttext/stjt/2001.031.html>]. Accessed 26 August 2020.
- [3] Ministry of Justice. Regulation nr. 1250/2019 of 19. December 2019. "Regulation on prevention of the spread of zoonotic diseases and infected produce to Iceland". [<https://www.reglugerd.is/reglugerdir/eftir-raduneytum/atvinnuvega--og-nyskopunarraduneyti/nr/1250-2019>]. Accessed 26 August 2020.
- [4] Runolfsson, H, et al. October 2017. "Report of the Working Group on Auditing legislation on animal diseases and veterinarians". [<https://www.stjornarradid.is/lisalib/getfile.aspx?itemid=b1231333-b400-11e7-9420-005056bc530c>]. Accessed 26 August 2020.
- [5] Ministry of Justice. Regulation nr 1048/2011 of 7 November 2011. "Regulation on surveillance of zoonotic diseases". [<https://www.reglugerd.is/reglugerdir/eftir-raduneytum/sjavarglandbunadar/nr/17937>]. Accessed 29 August 2020.

1.2.1b

Is there national legislation, plans or equivalent strategy document(s) which includes measures for risk identification and reduction for zoonotic disease spillover events from animals to humans?

Yes = 1 , No = 0

Current Year Score: 0

There is no public evidence of a national legislation, plan or equivalent strategy document, which includes measures for risk identification and reduction for zoonotic spillover events from animals to humans on the website for the Ministry of Health, Directorate of Health, Ministry of Agriculture, National University Hospital of Iceland, or the websites for the Icelandic Parliament or the Ministry of Justice [1, 2, 3, 4, 5, 6].

Surveillance and control of zoonotic disease is covered in law number 25/1993, on zoonotic diseases and defenses against them. The law covers preventative measures, such as quarantine and animal product storage, as well as isolation procedures and cleaning and disinfection of buildings, tools and vehicles with animals. In July 2019, it was added to the law that the Minister of Agriculture and Fisheries or the Minister of Tourism, Industries and Innovation can make defensive arrangements to prevent the spread of AMRs [7]. Regulation nr. 52/2014, implemented 24 January 2014, lists zoonotic diseases which should be reported to the Food and Veterinary Authority [5]. Regulation nr. 221/2012, implemented 23 February 2012, as a part of Iceland's laws on prevention of infectious diseases, serves as a guide on how to report all infectious diseases, should they arise [8]. The regulation does not mention zoonotic diseases specifically, but rather is an overarching regulation on the reports of all infectious diseases, zoonotic diseases included. This document lists diseases that medical personnel have to report if they encounter an infected person/animal. These reports, zoonotic or otherwise, must be sent to the Head Epidemiologist of Iceland, who serves under The Directorate of Health, who in turn answers to the Minister of Health, at The Ministry of Welfare [9].

- [1] Ministry of Health (Heilbrigðisráðuneytið). [<https://www.government.is/ministries/ministry-of-health/>]. Accessed 25 August 2020.
- [2] Directorate of Health (Embætti Landlæknis). [<https://www.landlaeknir.is>]. Accessed 25 August 2020.
- [3] Minister of Agriculture (Sjávarútvegs og landbúnaðarráðherra). [<https://www.stjornarradid.is/raduneyti/atvinnuvega-ognyskopunarraduneytid/>]. Accessed 25 August 2020.
- [4] National University Hospital of Iceland (Landspítali Íslands). [<https://www.landspitali.is>]. Accessed 25 August 2020.
- [5] Parliament of Iceland (Alþingi). [<https://www.althingi.is>]. Accessed 26 August 2020.
- [6] Ministry of Justice (Dómsmálaráðuneytið). [<https://www.reglugerd.is>]. Accessed 26 August 2020.
- [7] Parliament of Iceland (Alþingi). Law nr 25 of 7 April 1993. "Animal Diseases Act and Prevention of Animal Disease (Lög um dýrasjúkdóma og varnir gegn þeim)". [<https://www.althingi.is/lagas/nuna/1993025.html>]. Accessed 26 August 2020.
- [8] Ministry of Justice (Dómsmálaráðuneytið). Regulation nr 221/2012 of 23 February 2012. "Regulation on Reporting of Infectious Diseases (Reglugerð um skýrslugerð vegna sóttvarna)". [<https://www.reglugerd.is/reglugerdir/eftir-raduneytum/heilbrigdis/nr/17760>]. Accessed 26 August 2020.
- [9] Parliament of Iceland (Alþingi). Law nr 19 of 17 April 1997. "Law of Prevention of Infectious Diseases (Sóttvarnalög)". [<https://www.althingi.is/lagas/nuna/1997019.html>]. Accessed 26 August 2020.

1.2.1c

Is there national legislation, plans, or guidelines that account for the surveillance and control of multiple zoonotic pathogens of public health concern?

Yes = 1 , No = 0

Current Year Score: 0

There is insufficient evidence of regulations which govern both surveillance and control of multiple zoonotic diseases.

Surveillance and control of zoonotic disease is covered in law number 25/1993, on zoonotic diseases and defenses against them. The law covers preventative measures, such as quarantine and animal product storage, as well as isolation procedures and cleaning and disinfection of buildings, tools and vehicles with animals. In July 2019 the law was amended to allow the Minister of Agriculture and Fisheries or the Minister of Tourism, Industries and Innovation to make defensive arrangements in order to prevent the spread of AMRs [1].

Regulation nr. 221/2012, implemented 23 February 2012 as a part of Iceland's laws on prevention of infectious diseases, serves as guide on how to report all infectious diseases, should they arise [2]. The regulation does not mention zoonotic diseases specifically, but rather is an overarching regulation on the reporting of all infectious diseases, including zoonotic diseases. This document lists diseases that medical personnel have to report if they encounter an infected person or animal. These reports, zoonotic or not, must be sent to the Head Epidemiologist of Iceland, who serves under The Directorate of Health, which in turn answers to the Minister of Health, at The Ministry of Welfare [3].

However, there is no evidence of any additional regulation that specifically accounts for the surveillance and control of multiple zoonotic pathogens of public health concern.[4]

- [1] Parliament of Iceland (Alþingi). Law nr 25 of 7 April 1993. "Animal Diseases Act and Prevention of Animal Disease". [<https://www.althingi.is/lagas/nuna/1993025.html>]. Accessed 26 August 2020.
- [2] Ministry of Justice. Regulation nr 221/2012 of 23 February 2012. "Regulation on Reporting of Infectious Diseases" [<https://www.reglugerd.is/reglugerdir/eftir-raduneytum/heilbrigdis/nr/17760>]. Accessed 26 August 2020.
- [3] Parliament of Iceland (Alþingi). Law nr 19 of 17 April 1997. "Law of Prevention of Infectious Diseases". [<https://www.althingi.is/lagas/nuna/1997019.html>]. Accessed 26 August 2020.

[4] Ministry of Health (Heilbrigðisráðuneytið). [<https://www.government.is/ministries/ministry-of-health/>] Accessed 26 August 2020.

1.2.1d

Is there a department, agency, or similar unit dedicated to zoonotic disease that functions across ministries?

Yes = 1 , No = 0

Current Year Score: 0

There is no public information that suggest that there is a department, agency or similar unit dedicated to zoonotic diseases on the websites for the Ministry of Health, or the Ministry of Agriculture. [3, 4]

The Icelandic Food and Veterinary Authority, which is responsible to the Ministry of Industries and Innovation, has a response plan that details the course of action in the case of zoonotic diseases. However, it is not clear that it should function across ministries. [5]

Iceland's Director of Health heads a government agency called the Directorate of Health, which has, as one of their main functions, the responsibility to advise the Minister of Health and the Minister of Fisheries and Agriculture on matters regarding health and disease prevention. [1] Reporting to the Director of Health is the Head Epidemiologist of Iceland. His/her role is to monitor and control all infectious diseases, zoonotic or other, and report to the Directorate of Health. [2]

[1] Directorate of Health (Embætti landlæknis). 10 May 2020. [<https://www.landlaeknir.is/english/>]. Accessed 29 August 2020.

[2] Parliament of Iceland (Alþingi). Law nr 19 of 17 April 1997. "Law of Prevention of Infectious Diseases". [<https://www.althingi.is/lagas/nuna/1997019.html>]. Accessed 29 August 2020.

[3] Ministry of Health. [<https://www.government.is/ministries/ministry-of-health/>]. Accessed 29 August 2020.

[4] Minister of Agriculture. 2020. [<https://www.stjornarradid.is/raduneyti/atvinnuvega-og-nyskopunarraduneytid/>]. Accessed 29 August 2020.

[5] Icelandic Food and Veterinary Authority. February 2020. "Responses to zoonotic diseases". [<https://www.mast.is/is/dyraeigendur/dyr-i-neyd/vidbrogd-vid-dyrasjukdomum>]. Accessed 29 August 2020.

1.2.2 Surveillance systems for zoonotic diseases/pathogens

1.2.2a

Does the country have a national mechanism (either voluntary or mandatory) for owners of livestock to conduct and report on disease surveillance to a central government agency?

Yes = 1 , No = 0

Current Year Score: 1

There is evidence that Iceland has a national mechanism for owners of livestock to conduct and report on disease surveillance to a central government agency.

In the 5th article of chapter III of law nr. 25/1993 it states that whoever suspects that an animal is infected with an infectious disease, shall without delay report that to any veterinarian he/she can reach, or the police. [1]

The Icelandic food and Veterinary Authority has a response plan, for zoonotic disease reporting, that outlines the mechanism

that should be used. [2]

If police are contacted, the police are obliged to contact a veterinarian immediately. If the vet deems it necessary, he/she shall request a diagnosis of a sample. If the diagnosis reveals that it is a reportable infectious disease or a previously unknown infectious disease in Iceland, the vet is required to report that to the Icelandic Food and Veterinary Authority. [1]

[1] Parliament of Iceland (Alþingi). Law nr 25 of 7 April 1993. "Animal Diseases Act and Prevention of Animal Disease". [<https://www.althingi.is/lagas/nuna/1993025.html>]. Accessed 29 August 2020.

[2] Icelandic Food and Veterinary Authority. February 2020. "Responses to zoonotic diseases". [<https://www.mast.is/is/dyraeigendur/dyr-i-neyd/vidbrogd-vid-dyrasjukdomum>]. Accessed 29 August 2020.

1.2.2b

Is there legislation and/or regulations that safeguard the confidentiality of information generated through surveillance activities for animals (for owners)?

Yes = 1 , No = 0

Current Year Score: 0

There is no public evidence that Iceland has laws or regulations that safeguard information regarding surveillance of livestock, or their owners. Chapter 1, article 3 of the 1997 'Law on Prevention of Infectious Diseases (Sóttvarnalög)', states that full confidentiality applies to any personal information collected in cases of infectious diseases, but it is not specified whether that applies to owners of livestock. [1] Law number nr. 25 'On Animal Diseases and Defenses Against Them', which was implemented in April 1993 and last amended in January 2020, does not mention confidentiality for owners. [2] There is no additional information on the websites for the Ministry of Health, Directorate of Health, Ministry of Fishery and Agriculture, or Icelandic Food and Veterinary Authority. [3,4,5,6]

[1] Parliament of Iceland (Alþingi). Law nr 19 of 17 April 1997. "Law of Prevention of Infectious Diseases (Sóttvarnalög)". [<https://www.althingi.is/lagas/nuna/1997019.html>]. Accessed 29 August 2020.

[2] Parliament of Iceland (Alþingi). Law nr 25 of 7 April 1993. "Animal Diseases Act and Prevention of Animal Disease (Lög um dýrasjúkdóma og varnir gegn þeim)". [<https://www.althingi.is/lagas/nuna/1993025.html>]. Accessed 29 August 2020.

[3] Ministry of Health (Heilbrigðisráðuneytið). [<https://www.government.is/ministries/ministry-of-health/>]. Accessed 29 August 2020.

[4] Directorate of Health (Embætti Landlæknis). [<https://www.landlaeknir.is>] Accessed 29 August 2020.

[5] Minister of Agriculture (Sjávarútvegs- og landbúnaðarráðherra). 2018.

[<https://www.stjornarradid.is/raduneyti/atvinnuvega-og-nyskopunarraduneytid/>]. Accessed 29 August 2020.

[6] Icelandic Food and Veterinary Authority (Matvælastofnun). 2018. [<http://www.mast.is>]. Accessed 29 August 2020.

1.2.2c

Does the country conduct surveillance of zoonotic disease in wildlife (e.g., wild animals, insects, other disease vectors)?

Yes = 1 , No = 0

Current Year Score: 1

There is evidence that Iceland conducts surveillance of zoonotic diseases in wildlife on a regular, ongoing basis. Law nr. 25 'On Animal Diseases and Defenses Against Them (Lög um dæ;1/2rasjä;9kdæ;3ma og varnir gegn æ;3/4eim)', which was implemented in April 1993 and last amended in July 2016, which covers some zoonotic diseases, covers both wildlife, pets and livestock, states that the Minister of Agriculture should oversee surveillance and prevention of animal diseases, with the

help of the Icelandic Food and Veterinary Authority (MAST) [1]. Every year, since 2010, MAST releases a report on zoonotic diseases and antibiotic resistance [8]. In addition to tests for bird flu in domestic birds, wild birds were tested yearly in the years 2006-2011, and then again in 2017 [2]. In the event of increased risk of the spread of bird flu in Iceland MAST coordinates additional testing with other organizations [3]. However, according a 2015 OIE report specific passive surveillance systems for wildlife by the veterinary services are absent. The report states that the only wild life present are reindeer and wild birds, and that these are covered by meat inspection for reindeer and an active surveillance for the wild birds for bird influenza. According to the report there is little co-operation or co-ordination with the authority responsible for wildlife [4]. There is no further evidence of surveillance of zoonotic diseases in wildlife on the websites for the Minister of Agriculture, the Ministry of Health or the Directorate of Health [5, 6, 7].

- [1] Parliament of Iceland (Alþingi). Law nr 25 of 7 April 1993. "Animal Diseases Act and Prevention of Animal Disease". [<https://www.althingi.is/lagas/nuna/1993025.html>]. Accessed 29 August 2020.
- [2] Icelandic Food and Veterinary Authority. April 2018. "Screenings of infectious diseases in animals". [<http://mast.is/library/Eftirlitsni%C3%B0Ourst%C3%B6rur/EftirlitsnidurstodurDyrasjukdomaskimun180404AA.pdf>]. Accessed 7 November 2018.
- [3] Icelandic Food and Veterinary Authority. "Bird flu (Fuglflensa)". [<http://www.mast.is/dyraheilbrigdi/sjukdomar/fuglflensa/>]. Accessed 29 August 2020.
- [4] World Organization for Animal Health (OIE). September 2015. "PVS Evaluation Report - Iceland". [http://www.oie.int/fileadmin/Home/eng/Support_to_OIE_Members/pdf/20170727_OIE-PVS_Evaluation_IcelandFINAL.pdf]. Accessed 29 August 2020.
- [5] Minister of Agriculture. [<https://www.stjornarradid.is/raduneyti/atvinnuvega-og-nyskopunarraduneytid/>]. Accessed 29 August 2020.
- [6] Ministry of Health. [<https://www.government.is/ministries/ministry-of-health/>]. Accessed 29 August 2020.
- [7] Directorate of Health (Embætti landlæknis). [<https://www.landlaeknir.is>] Accessed 29 August 2020.
- [8] Icelandic Food and Veterinary Authority. "Zoonotic diseases and antibiotic resistance". [<https://www.mast.is/is/um-mast/eftirlitsnidurstodur/syklalyfjaonaemi>]. Accessed 29 August 2020.

1.2.3 International reporting of animal disease outbreaks

1.2.3a

Has the country submitted a report to OIE on the incidence of human cases of zoonotic disease for the last calendar year?

Yes = 1 , No = 0

Current Year Score: 1

2019

OIE WAHIS database

1.2.4 Animal health workforce

1.2.4a

Number of veterinarians per 100,000 people

Input number

Current Year Score: 61.17

2019

OIE WAHIS database

1.2.4b

Number of veterinary para-professionals per 100,000 people

Input number

Current Year Score: -

No data available

OIE WAHIS database

1.2.5 Private sector and zoonotic

1.2.5a

Does the national plan on zoonotic disease or other legislation, regulations, or plans include mechanisms for working with the private sector in controlling or responding to zoonoses?

Yes = 1 , No = 0

Current Year Score: 0

There is no evidence of a formal partnership between the public and the private sector in controlling or responding to zoonoses. The 2019 report on zoonotic diseases, made by the Icelandic Food and Veterinary Authority, describes data collection in cooperation with several private laboratory services. However, it is not clear whether a mechanism exists for controlling or responding to zoonoses. [8] There is no evidence that any private organizations or agencies are involved in controlling or responding to zoonoses via the websites for the Ministry of Health, Directorate of Health, Ministry of Agriculture, The National University Hospital of Iceland, or through any laws or regulations on zoonotic diseases. [1, 2, 3, 4, 5, 6] In the cases of zoonoses outbreak, Law nr. 19/1997 states that the Directorate of Health should form a consulting board consisting of an appointed epidemiologist along with representatives from The Environmental Agency (Umhverfisstofnun Ríkisins), The Icelandic Food and Veterinary Authority (Matvælastofnun Ríkisins) and the Icelandic Radiation Safety Agency (Geislavarnir Ríkisins). [7] These are all state-run agencies.

[1] Ministry of Health (Heilbrigðisráðuneytið). [<https://www.government.is/ministries/ministry-of-health/>]. Accessed 29 August 2020.

[2] Directorate of Health (Embætti Landlæknis). [<https://www.landlaeknir.is>] Accessed 29 August 2020.

[3] Minister of Agriculture (Sjávarútvegs- og landbúnaðarráðherra). 2018.

[<https://www.stjornarradid.is/raduneyti/atvinnuvega-og-nyskopunarraduneytid/>]. Accessed 29 August 2020.

[4] National University Hospital of Iceland (Landspítali Íslands). [<https://www.landspitali.is>]. Accessed 29 August 2020.

[5] Parliament of Iceland (Alþingi). Law nr 25 of 7 April 1993. "Animal Diseases Act and Prevention of Animal Disease (Lög um dýrasjúkdóma og varnir gegn þeim)". [<https://www.althingi.is/lagas/nuna/1993025.html>]. Accessed 29 August 2020.

[6] Parliament of Iceland (Alþingi). Law nr 221/2012 of 23 February 2012. "Regulation on Reporting of Infectious Diseases (Reglugerð um skýrslugerð vegna sóttvarna)". [<https://www.reglugerdir.is/reglugerdir/eftir-raduneytum/heilbrigdis/nr/17760>]. Accessed 29 August 2020.

[7] Parliament of Iceland (Alþingi). Law nr 19 of 17 April 1997. "Law of Prevention of Infectious Diseases (Sóttvarnalög)". [<https://www.althingi.is/lagas/nuna/1997019.html>]. Accessed 29 August 2020.

[8] Icelandic Food and Veterinary Authority (Matvælastofnun). "Zoonotic diseases and antibiotic resistance (Súnur og sýklalyfjaónæmi)". [<https://www.mast.is/is/um-mast/eftirlitsnidurstodur/syklalyfjaonaemi>]. Accessed 29 August 2020.

1.3 BIOSECURITY

1.3.1 Whole-of- government biosecurity systems

1.3.1a

Does the country have in place a record, updated within the past five years, of the facilities in which especially dangerous pathogens and toxins are stored or processed, including details on inventories and inventory management systems of those facilities?

Yes = 1 , No = 0

Current Year Score: 0

There is no public evidence that Iceland has a registry or a record of any facilities that store, process or research especially dangerous pathogens and toxins. There is no evidence on the websites for the Ministry of Health, the Directorate of Health, Ministry of Agriculture, the Ministry of Justice, and the Department of Pathology and Virology at The National University Hospital of Iceland, the Department of Civil Protection and Emergency Management or the VERTIC BWC legislation database. [1, 2, 3, 4, 5, 6, 7] Iceland has no Ministry of Defense.

Although Iceland submitted Confidence Building Measures in 1994, access to them is restricted, and it is unknown if there are more recent reports or if they contain information on this matter. [8]

[1] Ministry of Health. [<https://www.government.is/ministries/ministry-of-health/>]. Accessed 29 August 2020.

[2] Directorate of Health (Embætti landlæknis). [<https://www.landlaeknir.is>]. Accessed 29 August 2020.

[3] Minister of Agriculture. 2020. [<https://www.stjornarradid.is/raduneyti/atvinnuvega-og-nyskopunarraduneytid/>]. Accessed 29 August 2020.

[4] Ministry of Justice. [<https://www.government.is/ministries/ministry-of-justice/>]. Accessed 29 August 2020.

[5] National University Hospital of Iceland (Landspítali Íslands). 2018. "Department of Pathology and Virology".

[<https://www.landspitali.is/sjuklingar-adstandendur/deildir-og-thjonusta/sykla-og-veirufraedideild/>]. Accessed 29 August 2020.

[6] Department of Civil Protection and Emergency Management (Almannavarnadeild).

[<https://www.almannavarnir.is/english/about-the-department-of-civil-protection-and-emergency-management/>]. Accessed 14 October 2020.

[7] Verification Research, Training and Information Centre (VERTIC). "BWC Legislation database".

[<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/i/>]. Accessed 14 October 2020.

[8] United Nations Office at Geneva (UNOG). 2018. "BWC Electronic Confidence Building Measures Portal - Iceland".

[<https://bwc-ecbm.unog.ch/state/iceland>]. Accessed 18 April 2019.

1.3.1b

Does the country have in place legislation and/or regulations related to biosecurity which address requirements such as physical containment, operation practices, failure reporting systems, and/or cybersecurity of facilities in which especially dangerous pathogens and toxins are stored or processed?

Yes = 1 , No = 0

Current Year Score: 0

There is no public evidence that Iceland has a legislation and/or regulation in place related to biosecurity of facilities that store or process especially dangerous pathogens and toxins on the websites for the Ministry of Health, the Directorate of Health, Ministry of Agriculture, the Ministry of Justice, and the Department of Pathology and Virology at The National University Hospital of Iceland, the Department of Civil Protection and Emergency Management or the VERTIC Biological Weapons Convention legislation database. [1, 2, 3, 4, 5, 6, 7] Iceland has no Ministry of Defense.

Although Iceland submitted Confidence Building Measures in 1994, access to them is restricted to the public, and it is unknown if there are more recent reports or if they contain information on this matter. [8]

[1] Ministry of Health. [<https://www.government.is/ministries/ministry-of-health/>]. Accessed 29 August 2020.

[2] Directorate of Health (Embætti landlæknis). [<https://www.landlaeknir.is>]. Accessed 29 August 2020.

[3] Minister of Agriculture. 2020. [<https://www.stjornarradid.is/raduneyti/atvinnuvega-og-nyskopunarraduneytid/>]. Accessed 29 August 2020.

[4] Ministry of Justice. [<https://www.government.is/ministries/ministry-of-justice/>]. Accessed 29 August 2020.

[5] National University Hospital of Iceland (Landspítali Íslands). 2018. "Department of Pathology and Virology".

[<https://www.landspitali.is/sjuklingar-adstandendur/deildir-og-thjonusta/sykla-og-veirufraeideild/>]. Accessed 29 August 2020.

[6] Department of Civil Protection and Emergency Management (Almannavarnadeild).

[<https://www.almannavarnir.is/english/about-the-department-of-civil-protection-and-emergency-management/>]. Accessed 14 October 2020.

[7] Verification Research, Training and Information Centre (VERTIC). "BWC Legislation database".

[<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/i/>]. Accessed 14 October 2020.

[8] United Nations Office at Geneva (UNOG). 2018. "BWC Electronic Confidence Building Measures Portal - Iceland".

[<https://bwc-ecbm.unog.ch/state/iceland>]. Accessed 18 April 2019.

1.3.1c

Is there an established agency (or agencies) responsible for the enforcement of biosecurity legislation and regulations?

Yes = 1 , No = 0

Current Year Score: 0

There is no public evidence that Iceland has an established agency responsible for the enforcement of biosecurity legislation and regulations, on the websites for the Ministry of Health, the Directorate of Health, Ministry of Agriculture, the Ministry of Justice, and the Department of Pathology and Virology at The National University Hospital of Iceland, the Department of Civil Protection and Emergency Management or the VERTIC BWC (Biological Weapons Convention) legislation database [1, 2, 3, 4, 5, 6, 7]. Iceland has no Ministry of Defense.

Law no. 19/1997 on Health Security and Communicable Diseases states that at the Directorate of Health, a physician, the Chief Epidemiologist, shall be responsible for the health security and the measures against communicable diseases and other threats to health and that Chief Physicians of Health Care Centers and the Chief Epidemiologist shall collaborate on the implementation of necessary infectious disease control and prevention and shall be assisted by police authorities if necessary, but does not mention enforcement [8].

Although Iceland submitted Confidence Building Measures in 1994, access to them by the public is restricted, and it is

unknown if there are more recent reports or if they contain information on this matter [9].

- [1] Ministry of Health. [<https://www.government.is/ministries/ministry-of-health/>]. Accessed 29 August 2020.
- [2] Directorate of Health (Embætti landlæknis). [<https://www.landlaeknir.is>]. Accessed 29 August 2020.
- [3] Minister of Agriculture. 2020. [<https://www.stjornarradid.is/raduneyti/atvinnuvega-og-nyskopunarraduneytid/>]. Accessed 29 August 2020.
- [4] Ministry of Justice. [<https://www.government.is/ministries/ministry-of-justice/>]. Accessed 29 August 2020.
- [5] National University Hospital of Iceland (Landspítali Íslands). 2018. "Department of Pathology and Virology". [<https://www.landspitali.is/sjuklingar-adstandendur/deildir-og-thjonusta/sykla-og-veirufraedideild/>]. Accessed 29 August 2020.
- [6] Department of Civil Protection and Emergency Management (Almannavarnadeild). [<https://www.almannavarnir.is/english/about-the-department-of-civil-protection-and-emergency-management/>]. Accessed 14 October 2020.
- [7] Verification Research, Training and Information Centre (VERTIC). "BWC Legislation database". [<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/i/>]. Accessed 14 October 2020.
- [8] Parliament of Iceland (Alþingi). Law nr 19 of 17 April 1997. "Law of Prevention of Infectious Diseases". [<https://www.althingi.is/lagas/nuna/1997019.html>]. Accessed 29 August 2020.
- [9] United Nations Office at Geneva (UNOG). 2018. "BWC Electronic Confidence Building Measures Portal - Iceland". [<https://bwc-ecbm.unog.ch/state/iceland>]. Accessed 18 April 2019.

1.3.1d

Is there public evidence that shows that the country has taken action to consolidate its inventories of especially dangerous pathogens and toxins into a minimum number of facilities?

Yes = 1 , No = 0

Current Year Score: 0

There is no public evidence that Iceland consolidates its inventories of especially dangerous pathogens and toxins into a minimum number of facilities via the websites for the Ministry of Health, the Directorate of Health, Ministry of Agriculture, the Ministry of Justice, the Department of Pathology and Virology at The National University Hospital of Iceland, the Department of Civil Protection and Emergency Management or the Verification, Research, Training and Information Center (VERTIC) Biological Weapons Convention (BWC) legislation database [1, 2, 3, 4, 5, 6, 7]. Iceland has no Ministry of Defense.

Although Iceland submitted Confidence Building Measures in 1994, access to them is restricted to the public, and it is unknown if there are more recent reports or if they contain information on this matter [8].

- [1] Ministry of Health. [<https://www.government.is/ministries/ministry-of-health/>]. Accessed 29 August 2020.
- [2] Directorate of Health (Embætti landlæknis). [<https://www.landlaeknir.is>] Accessed 29 August 2020.
- [3] Minister of Agriculture. 2020. [<https://www.stjornarradid.is/raduneyti/atvinnuvega-og-nyskopunarraduneytid/>]. Accessed 29 August 2020.
- [4] Ministry of Justice. [<https://www.government.is/ministries/ministry-of-justice/>]. Accessed 29 August 2020.
- [5] National University Hospital of Iceland (Landspítali Íslands). 2018. "Department of Pathology and Virology". [<https://www.landspitali.is/sjuklingar-adstandendur/deildir-og-thjonusta/sykla-og-veirufraedideild/>]. Accessed 29 August 2020.
- [6] Department of Civil Protection and Emergency Management (Almannavarnadeild). [<https://www.almannavarnir.is/english/about-the-department-of-civil-protection-and-emergency-management/>]. Accessed

14 October 2020.

- [7] Verification Research, Training and Information Centre (VERTIC). "BWC Legislation database".
[<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/i/>]. Accessed 14 October 2020.
- [8] United Nations Office at Geneva (UNOG). 2018. "BWC Electronic Confidence Building Measures Portal - Iceland".
[<https://bwc-ecbm.unog.ch/state/iceland>]. Accessed 18 April 2019.

1.3.1e

Is there public evidence of in-country capacity to conduct Polymerase Chain Reaction (PCR)-based diagnostic testing for anthrax and/or Ebola, which would preclude culturing a live pathogen?

Yes = 1 , No = 0

Current Year Score: 1

There is some evidence of in-country capacity in Iceland to conduct Polymerase Chain Reaction (PCR)-based diagnostic testing for anthrax and/or Ebola, which would preclude culturing a live pathogen. The Department of Bacterial and Virology of The National University Hospital's quality handbook from October 2019 has a guide for testing for Ebola. There it is stated that the virus can be detected with Reverse Transcription Polymerase Chain Reaction (RT-PCR) and that the department sends samples to Stockholm for analysis. However it is mentioned that in certain cases it is possible to make a rapid diagnosis in a BSL-3 research lab in Reykjavik with rapid-PCR [7] There is no further evidence on the subject on the website for the Ministry of Health, Directorate of Health, Ministry of Agriculture, The National University Hospital of Iceland, The Department of Pathology and Virology of The National University Hospital of Iceland, or the Ministry of Justice [1, 2, 3, 4, 5, 6].

- [1] Ministry of Health. [<https://www.government.is/ministries/ministry-of-health/>]. Accessed October 2020.
- [2] Directorate of Health (Embætti landlæknis). [<https://www.landlaeknir.is>] Accessed October 2020.
- [3] Minister of Agriculture. [<https://www.stjornarradid.is/raduneyti/atvinnuvega-og-nyskopunarraduneytid/>]. Accessed October 2020.
- [4] National University Hospital of Iceland (Landspítali Íslands). [<https://www.landspitali.is>]. Accessed October 2020.
- [5] Department of Pathology and Virology. [<https://www.landspitali.is/sjuklingar-adstandendur/deildir-og-thjonusta/sykla-og-veirufraedideild/>]. Accessed October 2020.
- [6] Ministry of Justice. [<https://www.government.is/ministries/ministry-of-justice/>]. Accessed October 2020.
- [7] National University Hospital of Iceland (Landspítali Íslands). 22 October 2019. "Ebola - instructions for testing samples in category A". [<https://traveler.lsh.is/focal/gaedahandbaekur/gnhsykla.nsf/0/DC363F7B45EEF57C00257D3C0033A617>]. Accessed 30 August 2020.

1.3.2 Biosecurity training and practices

1.3.2a

Does the country require biosecurity training, using a standardized, required approach, such as through a common curriculum or a trainthe-trainer program, for personnel working in facilities housing or working with especially dangerous pathogens, toxins, or biological materials with pandemic potential?

Yes = 1 , No = 0

Current Year Score: 0

There is no significant evidence that Iceland requires biosecurity training, using a standardized, required approach, such as through a common curriculum or a train the-trainer program for personnel working in facilities, housing or working with

especially dangerous pathogens, toxins, or biological materials with pandemic potential.

The Icelandic National University hospital of Iceland has some degree of biosecurity training in place, per the manual for processing substances in the hospital's quality manual. However, details on how that training is structured are not publicly available as links for the education programs are not accessible [1]

There is no further public evidence on the websites for the Ministry of Health, the Directorate of Health, Ministry of Agriculture, the Ministry of Justice, the Department of Pathology and Virology at The National University Hospital of Iceland, the Department of Civil Protection and Emergency Management or the Verification, Research, Training and Information Center (VERTIC) Biological Weapons Convention (BWC) legislation database [2, 3, 4, 5, 6, 7, 8]. Iceland has no Ministry of Defense.

Although Iceland submitted Confidence Building Measures in 1994, public access to them is restricted, so it is unknown if there are more recent reports or if they contain information on this matter [9].

- [1] National University Hospital of Iceland (Landspítali Íslands). 7 August 2019. "Handbook for substances (Efnahandbók)". [<https://traveler.lsh.is/focal/gaedahandbaekur/gnhsykla.nsf/0/2BCDBC342F902E1A002575600050E6C7>]. Accessed 30 August 2020.
- [2] Ministry of Health. [<https://www.government.is/ministries/ministry-of-health/>]. Accessed 14 October 2018.
- [3] Directorate of Health (Embætti landlæknis). [<https://www.landlaeknir.is>] Accessed 14 October 2018.
- [4] Minister of Agriculture. 2018. [<https://www.stjornarradid.is/raduneyti/atvinnuvega-og-nyskopunarraduneytid/>]. Accessed 12 October 2018. [<https://www.stjornarradid.is/raduneyti/atvinnuvega-og-nyskopunarraduneytid/>]. Accessed 14 October 2020.
- [5] Ministry of Justice. [<https://www.government.is/ministries/ministry-of-justice/>]. Accessed 14 October 2020.
- [6] Department of Pathology and Virology. [<https://www.landspitali.is/sjuklingar-adstandendur/deildir-og-thjonusta/sykla-og-veirufraeideild/>]. Accessed 14 October 2020.
- [7] Department of Civil Protection and Emergency Management (Almannavarnadeild). [<https://www.almannavarnir.is/english/about-the-department-of-civil-protection-and-emergency-management/>]. Accessed 14 October 2020.
- [8] Verification Research, Training and Information Centre (VERTIC). "BWC Legislation database". [<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/i/>]. Accessed 14 October 2020.
- [9] United Nations Office at Geneva (UNOG). 2018. "BWC Electronic Confidence Building Measures Portal - Iceland". [<https://bwc-ecbm.unog.ch/state/iceland>]. Accessed 14 October 2020.

1.3.3 Personnel vetting: regulating access to sensitive locations

1.3.3a

Do regulations or licensing conditions specify that security and other personnel with access to especially dangerous pathogens, toxins, or biological materials with pandemic potential are subject to the following checks: drug testing, background checks, and psychological or mental fitness checks?

Personnel are subject to all three of these checks = 3, Personnel are subject to two of these checks = 2, Personnel are subject to one of these checks = 1, Personnel are not subject to any of these checks = 0

Current Year Score: 0

There is no public information on regulations or licensing conditions specify that security and other personnel with access to especially dangerous pathogens, toxins, or biological materials with pandemic potential are subject to the following checks: drug testing, background checks, and psychological or mental fitness checks on the website for the Ministry of Health, the Ministry of Industries and Innovation, the Ministry of Justice, the Directorate of Health, the National University Hospital of Iceland, the Department of Civil Protection and Emergency Management or the Verification, Research, Training and Information Center (VERTIC) Biological Weapons Convention (BWC) legislation database [1, 2, 3, 4, 5, 6, 7]. Iceland has no Ministry of Defense.

According to the website of the National University Hospital of Iceland, researchers can get access to parts of the hospital's biobank, which contains biological material, given permission from Science ethic committees, the Director of therapy within the National University Hospital of Iceland, and The Icelandic Data Protection Authority, depending on which applies, but no licensing conditions are specified. There is no explicit mention of dangerous pathogens, toxins, or biological materials with pandemic potential [8].

Although Iceland submitted Confidence Building Measures in 1994, public access to them is restricted, and it is unknown if there are more recent reports or if they contain information on this matter [9].

- [1] Ministry of Health. [<https://www.government.is/ministries/ministry-of-health/>]. Accessed 30 August 2020.
- [2] Ministry of Industries and Innovation. 2020. [<https://www.stjornarradid.is/raduneyti/atvinnuvega-ognyskopunarraduneytid/>]. Accessed 30 August 2020.
- [3] Ministry of Justice. [<https://www.government.is/ministries/ministry-of-justice/>]. Accessed 30 August 2020.
- [4] Directorate of Health (Embætti landlæknis). [<https://www.landlaeknir.is>] Accessed 30 August 2020
- [5] National University Hospital of Iceland (Landspítali Íslands). 2020. [<https://www.landspitali.is/>]. Accessed 30 August 2020.
- [6] National University Hospital of Iceland (Landspítali Íslands). 2018. "Scientific research".
[<https://www.landspitali.is/fagfolk/visindi/visindastarf/>]. Accessed 30 August 2020.
- [7] Department of Civil Protection and Emergency Management (Almannavarnadeild).
[<https://www.almannavarnir.is/english/about-the-department-of-civil-protection-and-emergency-management/>]. Accessed 14 October 2020.
- [8] Verification Research, Training and Information Centre (VERTIC). "BWC Legislation database".
[<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/i/>]. Accessed 14 October 2020.
- [9] United Nations Office at Geneva (UNOG). 2018. "BWC Electronic Confidence Building Measures Portal - Iceland".
[<https://bwc-ecbm.unog.ch/state/iceland>]. Accessed 14 October 2020.

1.3.4 Transportation security

1.3.4a

Does the country have publicly available information on national regulations on the safe and secure transport of infectious substances (specifically including Categories A and B)?

Yes = 1 , No = 0

Current Year Score: 1

Iceland has publicly available information the safe and secure transport of infectious substances, including Categories A and B in the European Agreement on the International Carriage of Dangerous Goods by Road (ADR) handbook on transport of dangerous goods, published in 2020 by the Administration of Occupational Safety and Health. Section 6.2 describes what substances should be categorized as infectious substances and how the category of the item is determined. Special

considerations are described for the transport of such substances, such as that substances of this kind should be transported in closed transport and not be transported with certain other items. The handbook is done in accordance with ADR rules, which are in effect in Iceland, and the national regulation 1077/2010 on the transport of dangerous goods [1]

[1] Administration of Occupational Safety and Health (Vinnueftirlitið). 2020. "ADR handbook - transport of dangerous goods (ADR handbók - flutningur á hættulegum farmi)". [https://www.vinnueftirlit.is/media/handbaekur/Handbok_ADR.pdf]. Accessed 30 August 2020.

1.3.5 Cross-border transfer and end-user screening

1.3.5a

Is there legislation and/or regulations in place to oversee the cross-border transfer and end-user screening of especially dangerous pathogens, toxins, and pathogens with pandemic potential?

Yes = 1 , No = 0

Current Year Score: 0

There is insufficient evidence that Iceland has regulations in place to oversee the cross-border transfer and end-user screening of especially dangerous goods, including pathogens and toxins, on the websites for the Ministry of Health, the Directorate of Health, Ministry of Agriculture, the Ministry of Justice, the Department of Pathology and Virology at The National University Hospital, the Department of Civil Protection and Emergency Management of Iceland or the Verification, Research, Training and Information Center (VERTIC) Biological Weapons Convention (BWC) regulation database [1, 2, 3, 4, 5, 6, 7]. Iceland has no Ministry of Defense.

Iceland signed the Convention on Biological Diversity (CBD), which is an international agreement on biosafety, in 1992. It was implemented in law number 18/1996, which was passed on 2. April 1996. The law covers genetically modified organisms (GMOs) and how to treat, label and sell GMOs but does not mention biosafety otherwise [8]. Lastly, Iceland is a member of the Nordic Biosafety Networks (NBN), but no information is available on proposals, legislation or regulations as a result of that membership [9].

Although Iceland submitted Confidence Building Measures in 1994, however, public access to them is restricted, so it is unknown if there are more recent reports or if they contain information on this matter [10].

Regulation 322/1990, with later amendments in 2006, on transport of dangerous goods via air builds on the rules of the International Civil Aviation Organization (ICAO) and covers domestic and non-domestic flight. The regulation includes a checklist for the reception of dangerous goods [11, 12].

[1] Ministry of Health. [<https://www.government.is/ministries/ministry-of-health/>]. Accessed 14 October 2020.

[2] Directorate of Health (Embætti landlæknis). [<https://www.landlaeknir.is>] Accessed 14 October 2020.

[3] Minister of Agriculture. 2020. [<https://www.stjornarradid.is/raduneyti/atvinnuvega-og-nyskopunarraduneytid/>]. Accessed 14 October 2020.

[4] Ministry of Justice. [<https://www.government.is/ministries/ministry-of-justice/>]. Accessed 14 October 2020.

[5] Department of Pathology and Virology. [<https://www.landspitali.is/sjuklingar-adstandendur/deildir-og-thjonusta/sykla-og-veirufraedideild/>]. Accessed 14 October 2020.

[6] Department of Civil Protection and Emergency Management (Almannavarnadeild).

[<https://www.almannavarnir.is/english/about-the-department-of-civil-protection-and-emergency-management/>]. Accessed 14 October 2020.

- [7] Verification Research, Training and Information Centre (VERTIC). "BWC Legislation database".
[<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/i/>]. Accessed 14 October 2020.
- [8] Parliament of Iceland. Law nr. 18/1996 of 2 April 1996. "Laws on genetically modified organisms".
[<https://www.althingi.is/lagas/nuna/1996018.html>]. Accessed 14 October 2020.
- [9] Nordic Biosafety Network. 2020. [<https://www.folkhalsomyndigheten.se/Nordic-biosafety-network>]. Accessed 14 October 2020.
- [10] United Nations Office at Geneva (UNOG). 2020. "BWC Electronic Confidence Building Measures Portal - Iceland".
[<https://bwcecbm.unog.ch/state/iceland>]. Accessed 14 October 2020.
- [11] Administration of Occupational Safety and Health (Vinnueftirlitî). 2020. "ADR handbook - transport of dangerous goods". [https://www.vinnueftirlit.is/media/handbaekur/Handbok_ADR.pdf]. Accessed 30 August 2020.
- [12] Ministry of Justice. Regulation 322/1990 of 5 July 1990. "Regulation on the safe transport of dangerous goods by air".
Accessed 30 August 2020.

1.4 BIOSAFETY

1.4.1 Whole-of-government biosafety systems

1.4.1a

Does the country have in place national biosafety legislation and/or regulations?

Yes = 1 , No = 0

Current Year Score: 0

There is no public evidence that Iceland has a legislation or regulation that has to do with biosafety, on the websites for the Ministry of Health, Directorate of Health, Ministry of Agriculture, the Ministry of Justice, Department of Pathology and Virology at The National University Hospital, Department of Civil Protection and Emergency Management of Iceland or the Verification, Research, Training and Information Center (VERTIC) Biological Weapons Convention (BWC) regulation database [1, 2, 3, 4, 5, 6, 7]. Iceland has no Ministry of Defense.

Iceland signed the Convention on Biological Diversity (CBD), which is an international agreement on biosafety, in 1992. It was implemented in law number 18/1996, which was passed on 2. April 1996. The law covers genetically modified organisms (GMOs) and how to treat, label and sell GMOs but does not mention biosafety otherwise [8]. Lastly, Iceland is a member of the Nordic Biosafety Networks (NBN), but no information is available on proposals, legislation or regulations as a result of that membership [9].

Although Iceland submitted Confidence Building Measures in 1994, public access to them is restricted, so it is unknown if there are more recent reports or if they contain information on this matter [10].

- [1] Ministry of Health. [<https://www.government.is/ministries/ministry-of-health/>]. Accessed 14 October 2020.
- [2] Directorate of Health (Embætti landlæknis). [<https://www.landlaeknir.is>] Accessed 14 October 2020.
- [3] Minister of Agriculture. 2020. [<https://www.stjornarradid.is/raduneyti/atvinnuvega-og-nyskopunarraduneytid/>]. Accessed 14 October 2020.
- [4] Ministry of Justice. [<https://www.government.is/ministries/ministry-of-justice/>]. Accessed 14 October 2020.
- [5] Department of Pathology and Virology". [<https://www.landspitali.is/sjuklingar-adstandendur/deildir-og-thjonusta/sykla-og-veirufraeideild/>]. Accessed 14 October 2020.
- [6] Department of Civil Protection and Emergency Management (Almannavarnadeild).

[<https://www.almannavarnir.is/english/about-the-department-of-civil-protection-and-emergency-management/>]. Accessed 14 October 2020.

[7] Verification Research, Training and Information Centre (VERTIC). "BWC Legislation database".

[<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/i/>]. Accessed 14 October 2020.

[8] Parliament of Iceland. Law nr. 18/1996 of 2 April 1996. "Laws on genetically modified organisms".

[<https://www.athingi.is/lagas/nuna/1996018.html>]. Accessed 14 October 2020.

[9] Nordic Biosafety Network. 2020. [<https://www.folkhalsomyndigheten.se/Nordic-biosafety-network>]. Accessed 14 October 2020.

[10] United Nations Office at Geneva (UNOG). 2020. "BWC Electronic Confidence Building Measures Portal - Iceland".

[<https://bwc-ecbm.unog.ch/state/iceland>]. Accessed 14 October 2020.

1.4.1b

Is there an established agency responsible for the enforcement of biosafety legislation and regulations?

Yes = 1 , No = 0

Current Year Score: 0

There is no public evidence that Iceland has an established agency responsible for the enforcement of biosafety legislation and regulations via the websites for the Ministry of Health, Directorate of Health, Ministry of Agriculture, Department of Pathology and Virology at the National University Hospital of Iceland, Department of Civil Protection and Emergency Management of Iceland or Verification, Research, Training and Information Center (VERTIC) nuclear security regulation database [1, 2, 3, 4, 5, 6, 7]. Iceland has no Ministry of Defense.

Iceland signed the Convention on Biological Diversity (CBD), which is an international agreement on biosafety, in 1992. It was implemented in law number 18/1996, which was passed on 2. April 1996. The law covers genetically modified organisms (GMOs) and how to treat, label and sell GMOs but does not mention biosafety otherwise [8]. Lastly, Iceland is a member of the Nordic Biosafety Networks (NBN), but no information is available on proposals, legislation or regulations as a result of that membership [9].

Although Iceland submitted Confidence Building Measures in 1994, public access to them is restricted, so it is unknown if there are more recent reports or if they contain information on this matter [10].

[1] Ministry of Health. [<https://www.government.is/ministries/ministry-of-health/>]. Accessed 14 October 2020.

[2] Directorate of Health (Embætti landlæknis). [<https://www.landlaeknir.is>] Accessed 14 October 2020.

[3] Minister of Agriculture. 2020. [<https://www.stjornarradid.is/raduneyti/atvinnuvega-og-nyskopunarraduneytid/>]. Accessed 14 October 2020.

[4] Ministry of Justice. [<https://www.government.is/ministries/ministry-of-justice/>]. Accessed 14 October 2020.

[5] Department of Pathology and Virology. [<https://www.landspitali.is/sjuklingar-adstandendur/deildir-og-thjonusta/sykla-og-veirufraedideild/>]. Accessed 14 October 2020.

[6] Department of Civil Protection and Emergency Management (Almannavarnadeild).

[<https://www.almannavarnir.is/english/about-the-department-of-civil-protection-and-emergency-management/>]. Accessed 14 October 2020.

[7] Verification Research, Training and Information Centre (VERTIC). "BWC Legislation database".

[<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/i/>]. Accessed 14 October 2020.

[8] Parliament of Iceland. Law nr. 18/1996 of 2 April 1996. "Laws on genetically modified organisms."

- [<https://www.althingi.is/lagas/nuna/1996018.html>]. Accessed 14 October 2020.
- [9] Nordic Biosafety Network. 2020. [<https://www.folkhalsomyndigheten.se/Nordic-biosafety-network>]. Accessed 14 October 2020.
- [10] United Nations Office at Geneva (UNOG). 2020. "BWC Electronic Confidence Building Measures Portal - Iceland". [<https://bwc-ecbm.unog.ch/state/iceland>]. Accessed 14 October 2020.

1.4.2 Biosafety training and practices

1.4.2a

Does the country require biosafety training, using a standardized, required approach, such as through a common curriculum or a train-the-trainer program, for personnel working in facilities housing or working with especially dangerous pathogens, toxins, or biological materials with pandemic potential?

Yes = 1 , No = 0

Current Year Score: 0

There is no public evidence that Iceland requires biosafety training for personnel working in facilities housing or working with especially dangerous pathogens, toxins, or biological materials with pandemic potential via the websites for Ministry of Health, the Directorate of Health, Ministry of Agriculture, the Department of Pathology and Virology at the National University Hospital of Iceland, the Department of Civil Protection and Emergency Management of Iceland or the Verification, Research, Training and Information Center (VERTIC) nuclear security regulation database [1, 2, 3, 4, 5, 6, 7]. Iceland has no Ministry of Defense.

Iceland signed the Convention on Biological Diversity (CBD), which is an international agreement on biosafety, in 1992. It was implemented in law number 18/1996, which was passed on 2. April 1996. The law covers genetically modified organisms (GMOs) and how to treat, label and sell GMOs but does not mention biosafety otherwise [8]. Lastly, Iceland is a member of the Nordic Biosafety Networks (NBN), but no information is available on proposals, legislation or regulations as a result of that membership [9].

Although Iceland submitted Confidence Building Measures in 1994, public access to them is restricted, so it is unknown if there are more recent reports or if they contain information on this matter [10].

- [1] Ministry of Health. [<https://www.government.is/ministries/ministry-of-health/>]. Accessed 14 October 2020.
- [2] Directorate of Health (Embætti landlæknis). [<https://www.landlaeknir.is>] Accessed 14 October 2020.
- [3] Minister of Agriculture. 2020. [<https://www.stjornarradid.is/raduneyti/atvinnuvega-og-nyskopunarraduneytid/>]. Accessed 14 October 2020.
- [4] Ministry of Justice. [<https://www.government.is/ministries/ministry-of-justice/>]. Accessed 14 October 2020.
- [5] Department of Pathology and Virology. [<https://www.landspitali.is/sjuklingar-adstandendur/deildir-og-thjonusta/sykla-og-veirufraedideild/>]. Accessed 14 October 2020.
- [6] Department of Civil Protection and Emergency Management (Almannavarnadeild). [<https://www.almannavarnir.is/english/about-the-department-of-civil-protection-and-emergency-management/>]. Accessed 14 October 2020.
- [7] Verification Research, Training and Information Centre (VERTIC). "BWC Legislation database". [<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/i/>]. Accessed 14 October 2020.
- [8] Parliament of Iceland. Law nr. 18/1996 of 2 April 1996. "Laws on genetically modified organisms". [<https://www.althingi.is/lagas/nuna/1996018.html>]. Accessed 14 October 2020.

[9] Nordic Biosafety Network. 2020. [<https://www.folkhalsomyndigheten.se/Nordic-biosafety-network>]. Accessed 14 October 2020.

[10] United Nations Office at Geneva (UNOG). 2020. "BWC Electronic Confidence Building Measures Portal - Iceland". [<https://bwc-ecbm.unog.ch/state/iceland>]. Accessed 14 October 2020.

1.5 DUAL-USE RESEARCH AND CULTURE OF RESPONSIBLE SCIENCE

1.5.1 Oversight of research with especially dangerous pathogens, toxins, pathogens with pandemic potential and/or other dual-use research

1.5.1a

Is there publicly available evidence that the country has conducted an assessment to determine whether ongoing research is occurring on especially dangerous pathogens, toxins, pathogens with pandemic potential and/or other dual-use research?

Yes = 1 , No = 0

Current Year Score: 0

There is no public evidence that Iceland has conducted an assessment to determine whether ongoing research is occurring on especially dangerous pathogens, toxins, pathogens with pandemic potential, and/or other dual-use research, on the websites for the Ministry of Health, Directorate of Health, Ministry of Agriculture, Ministry of Justice, and Department of Pathology and Virology at The National University Hospital of Iceland or the Verification, Research, Training and Information Center (VERTIC) Biological Weapons Convention (BWC) regulation database [1, 2, 3, 4, 5, 7]. Iceland has no Ministry of Defense

Although Iceland submitted Confidence Building Measures in 1994, public access to them is restricted, so it is unknown if there are more recent reports or if they contain information on this matter [6].

[1] Ministry of Health. [<https://www.government.is/ministries/ministry-of-health/>]. Accessed 30 August 2020.

[2] Directorate of Health (Embætti landlæknis). [<https://www.landlaeknir.is>] Accessed 30 August 2020.

[3] Minister of Agriculture. 2020. [<https://www.stjornarradid.is/raduneyti/atvinnuvega-og-nyskopunarraduneytid/>]. Accessed 30 August 2020.

[4] Ministry of Justice. [<https://www.government.is/ministries/ministry-of-justice/>]. Accessed 30 August 2020.

[5] Department of Pathology and Virology. [<https://www.landspitali.is/sjuklingar-adstandendur/deildir-og-thjonusta/sykla-og-veirufraedideild/>]. Accessed 30 August 2020.

[6] United Nations Office at Geneva (UNOG). 2020. "BWC Electronic Confidence Building Measures Portal - Iceland". [<https://bwc-ecbm.unog.ch/state/iceland>]. Accessed 18 April 2019.

[7] Verification Research, Training and Information Centre (VERTIC). "BWC Legislation database". [<https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/i/>]. Accessed 14 October 2020.

1.5.1b

Is there legislation and/or regulation requiring oversight of research with especially dangerous pathogens, toxins, pathogens with pandemic potential and/or other dual-use research?

Yes = 1 , No = 0

Current Year Score: 0

There is no public evidence that Iceland has a national policy requiring oversight of dual-use research, on the websites for the Ministry of Health, Directorate of Health, Ministry of Agriculture, Ministry of Justice, and Department of Pathology and Virology at The National University Hospital of Iceland, or in the Verification, Research, Training and Information Center (VERTIC) Biological Weapons Convention (BWC) regulation database [1, 2, 3, 4, 5, 6]. Iceland has no Ministry of Defense.

Law nr. 61/2013 on the use of chemicals states that the Environment Agency of Iceland should oversee all research with dangerous substances, but does not mention dual-use research [7]. Regulation nr on surveillance of services and items that could have military implications, however, that regulation does not mention research [8]. There is no mention of dual-use research in the laws on the prevention of infectious diseases [9].

The Department of Pathology and Virology oversees a BSL-3 security research laboratory, but there is no public evidence that they do any kind of research with especially dangerous pathogens, pathogens with pandemic potential, and/or other dual-use research [5].

Although Iceland submitted Confidence Building Measures in 1994, public access to them is restricted, so it is unknown if there are more recent reports or if they contain information on this matter [10].

- [1] Ministry of Health. [<https://www.government.is/ministries/ministry-of-health/>]. Accessed 30 August 2020.
- [2] Directorate of Health (Embætti landlæknis). [<https://www.landlaeknir.is>] Accessed 30 August 2020.
- [3] Minister of Agriculture. 2020. [<https://www.stjornarradid.is/raduneyti/atvinnuvega-og-nyskopunarraduneytid/>]. Accessed 30 August 2020.
- [4] Ministry of Justice. [<https://www.government.is/ministries/ministry-of-justice/>]. Accessed 30 August 2020.
- [5] Department of Pathology and Virology. [<https://www.landspitali.is/sjuklingar-adstandendur/deildir-og-thjonusta/sykla-og-veirufraedideild/>]. Accessed 30 August 2020.
- [6] Verification Research, Training and Information Centre (VERTIC). "Nuclear Security Legislation Database". [<https://www.vertic.org/nuclear-and-other-radioactive-material/nuclear-security-legislation-database/>]. Accessed 30 August 2020.
- [7] Parliament of Iceland. Law nr. 61/2013 of 8 April 2013. "Chemical laws". [<https://www.althingi.is/altext/stjt/2013.061.html>]. Accessed 17 October 2020.
- [8] Ministry of Justice. Regulation 361/2016 of 16 April 2016. "Regulation on supervision of services and items that could have military implications". Accessed 30 August 2020.
- [9] Parliament of Iceland (Alþingi). Law nr 19 of 17 April 1997. "Law of Prevention of Infectious Diseases". [<https://www.althingi.is/lagas/nuna/1997019.html>]. Accessed 29 August 2020.
- [10] United Nations Office at Geneva (UNOG). 2020. "BWC Electronic Confidence Building Measures Portal - Iceland". [<https://bwc-ecbm.unog.ch/state/iceland>]. Accessed 30 August 2020.

1.5.1c

Is there an agency responsible for oversight of research with especially dangerous pathogens, toxins, pathogens with pandemic potential and/or other dual-use research?

Yes = 1 , No = 0

Current Year Score: 0

There is no public evidence that Iceland has an agency responsible for oversight of research with especially dangerous pathogens, pathogens with pandemic potential, and/or other dual-use research, on the websites for the Ministry of Health, Directorate of Health, Ministry of Agriculture, Ministry of Justice, and Department of Pathology and Virology at The National University Hospital of Iceland or the Verification, Research, Training and Information Center (VERTIC) Biological Weapons

Convention (BWC) regulation database [1, 2, 3, 4, 5, 7]. Iceland has no Ministry of defense.

The Department of Pathology and Virology oversees a BSL-3 security research laboratory, but there is no public evidence that they do any kind of research with especially dangerous pathogens, pathogens with pandemic potential, and/or other dual-use research [5].

Although Iceland submitted Confidence Building Measures in 1994, public access to them is restricted, so it is unknown if there are more recent reports or if they contain information on this matter [6].

- [1] Ministry of Health. [<https://www.government.is/ministries/ministry-of-health/>]. Accessed 30 August 2020..
- [2] Directorate of Health (Embætti landlæknis). [<https://www.landlaeknir.is>] Accessed 30 August 2020..
- [3] Minister of Agriculture. 2018. [<https://www.stjornarradid.is/raduneyti/atvinnuvega-og-nyskopunarraduneytid/>]. Accessed 30 August 2020..
- [4] Ministry of Justice. [<https://www.government.is/ministries/ministry-of-justice/>]. Accessed 30 August 2020.
- [5] Department of Pathology and Virology. [<https://www.landspitali.is/sjuklingar-adstandendur/deildir-og-thjonusta/sykla-og-veirufraedideild/>]. Accessed 30 August 2020.
- [6] United Nations Office at Geneva (UNOG). 2018. "BWC Electronic Confidence Building Measures Portal - Iceland". [<https://bwc-ecbm.unog.ch/state/iceland>]. Accessed 30 August 2020.
- [7] Verification Research, Training and Information Centre (VERTIC). "Nuclear Security Legislation Database". [<https://www.vertic.org/nuclear-and-other-radioactive-material/nuclear-security-legislation-database/>]. Accessed 17 October 2020.

1.5.2 Screening guidance for providers of genetic material

1.5.2a

Is there legislation and/or regulation requiring the screening of synthesized DNA (deoxyribonucleic acid) against lists of known pathogens and toxins before it is sold?

Yes = 1 , No = 0

Current Year Score: 0

There is no public evidence that Iceland has national legislation, regulations, policies, or other guidance, requiring the screening of synthesized DNA before it is sold, via the websites for the Ministry of Health, Directorate of Health, Ministry of Agriculture, Ministry of Justice, and Department of Pathology and Virology at The National University Hospital of Iceland or the Verification, Research, Training and Information Center (VERTIC) Biological Weapons Convention (BWC) regulation database [1, 2, 3, 4, 5, 6]. Iceland has no Ministry of Defense

Law nr. 18/1996, which took effect on 15 April 1996, covers genetically modified organisms (GMOs) and how to treat, label and sell GMOs. There is no mention of synthesized DNA [7].

Although Iceland submitted Confidence Building Measures in 1994, public access to them is restricted, so it is unknown if there are more recent reports or if they contain information on this matter [8].

- [1] Ministry of Health. [<https://www.government.is/ministries/ministry-of-health/>]. Accessed 30 August 2020..
- [2] Directorate of Health (Embætti landlæknis). [<https://www.landlaeknir.is>] Accessed 30 August 2020..
- [3] Minister of Agriculture. 2018. [<https://www.stjornarradid.is/raduneyti/atvinnuvega-og-nyskopunarraduneytid/>]. Accessed 30 August 2020..

- [4] Ministry of Justice. [<https://www.government.is/ministries/ministry-of-justice/>]. Accessed 30 August 2020.
- [5] Department of Pathology and Virology. [<https://www.landspitali.is/sjuklingar-adstandendur/deildir-og-thjonusta/sykla-og-veirufraeideild/>]. Accessed 30 August 2020.
- [6] Verification Research, Training and Information Centre (VERTIC). "Nuclear Security Legislation Database". [<https://www.vertic.org/nuclear-and-other-radioactive-material/nuclear-security-legislation-database/>]. Accessed 30 August 2020.
- [7] Parliament of Iceland. Law nr. 18/1996 of 2 April 1996. "Laws on genetically modified organisms". [<https://www.althingi.is/lagas/nuna/1996018.html>]. Accessed 30 August 2020.
- [8] United Nations Office at Geneva (UNOG). 2020. "BWC Electronic Confidence Building Measures Portal - Iceland". [<https://bwc-ecbm.unog.ch/state/iceland>]. Accessed 30 August 2020.

1.6 IMMUNIZATION

1.6.1 Vaccination rates

1.6.1a

Immunization rate (measles/MCV2)

Immunization rate (measles/MCV2), 95% or greater = 2, 80-94.9% = 1, Less than 80%, or no data = 0

Current Year Score: 2

2019

World Health Organization

1.6.1b

Are official foot-and-mouth disease (FMD) vaccination figures for livestock publicly available through the OIE database?

Yes = 1 , No = 0

Current Year Score: 1

2020

OIE WAHIS database

Category 2: Early detection and reporting for epidemics of potential international concern

2.1 LABORATORY SYSTEMS STRENGTH AND QUALITY

2.1.1 Laboratory testing for detection of priority diseases

2.1.1a

Does the national laboratory system have the capacity to conduct diagnostic tests for at least 5 of the 10 WHO-defined core tests?

Evidence they can conduct 5 of the 10 core tests and these tests are named = 2, Evidence they can conduct 5 of the 10 core tests and the tests are not named = 1, No evidence they can conduct 5 of the 10 core tests = 0

Current Year Score: 0

There is insufficient evidence that the Icelandic national laboratory system has the capacity to conduct diagnostic tests for at least 5 of the 10 World Health Organization (WHO)-defined core tests. There is evidence that The Department of Pathology and Virology of The National University Hospital of Iceland can conduct tests for 4 of the 6 core tests, common across all countries, defined by WHO, which are: polymerase chain reaction (PCR) testing for influenza, virus culture for poliovirus, serology for HIV and microscopy for mycobacterium tuberculosis [1, 2, 3, 4]. There is no public evidence via the Directorate of Health, the Ministry of Health or the National University Hospital of Iceland that the country can conduct the core tests for rapid diagnostic testing for plasmodium spp (malaria) or typhoid, or that Iceland has publicly defined country-specific core tests [5, 6, 7].

[1] Department of Bacterial and Virology of The National University Hospital of Iceland (Landspítali Íslands). 12 May 2019. "Influenza A and B (Inflúensa A og B)".

[<https://traveler.lsh.is/focal/gaedahandbaekur/gnhsykla.nsf/d898a6f6a787152d8025643c007ba4bb/5a74dd587bd8cf560025773600510ad5?OpenDocument>]. Accessed 30 August 2020.

[2] Department of Bacterial and Virology of The National University Hospital of Iceland (Landspítali Íslands). 24 January 2018. "Enteroviruses (Enterovirur)".

[<https://traveler.lsh.is/focal/gaedahandbaekur/gnhsykla.nsf/0/273D0D7E6E79708D00257896003DAFA3?OpenDocument>]. Accessed 30 August 2020.

[3] Department of Bacterial and Virology of The National University Hospital of Iceland (Landspítali Íslands). 13 March 2017. "HIV".

[<https://traveler.lsh.is/focal/gaedahandbaekur/gnhsykla.nsf/0/3E30E9C563713B0C00257736005094D7?OpenDocument>]. Accessed 30 August 2020.

[4] Department of Bacterial and Virology of The National University Hospital of Iceland (Landspítali Íslands). 19 December 2017. "Microscopy - lower respiratory system (Smásjárskoðun - neðri öndunarfæri)".

[<https://traveler.lsh.is/focal/gaedahandbaekur/gnhsykla.nsf/0/46F94BF421341FAD00256E8B003A7110?OpenDocument>]. Accessed 30 August 2020.

[5] Directorate of Health (Embætti Landlæknis). [<https://www.landlaeknir.is>] Accessed 30 August 2020.

[6] Ministry of Health (Heilbrigðisráðuneyti). [<https://www.govt.is/ministries/ministry-of-health/>]. Accessed 30 August 2020.

[7] National University Hospital of Iceland (Landspítali Íslands). [<https://www.landspitali.is>]. Accessed 30 August 2020.

2.1.1b

Is there a national plan, strategy or similar document for conducting testing during a public health emergency, which includes considerations for testing for novel pathogens, scaling capacity, and defining goals for testing?

Yes, there is evidence of a plan, and it includes considerations for testing for novel pathogens, scaling capacity, and defining goals for testing = 2, Yes, there is evidence of a plan, but there is insufficient evidence that it includes considerations for testing for novel pathogens, scaling capacity, and defining goals for testing = 1, No evidence of a plan = 0

Current Year Score: 1

Iceland has a Covid-19-specific testing strategy which outlines testing schedule for different priority groups (defined by regulation no. 1198/2020) and different testing arrangements [10]. There is, however, no public evidence of an overreaching national plan, strategy or similar document for conducting testing during a public health emergency, which includes considerations for testing for novel pathogens, scaling capacity, and defining goals for testing.

The national plan for responding to Chemical, Biological, Radiological, Nuclear, Explosives (CBRNE) incidents includes details on collaboration between several public institutions, however there is insufficient evidence that the it includes considerations for testing for novel pathogens and defining goals for testing [1].

The national pandemic response plan mentions that testing should be executed by the National University Hospital of Iceland, but does not provide a further outline for testing [2].

The National University Hospital of Iceland has a response plan for Ebola outbreaks, in which testing procedures are outlined and more formal guidelines referenced, however that plan is not a national plan and the guidelines referenced are not open to the public [3].

There is no further evidence on the websites for the Ministry of Health, the Directorate of Health, the Ministry of Agriculture, the Ministry of Justice, the Department of Pathology and Virology at The National University Hospital of Iceland or the VERTIC BWC regulation database [4, 5, 6, 7, 8, 9]. Iceland has no Ministry of Defense.

[1] Directorate of Health (Landlæknir). 21 October 2019. "Response plan for Chemical, Biological, Radiological, Nuclear, Explosives (CBRNE) incidents (Viðbragðsáætlun vegna CBRNE atvika)". [<https://www.landlaeknir.is/um-embaettid/frettir/frett/item38074/vidbragdsaaetlun-vegna-cbrne-atvika>]. Accessed 30 August 2020.

[2] Directorate of Health (Landlæknir). 3 March 2020. "National pandemic plan 3rd edition 2020 (Landsáætlun um heimsfaraldur, 3. útg. 2020)". [<https://www.landlaeknir.is/utgefild-efni/skjal/item29596/>]. Accessed 12 September 2020.

[3] National University Hospital of Iceland (Landspítali Íslands). 2014. "Response plan for ebola outbreaks in NUHI (Viðbraðgsáætlun vegnaebólu á LSH)". [https://www.landspitali.is/library/Sameiginlegarskrar/Gagnasafn/BRUNNURINN/Vidbragdsaaetlun-LSH/Vidbragdsaaetlun-vegna-ebolu/ebola_utgafa_5_heildarskjal_171214_3.pdf]. Accessed 17 October 2020.

[4] Ministry of Health (Heilbrigðisráðuneytið). [<https://www.govt.is/ministries/ministry-of-health/>]. Accessed 30 August 2020.

[5] Directorate of Health (Embætti Landlæknis). [<https://www.landlaeknir.is>] Accessed 30 August 2020.

[6] Minister of Agriculture (Sjávarútvegs- og landbúnaðaráðherra). 2020.

[<https://www.stjornarradid.is/raduneyti/atvinnuvega-og-nyskopunarraduneytid/>]. Accessed 30 August 2020.

[7] Department of Pathology and Virology (Sýkla- og Veirufræðideild). [<https://www.landspitali.is/sjuklingar-adstandendur/deildir-og-thjonusta/sykla-og-veirufraedideild/>]. Accessed 30 August 2020.

[8] Ministry of Justice (Dómsmálaráðuneytið). [<https://www.govt.is/ministries/ministry-of-justice/>]. Accessed 30 August 2020.

- [9] Verification Research, Training and Information Centre (VERTIC). "Nuclear Security Legislation Database". [<https://www.vertic.org/nuclear-and-other-radioactive-material/nuclear-security-legislation-database/>]. Accessed 30 August 2020.
- [10] Directorate of Health and Department of Civil Protection and Emergency Management (Embætti Landlæknis og Almannavarnadeild ríkislöggreglustjóra). "Information and statistics on vaccinations against Covid-19". [<https://www.covid.is/covid-19-vaccine>]. Accessed 6 April 2021.

2.1.2 Laboratory quality systems

2.1.2a

Is there a national laboratory that serves as a reference facility which is accredited (e.g., International Organization for Standardization [ISO] 15189:2003, U.S. Clinical Laboratory Improvement Amendments [CLIA])?

Yes = 1 , No = 0

Current Year Score: 1

There is a national laboratory that serves as a reference facility which is accredited. According to the quality policy for the department of Pathology and Virology of the National University Hospital of Iceland, which serves as a national reference facility, the departments administration ensures compliance with the ISO15189 standard [1]. According to the website, "The departmental management will ensure that the requirements of ISO15189 are met" [1]. The department aims to meet the needs of those who request research, teaching, education and counselling in pathology. The department is engaged in scientific research and is a reference laboratory for Iceland as well as producing samples for other laboratories. The department's activities contribute to improved public health through the registration of infectious diseases, tracking of infections, screen studies, vaccinations and education to the public [1]. Keldur institute also acts as a National reference laboratory for several items (fish, mollusks, crustaceans, Campylobacter, parasites (in particular Trichinella, Echinococcus and Anisakis) and TSE). There is a biocontainment laboratory situated at the institute (of biosafety level 3). The diagnostic service is conducted in accordance to ISO17025 and several of the methods utilized are accredited [2]

- [1] Department of Pathology and Virology of The National University Hospital of Iceland (Landspítali Íslands). 21 November 2017. "The quality policy for the Department of Virology". [<https://traveler.lsh.is/focal/gaedahandbaekur/gnhsykla.nsf/0/1B4C5EE79F344C2E00256C78003425E9>]. Accessed 30 August 2020.
- [2] Keldur - The Institute for Experimental Pathology. "Services". [http://keldur.is/services_0]. Accessed 30 August 2020.

2.1.2b

Is there a national laboratory that serves as a reference facility which is subject to external quality assurance review?

Yes = 1 , No = 0

Current Year Score: 1

There is evidence that the national laboratory that serves as a reference facility is subject to external quality assurance in Iceland. According to the quality policy for the department of Pathology and Virology of the National University Hospital of Iceland, which serves as a national reference facility, the departments administration ensures compliance with the ISO15189 standard [1]. According to the website, "The departmental management will ensure that the requirements of ISO15189 are met" [1]. The department aims to meet the needs of those who request research, teaching, education and counselling in pathology. The department is engaged in scientific research and is a reference laboratory for Iceland as well as producing samples for other laboratories. The department's activities contribute to improved public health through the registration of

infectious diseases, tracking of infections, screen studies, vaccinations and education to the public [1]. ISO15189 certification requires external quality assurance reviews. [2]

[1] Department of Pathology and Virology of The National University Hospital of Iceland (Landspítali Íslands). 21 November 2017. "The quality policy for the Department of Virology".

[<https://traveler.lsh.is/focal/gaedahandbaekur/gnhsykla.nsf/0/1B4C5EE79F344C2E00256C78003425E9>]. Accessed 12. October 2018.

[2] World Health Organization (WHO). "Content Sheet 10-1: Overview of External Quality Assessment (EQA)". [http://www.who.int/ihr/training/laboratory_quality/10_b_eqa_contents.pdf]. Accessed 18 November 2018.Â

2.2 LABORATORY SUPPLY CHAINS

2.2.1 Specimen referral and transport system

2.2.1a

Is there a nationwide specimen transport system?

Yes = 1 , No = 0

Current Year Score: 0

There is no public evidence that Iceland has a nationwide specimen transport system. The quality manual for the department of Pathology and Virology of the National University Hospital of Iceland has a section on how to label, pack and send specimens, however the guideline for sending does not include the use of any official system [1]. No additional evidence can be found on the websites for The Minister of Health, Directorate of Health, Ministry of Agriculture or The National University Hospital of Iceland [2, 3, 4, 5]. The response plan for Chemical, Biological, Radiological, Nuclear, Explosives (CBRNE) incidents outlines procedures for collecting and sending specimens, but does not mention a specific transport system [6].

[1] Department of Pathology and Virology. 9 March 2019. "Completion request, marking, finishing and delivery of specimens".

[<https://kaldur.landspitali.is/focal/gaedahandbaekur/gnhsykla.nsf/5e27f2e5a88c898e00256500003c98c2/e93739efc721e95000257df800519e2a?OpenDocument>]. Accessed 30 August 2020.

[2] Ministry of Health. [<https://www.government.is/ministries/ministry-of-health/>]. Accessed 30 August 2020.

[3] Directorate of Health (Embætti landlæknis). [<https://www.landlaeknir.is>]. Accessed 30 August 2020.

[4] Minister of Agriculture. 2020. [<https://www.stjornarradid.is/raduneyti/atvinnuvega-og-nyskopunarraduneytid/>]. Accessed 30 August 2020.

[5] National University Hospital of Iceland. 2020. [<https://www.landspitali.is/>]. Accessed 30 August 2020.

[6] Directorate of Health. 21 October 2019. "Response plan for Chemical, Biological, Radiological, Nuclear, Explosives (CBRNE) incidents". [<https://www.landlaeknir.is/um-embaettid/frettir/frett/item38074/vidbragdsaaetlun-vegna-cbrne-atvika>]. Accessed 30 August 2020.

2.2.2 Laboratory cooperation and coordination

2.2.2a

Is there a plan in place to rapidly authorize or license laboratories to supplement the capacity of the national public health laboratory system to scale-up testing during an outbreak?

Yes = 2 , Yes, but there is evidence of gaps in implementation = 1 , No = 0

Current Year Score: 0

There is insufficient evidence that there is a plan to rapidly authorize or license laboratories to supplement the capacity of the national public health laboratory system to scale-up testing during an outbreak. The response plan for Chemical, Biological, Radiological, Nuclear, Explosives (CBRNE) incidents plan includes a list of several public and academic laboratories that have a role in supplementing existing testing in emergencies, however, the plan does not mention licensing nor go into details on how the collaboration process should be [1]. The 3rd edition of the National Pandemic Plan, published in 2020, does not include information on licensing other laboratories to supplement testing [2]. There is no further evidence on the websites for the Ministry of Health, the Directorate of Health, the Ministry of Agriculture, the Ministry of Justice, the Department of Pathology and Virology at The National University Hospital of Iceland or the Verification Research, Training and Information Center (VERTIC) Biochemical Weapons Convention (BWC) regulation database [3, 4, 5, 6, 7, 8]. Iceland has no Ministry of Defense.

[1] Directorate of Health. 21 October 2019. "Response plan for Chemical, Biological, Radiological, Nuclear, Explosives (CBRNE) incidents". [<https://www.landlaeknir.is/um-embaettid/frettir/frett/item38074/vidbragdsaaetlun-vegna-cbrne-atvika>]. Accessed 30 August 2020.

[2] Directorate of Health. 3 March 2020. "National pandemic plan 3rd edition 2020". [<https://www.landlaeknir.is/utgefild-efni/skjal/item29596/>]. Accessed 12 September 2020.

[3] Ministry of Health. [<https://www.government.is/ministries/ministry-of-health/>]. Accessed 25 October 2020.

[4] Directorate of Health (Embætti landlæknis). [<https://www.landlaeknir.is>] Accessed 25 October 2020.

[5] Minister of Agriculture. 2020. [<https://www.stjornarradid.is/raduneyti/atvinnuvega-og-nyskopunarraduneytid/>]. Accessed 25 October 2020.

[6] Department of Pathology and Virology. [<https://www.landspitali.is/sjuklingar-adstandendur/deildir-og-thjonusta/sykla-og-veirufraedideild/>]. Accessed 30 August 2020.

[7] Ministry of Justice. [<https://www.government.is/ministries/ministry-of-justice/>]. Accessed 25 October 2020.

[8] Verification Research, Training and Information Centre (VERTIC). "Nuclear Security Legislation Database".

[<https://www.vertic.org/nuclear-and-other-radioactive-material/nuclear-security-legislation-database/>]. Accessed 25 October 2020.

2.3 REAL-TIME SURVEILLANCE AND REPORTING

2.3.1 Indicator and event-based surveillance and reporting systems

2.3.1a

Is there evidence that the country is conducting ongoing event-based surveillance and analysis for infectious disease?

Yes, there is evidence of ongoing event-based surveillance and evidence that the data is being analyzed on a daily basis = 2,

Yes, there is evidence of ongoing event-based surveillance, but no evidence that the data are being analyzed on a daily basis

= 1, No = 0

Current Year Score: 0

There is no public evidence that Iceland is conducting ongoing event-based surveillance and analysis for infectious disease, on the websites for the Department of Civil Protection and Emergency Management, The Ministry of Health, Directorate of Health, Ministry of Agriculture, or The National University Hospital of Iceland [1, 2, 3, 4, 5].

[1] Department of Civil Protection and Emergency Management (Almannavarnadeild). 18. May 2018. "About the Department of Civil Protection and Emergency Management". [<https://www.almannavarnir.is/english/about-the-department-of-civil->

- protection-and-emergency-management/] Accessed 13 September 2020.
- [2] Ministry of Health. [<https://www.government.is/ministries/ministry-of-health/>]. Accessed 13 September 2020.
- [3] Directorate of Health (Embætti landlæknis). [<https://www.landlaeknir.is>] Accessed 13 September 2020.
- [4] Minister of Agriculture. [<https://www.stjornarradid.is/raduneyti/atvinnuvega-og-nyskopunarraduneytid/>]. Accessed 13 September 2020.
- [5] National University Hospital of Iceland (Landspítali Íslands). [<https://www.landspitali.is>]. Accessed 13 September 2020.

2.3.1b

Is there publicly available evidence that the country reported a potential public health emergency of international concern (PHEIC) to the WHO within the last two years?

Yes = 1 , No = 0

Current Year Score: 0

There is no public evidence that Iceland reported a potential public health emergency of international concern (PHEIC) to the WHO within the last two years, according to the WHO Outbreak News Page, or the websites for the Ministry of Health and the Directorate of Health. No evidence can be found that Iceland reported Covid-19 as a PHEIC to the WHO despite a national state of emergency being declared in March and October 2020 [1, 2, 3, 4, 5].

- [1] World Health Organization (WHO). "Disease Outbreak News - Iceland". [<http://www.who.int/csr/don/archive/country/isl/en/>]. Accessed 30 August 2020.
- [2] Ministry of Health. [<https://www.government.is/ministries/ministry-of-health/>]. Accessed 30 August 2020.
- [3] Directorate of Health (Embætti landlæknis). [<https://www.landlaeknir.is>] Accessed 30 August 2020.
- [4] Department of Civil Protection and Emergency Management (Almannavarnadeild). 3 March 2020. "State of emergency due to Covid-19 (Neyðarstig almannavarna vegna Covid-19)". [<https://www.almannavarnir.is/frettir/neydarstig-almannavarna-vegna-covid-19/>], Accessed 17 October 2020.
- [5] Department of Civil Protection and Emergency Management (Almannavarnadeild). 4 October 2020. "State of emergency due to Covid-19 (Neyðarstig almannavarna vegna Covid-19)". [<https://www.almannavarnir.is/frettir/neydarstig-almannavarna-virkjad/>], Accessed 17 October 2020.

2.3.2 Interoperable, interconnected, electronic real-time reporting systems

2.3.2a

Does the government operate an electronic reporting surveillance system at both the national and the sub-national level?

Yes = 1 , No = 0

Current Year Score: 0

There is insufficient evidence that Iceland operates an electronic reporting surveillance system at either the national or sub-national level. There is no public evidence of such a system available via the Icelandic government on the websites for the Ministry of Health, Directorate of Health, or the National University Hospital of Iceland [1, 2, 3]. Iceland has in place an electronic surveillance system in place for fisheries, but that is mainly only focused on fishing regulations, quota and illegal fishing and mentions nothing about health-related issues [4].

- [1] Ministry of Health. [<https://www.government.is/ministries/ministry-of-health/>]. Accessed 30 August 2020.
- [2] Directorate of Health (Embætti landlæknis). [<https://www.landlaeknir.is>] Accessed 30 August 2020.
- [3] National University Hospital of Iceland (Landspítali Íslands). 2018. [<https://www.landspitali.is/>]. Accessed 30 August 2020.

[4] Geirsson, G. 2011. "Case study of the Icelandic integrated system for monitoring, control and surveillance". Food and agriculture organization of The United Nations. [<http://www.fao.org/3/i2099e/i2099e.pdf>]. Accessed 30 August 2020.

2.3.2b

Does the electronic reporting surveillance system collect ongoing or real-time laboratory data?

Yes = 1 , No = 0

Current Year Score: 0

There is insufficient public evidence that the Icelandic government operates an electronic reporting surveillance system that collects ongoing/real-time laboratory data. There is no public evidence of such a system available via the websites for the Ministry of Health, Directorate of Health, or the National University Hospital of Iceland [1, 2, 3].

[1] Ministry of Health. [<https://www.government.is/ministries/ministry-of-health/>]. Accessed 30 August 2020.

[2] Directorate of Health (Embætti landlæknis). [<https://www.landlaeknir.is>] Accessed 30 August 2020.

[3] National University Hospital of Iceland (Landspítali Íslands). 2018. [<https://www.landspitali.is/>]. Accessed 30 August 2020.

2.4 SURVEILLANCE DATA ACCESSIBILITY AND TRANSPARENCY

2.4.1 Coverage and use of electronic health records

2.4.1a

Are electronic health records commonly in use?

Electronic health records are commonly in use = 2, Electronic health records are not commonly in use, but there is evidence they are used = 1, No evidence electronic health records are in use = 0

Current Year Score: 2

Electronic health records (EHR) in Iceland are commonly in use. A work schedule of electronic medical records points to this, since most of the upcoming projects aim to further increase the merger of different databases and development of electronic systems [1]. Since 1996, an accessible database of EHR for all medical professionals to use, has been the goal of the Icelandic government. The Directorate of Health is responsible for overseeing the use of EHR for the whole country, which entails promoting the use of information technology in health services and contribute to security and improvement in the health system and better health of the population [2]. Since 1 March 2018 the functional unit overseeing development of EHR and related systems is called the National Center for e-health [4] The World Health Organization's 2015 Atlas of eHealth country profiles finds that more than 75% of primary, secondary and tertiary health facilities in Iceland use EHR. [3]

[1] Directorate of Health. July 2017. "Work schedule of electronic medical records 2017-2018".

[<https://www.landlaeknir.is/servlet/file/store93/item32890/Starfsaaetlun%20EL-RS%202017-2018%20Lokaskjal.pdf>]. Accessed 28 September 2018."

[2] Directorate of Health. January 2016. "Electronic Medical Records and Health Network. Policy of the Director of Health until 2020". [https://www.landlaeknir.is/servlet/file/store93/item28559/Rafr%C3%A6n_sj%C3%BAkraskra-og-heilbrigdisnet_Stefna-EL-til_2020_jan.2016.pdf]. Accessed 28 September 2018.

[3] World Health Organization (WHO). 2015. "Atlas of eHealth country profiles".

[http://apps.who.int/iris/bitstream/handle/10665/204523/9789241565219_eng.pdf?sequence=1]. Accessed 13 January 2019.

[4] Directorate of Health. 21 February 2019. "National Center for e-Health". [<https://www.landlaeknir.is/um->

embaettid/greinar/grein/item36625/Midstod-rafraennar-sjukraskrar---e--National-Centre-for-e-Health-]. Accessed 30 August 2020.

2.4.1b

Does the national public health system have access to electronic health records of individuals in their country?

Yes = 1 , No = 0

Current Year Score: 1

The national public health system of Iceland has access to electronic health records of individuals. The Icelandic healthcare system is entirely public and managed by The Minister of Health. Law nr. 40/2007 on healthcare, which became effective on 1 September 2007, states that all individuals shall have the option of receiving the most comprehensive health service available at any given time for the protection of mental, physical and social health in accordance with the laws, social security legislation, patient law and other laws, as applicable [1]. A document titled 'The work schedule for electronic health records 2017-2018', which describes accomplishments for the last three years and lists upcoming projects regarding further development of the EHR, published by the Directorate of Health, states that every medical professional, private or public, has access to the electronic health records database [2].

[1] Parliament of Iceland (Alþingi). Law nr. 40/2007 of 27 March 2007. "Law on healthcare".

[<https://www.althingi.is/lagas/nuna/2007040.html>]. Accessed 12 September 2020.

[2] Directorate of Health (Embætti landlæknis). July 2017. "Work schedule of electronic medical records 2017-2018 (Starfsáætlun rafrænnar sjókraskrarr 2017-2018)".

[<https://www.landlaeknir.is/servlet/file/store93/item32890/Starfsaaetlun%20EL-RS%202017-2018%20Lokaskjal.pdf>].

Accessed 12 September 2020.

2.4.1c

Are there data standards to ensure data is comparable (e.g., ISO standards)?

Yes = 1 , No = 0

Current Year Score: 0

There is no public evidence that Iceland has data standards to ensure data is comparable (e.g. ISO standards) on the website for the Ministry of Health, Directorate of Health, or The National University Hospital of Iceland [1, 2, 3]. Although the Directorate of Health's policy for electronic health records states that the Director has the responsibility to make sure that the electronic records are standardized and comparable, there is no evidence of how this is to be done [4]. In a document published in July 2015, titled 'Safety and quality of medical records - Instructions from the Director of Health', it says that in case the EHR system should be operated, partly or completely, by a third party, it should be made certain that it has validated quality control or fulfills the requirements of ISO 27001, or other comparable standards, but that has to do with data security, not comparability [5].

[1] Ministry of Health. [<https://www.govt.is/ministries/ministry-of-health/>]. Accessed 12 September 2020.

[2] Directorate of Health (Embætti landlæknis). [<https://www.landlaeknir.is>] Accessed 12 September 2020.

[3] National University Hospital of Iceland (Landspítali Íslands). [<https://www.landspitali.is>]. Accessed 12 September 2020.

[4] Directorate of Health (Embætti landlæknis). January 2016. "Electronic Medical Records and Health Network. Policy of the Director of Health until 2020". [https://www.landlaeknir.is/servlet/file/store93/item28559/Rafr%C3%A6n_sj%C3%BAkraska-og-heilbrigdisnet_Stefna-EL-til_2020_jan.2016.pdf]. Accessed 12 September 2020.

[5] Directorate of Health (Embætti landlæknis). July 2015. "Safety and quality of medical records - Instructions from the

Director of Health".

[[https://www.landlaeknir.is/servlet/file/store93/item27455/Fyrirmaeli%20landlaeknis%20um%20oryggi%20sj%C3%BAkraskr aa%20 \[2\].pdf](https://www.landlaeknir.is/servlet/file/store93/item27455/Fyrirmaeli%20landlaeknis%20um%20oryggi%20sj%C3%BAkraskr aa%20 [2].pdf)]. Accessed 12 September 2020.

2.4.2 Data integration between human, animal, and environmental health sectors

2.4.2a

Is there evidence of established mechanisms at the relevant ministries responsible for animal, human, and wildlife surveillance to share data (e.g., through mosquito surveillance, brucellosis surveillance)?

Yes = 1 , No = 0

Current Year Score: 0

There is no public evidence that Iceland has an established mechanism at the relevant ministries responsible for animal, human and wildlife surveillance to share data, on the websites for the Ministry of Health, Directorate of Health, Ministry of Agriculture, Ministry for the Environment and Natural Resources, or The National University Hospital of Iceland [1, 2, 3, 4, 5] Chapter 2, article 6 of law nr. 19/1997 on disease prevention measures, states that the Minister of Health shall appoint to a disease prevention council, seven individuals who will serve for a four-year term. Sitting in this council should be specialists in the fields of bacteriology, virology, pathology, sexually transmitted diseases, preventive medicine, general physician, and a nurse who specializes in disease prevention. The council shall be based at the facility for the Directorate of Health and the secretary for the council is the Chief Epidemiologist of Iceland. This council is responsible for sharing information between departments, define the framework for disease prevention, and to council on the prevention of infectious diseases [6]. However, there is no description of the mechanism with which the sharing is done, nor is there any mention of sharing information or data between ministries.

[1] Ministry of Health. [<https://www.government.is/ministries/ministry-of-health/>]. Accessed 30 August 2020.

[2] Directorate of Health (Embætti landlæknis). [<https://www.landlaeknir.is>] Accessed 30 August 2020.

[3] Minister of Agriculture. [<https://www.stjornarradid.is/raduneyti/atvinnuvega-og-nyskopunarraduneytid/>]. Accessed 30 August 2020.

[4] Ministry for the environment and natural resources. [<https://www.government.is/ministries/ministry-for-the-environment-and-natural-resources/>]. Accessed 30 August 2020.

[5] National University Hospital of Iceland (Landspítali Æslands). [<https://www.landspitali.is>]. Accessed 30 August 2020.

[6] Parliament of Iceland (Alþingi). Law nr 19 of 17 April 1997. "Law of Prevention of Infectious Diseases". [<https://www.althingi.is/lagas/nuna/1997019.html>]. Accessed 30 August 2020.

2.4.3 Transparency of surveillance data

2.4.3a

Does the country make de-identified health surveillance data on infectious diseases publicly available via reports (or other format) on government websites (such as the Ministry of Health, Ministry of Agriculture, or similar)?

Yes = 1 , No = 0

Current Year Score: 0

There is insufficient evidence that Iceland makes de-identified health surveillance data on infectious diseases available on a weekly basis or more frequently.

The Directorate of Health, a government agency headed by the Director of Health, whose role is to promote high-quality and safe health care for the people of Iceland, health promotion, and effective disease prevention measures, publishes an annual report, titled 'Farsóttaskýrsla' ('Outbreak Report'). This report lists all confirmed cases of outbreaks, describes the diseases and often gives historical description of that disease in Iceland. Among diseases that are mentioned in the 2018 report are: Influenza, Tuberculosis, HIV and malaria [1]. Additionally the Directorate of Health publishes the report 'Farsóttarfréttir' ('Pandemic News') approximately once per quarter [2]. There is no further evidence on the website of the Ministry of Health. [3] Iceland however does make de-identified Covid-19 surveillance data, including details such as case count and mortality rate available via daily reports on the government website www.covid.is. [4]

[1] Directorate of Health (Embætti Landlæknis). [<https://www.landlaeknir.is/smit-og-sottvarnir/>]. Accessed 18 October 2020.

[2] Directorate of Health (Embætti landlæknis). 12 January 2016. "Pandemic news (Farsóttarfréttir)". Accessed 12 September 2020.

[3] Ministry of Health (Heilbrigðisráðuneytið). [<https://www.government.is/ministries/ministry-of-health/>]. Accessed 6 September 2020.

[4] Embætti Landlæknis og Almannavarnadeild ríkislöggreglustjóra. "Covid-19 in Iceland - Numerical data since 15 June (Covid-19 á Íslandi - Tölfræði frá og með 15. júní)". [<https://covid.is>]. Accessed 29 August 2020.

2.4.3b

Does the country make de-identified COVID-19 surveillance data (including details such as daily case count, mortality rate, etc) available via daily reports (or other formats) on government websites (such as the Ministry of Health, or similar)?

Yes = 1 , No = 0

Current Year Score: 1

Iceland makes de-identified Covid-19 surveillance data, including details such as case count and mortality rate available via daily reports on the government website www.covid.is.

The website contains data on incident rates in the last 14 days, current and cumulative numbers for the number of incidents, test, persons in quarantine, and in isolation. An overview of the daily number domestic and non-domestic cases is available as well as data aggregated by age groups and municipality [1]

[1] Directorate of Health and Department of Civil Protection and Emergency Management (Embætti landlæknisog Almannavarnadeild ríkislöggreglustjóra). "Covid-19 in Iceland - Numerical data since 15 June". [<https://covid.is>]. Accessed 29 August 2020.

2.4.4 Ethical considerations during surveillance

2.4.4a

Is there legislation and/or regulations that safeguard the confidentiality of identifiable health information for individuals, such as that generated through health surveillance activities?

Yes = 1 , No = 0

Current Year Score: 1

Iceland has laws that safeguards the confidentiality of identifiable health information for individuals, such as that generated through health surveillance activities. Chapter 1, article 2 of laws nr. 55/2009 on medical records, which took effect on 1 May

2009, states that when creating and updating medical records, full respect has to be given to the rights of privacy of the patients, as the records contain sensitive personal information and that medical records are confidential [1]. Furthermore, chapter 7, article 22, on 'surveillance', states that it is the responsibility of The Data Protection Authority to oversee the processing and safeguarding of personal information in all medical records [2]. Chapter 1, article 3 of Law nr. 19/1997 on Prevention of Infectious Diseases (Sottvarnalog) states that full confidentiality of all personally identifiable information, shall be exercised in reports on infectious diseases, as with other medical records [2].

[1] Parliament of Iceland (Alþingi). Law nr 55 of 27 April 2009. "Laws on medical records".

[<https://www.althingi.is/lagas/nuna/2009055.html>]. Accessed 30 August 2020.

[2] Data Protection Authority. [<https://www.personuvernd.is/information-in-english/>]. Accessed 30 August 2020.

[3] Parliament of Iceland (Alþingi). Law nr 19 of 17 April 1997. "Law of Prevention of Infectious Diseases".

[<https://www.althingi.is/lagas/nuna/1997019.html>]. Accessed 30 August 2020.

2.4.4b

Is there legislation and/or regulations safeguarding the confidentiality of identifiable health information for individuals, such as that generated through health surveillance activities, include mention of protections from cyber attacks (e.g., ransomware)?

Yes = 1 , No = 0

Current Year Score: 0

There is no public evidence that the laws safeguarding the confidentiality of identifiable health information for individuals, include mention of protections from cyber attacks. Law nr. 55/2009 on medical records, which took effect on 1 May 2009, has no mentions of cyber attacks and no additional evidence is available via the websites for The Ministry of Health, The National University Hospital of Iceland, or in the 2017 'Information Security Policy of the Directorate of Health (Upplýsingaöryggisstefna Embættis landlæknis)' about protection against cyber attacks [1, 2, 3, 4].

[1] Parliament of Iceland (Alþingi). Law nr 55 of 27 April 2009. "Laws on medical records (Lög um sjúkraskrár)".

[<https://www.althingi.is/lagas/nuna/2009055.html>]. Accessed 30 August 2020.

[2] Ministry of Health (Heilbrigðisráðuneytið). [<https://www.gov.is/ministries/ministry-of-health/>]. Accessed 30 August 2020.

[3] National University Hospital of Iceland (Landspítali Íslands). [<https://www.landspitali.is>]. Accessed 30 August 2020.

[4] Directorate of Health (Embætti landlæknis). 28 November 2017. "Information Security Policy of the Directorate of Health (Upplýsingaöryggisstefna Embættis landlæknis)".

[<https://www.landlaeknir.is/servlet/file/store93/item20397/Uppl%C3%BDsinga%C3%B6ryggisstefna%20Emb%C3%A6ttis%20landl%C3%A6knis%202017%20LOK%20.pdf>]. Accessed 30 August 2020.

2.4.5 International data sharing

2.4.5a

Has the government made a commitment via public statements, legislation and/or a cooperative agreement to share surveillance data during a public health emergency with other countries in the region?

Yes, commitments have been made to share data for more than one disease = 2, Yes, commitments have been made to share data only for one disease = 1, No = 0

Current Year Score: 2

There is evidence that Iceland has made a commitment to share surveillance data for multiple diseases during a public health emergencies with other countries in the region. As a member of the European Economic Area, Iceland shares surveillance data during a public health emergency with other countries in the region. All European Union (EU) and European Economic Area (EEA) countries are part of the European Center for Disease Prevention and Control Early Warning and Response System (EWRS). The EWRS is a platform to allow exchange of information on risk assessment and risk management for more timely, efficient and coordinated public health action. The EWRS is used for notifications on outbreaks, exchanging information and decisions about the coordination of measures among Member States. Over the years, it has played an important role to support health crisis related to severe acute respiratory syndrome (SARS), Ebola virus disease, avian influenza in humans and other communicable diseases [1]. Article 9 of Chapter IV of the EU Decision on Serious Cross-Border Threats to Health notes that the European Commission shall make available to the national competent authorities through the EWRS any information that may be useful for coordinating the response including information related to serious cross-border threats to health and public health measures related to serious cross-border threats to health transmitted through rapid alert and information systems established under other provisions of Union law or the Euratom Treaty [2].

[1] European Centre for Disease Prevention and Control. "Early Warning and Response System (EWRS)".

[<https://ecdc.europa.eu/en/early-warning-and-response-system-ewrs>]. Accessed 5 September 2020.

[2] Decision No 1082/2013/EU of the European Parliament and of the Council of 22 October 2013 on Serious Cross-Border Threats to Health and Repealing Decision No 2119/98/EC. Official Journal of the European Union.

[https://ec.europa.eu/health/sites/health/files/preparedness_response/docs/decision_serious_crossborder_threats_22102013_en.pdf]. Accessed 5 September 2020.

2.5 CASE-BASED INVESTIGATION

2.5.1 Case investigation and contact tracing

2.5.1a

Is there a national system in place to provide support at the sub-national level (e.g. training, metrics standardization and/or financial resources) to conduct contact tracing in the event of a public health emergency?

Yes, there is evidence that the national government supports sub-national systems to prepare for future public health emergencies = 2, Yes, there is evidence that the national government supports sub-national systems, but only in response to active public health emergencies = 1, No = 0

Current Year Score: 1

There is a national system in place in Iceland (e.g. training, metrics standardization and/or financial resources) to expand contact tracing in the event of an active public health emergency.

Once the arrival of the disease was confirmed, the government quickly built a team of contact tracers to interview those with a positive diagnosis and track down people they'd been in contact with. Within a few weeks, Icelanders had another high-tech tool at their disposal, too: a government-backed automated tracing app. Rakning C-19, which launched in early April, was hailed as a way to "make the tracing of transmissions easier" at the time. It tracks users' GPS data to compile a record of where they have been, allowing investigators—with permission—to look at whether those with a positive diagnosis are potentially spreading the disease. [7]

There is no evidence this was done in accordance to any contact tracing guidelines and there is no evidence that Iceland has a national system in place to provide support to conduct contact tracing in the event of a public health emergency on the websites of the Ministry of Health, Directorate of Health, Ministry of Agriculture, or National University Hospital of Iceland [1,

2, 3, 4]. The national pandemic plan and national chemical, biological, radiological, nuclear, explosives (CBRNE) plan mention disease tracking but do not discuss care or treatment for contacts of those infected [5, 6].

- [1] Ministry of Health (Heilbrigðisráðuneytið). [<https://www.government.is/ministries/ministry-of-health/>]. Accessed 25 August 2020.
- [2] Directorate of Health (Embætti Landlæknis). [<https://www.landlaeknir.is>]. Accessed 25 August 2020.
- [3] Minister of Agriculture (Sjávarútvegs- og landbúnaðarráðherra). [<https://www.stjornarradid.is/raduneyti/atvinnuvega-ognyskopunarraduneytid/>]. Accessed 25 August 2020.
- [4] National University Hospital of Iceland (Landspítali Íslands). [<https://www.landspitali.is>]. Accessed 25 August 2020.
- [5] Directorate of Health (Landlæknir). 21 October 2019. "Response plan for CBRNE incidents (Viðbragðsáætlun vegna CBRNE atvika (Chemical, Biological, Radiological, Nuclear, Explosives)". [<https://www.landlaeknir.is/um-embaettid/frettir/frett/item38074/vidbragdsaaetlun-vegna-cbrne-atvika>]. Accessed 30 August 2020.
- [6] Directorate of Health (Landlæknir). 3 March 2020. "National pandemic plan 3rd edition 2020 (Landsáætlun um heimsfaraldur, 3. útg. 2020)". [<https://www.landlaeknir.is/utgefdir-efni/skjal/item29596/>]. Accessed 5 September 2020.
- [7] MIT Technology Review. May 11, 2020. "Nearly 40% of Icelanders are using a covid app—and it hasn't helped much". [<https://www.technologyreview.com/2020/05/11/1001541/iceland-rakning-c19-covid-contact-tracing/>] Accessed 24 June 2021.

2.5.1b

Does the country provide wraparound services to enable infected people and their contacts to self-isolate or quarantine as recommended, particularly economic support (paycheck, job security) and medical attention?

Yes, both economic support and medical attention are provided = 2, Yes, but only economic support or medical attention is provided = 1, No = 0

Current Year Score: 0

There is insufficient evidence that Iceland provides wraparound services to enable infected people and their contacts to self-isolate or quarantine as recommended, particularly economic support (paycheck, job security) and medical attention.

Iceland has special measures for Covid-19, where it provides both economic support and medical attention to suspected cases. Those that cannot work due to quarantine are eligible for compensation payments from the Directorate of Labor. Furthermore those with a reduced employment ratio are entitled to partial unemployment benefits [1]. Those in quarantine have access to 24/7 medical consultation via phone [2]. However these measures do not extend to health emergencies other than Covid-19.

There is no further information on the webpages for the Directorate of Labor, Ministry of Health, Directorate of Health or the Ministry of Social Affairs [3, 4, 5, 6].

- [1] Directorate of Labor (VinnumÁlastofnun). "Information for Covid-19 (Upplýsingar vegna Covid-19)". [<https://vinnumalastofnun.is/upplýsingar-vegna-covid-19/>]. Accessed 5 September 2020.
- [2] Directorate of Health and Department of Civil Protection and Emergency Management (Embætti landlæknisog Almannavarnadeild ríkislöggreglustjóra). "Quarantine". [<https://www.covid.is/flokkar/sottkví>]. Accessed 5 September 2020. 3] Directorate of Labor (VinnumÁlastofnun). [<https://vinnumalastofnun.is>]. Accessed 17 October 2020.
- [4] Ministry of Health. [<https://www.government.is/ministries/ministry-of-health/>]. Accessed 30 August 2020.
- [5] Directorate of Health (Embætti landlæknis). [<https://www.landlaeknir.is>] Accessed 30 August 2020.
- [6] Ministry of Social Affairs. [<http://government.is/ministries/ministry-of-social-affairs/>]. Accessed 17 October 2020.

2.5.1c

Does the country make de-identified data on contact tracing efforts for COVID-19 (including the percentage of new cases from identified contacts) available via daily reports (or other format) on government websites (such as the Ministry of Health, or similar)?

Yes = 1 , No = 0

Current Year Score: 0

There is no evidence that Iceland makes data on contact tracing efforts for Covid-19 publicly available.

The official website for Covid-19 information in Iceland includes daily numbers for the percentage of new cases identified in those that are or have been in quarantine due to contact with infected individuals. There is however no data on whether cases are linked [1]. There is evidence that this data exists, though it might not be publicly available [2].

There is no further information on the webpages for the Directorate of Labor, Ministry of Health or Directorate of Health [3, 4, 5].

[1] Directorate of Health and Department of Civil Protection and Emergency Management (Embætti landlæknisog Almannavarnadeild ríkislöggreglustjóra). "Covid-19 in Iceland - Numerical data since 15 June". [<https://covid.is>]. Accessed 29 August 2020.

[2] Directorate of Health and Department of Civil Protection and Emergency Management (Embætti landlæknisog Almannavarnadeild ríkislöggreglustjóra). "Privacy statement". [<https://www.covid.is/app/personuverndarstefna>]. Accessed 17 October 2020.

[3] Directorate of Labor (VinnumÁlastofnun). [<https://vinnumalastofnun.is>]. Accessed 17 October 2020.

[4] Ministry of Health. [<https://www.government.is/ministries/ministry-of-health/>]. Accessed 30 August 2020.

[5] Directorate of Health (Embætti landlæknis). [<https://www.landlaeknir.is>] Accessed 30 August 2020.

2.5.2 Point of entry management

2.5.2a

Is there a joint plan or cooperative agreement between the public health system and border control authorities to identify suspected and potential cases in international travelers and trace and quarantine their contacts in the event of a public health emergency?

Yes, plan(s)/agreement(s) are in place to prepare for future public health emergencies = 2, Yes, but plan(s)/agreement(s) are in place only in response to active public health emergencies = 1, No = 0

Current Year Score: 2

There is evidence of a joint plan between the public health system and border control authorities to identify suspected and potential cases in international travelers and trace their contacts for future public health emergencies.

The 'Response plan for disease prevention in international airports', published in 2018 by the Chief Epidemiologist, Isavia and the Department of Civil Protection and Emergency Management outlines how airport authorities should collaborate in order to identify and trace potential cases. The plan maintained and updated by cooperation of the three aforementioned parties and should reviewed in 2020. It states that the Public Health Passenger Locator Card should use by the border control authorities and passed on to the local police and the state epidemiologist or relevant health authorities depending on the situation. According to the response plan the Handbook for the Management of Public Health Events in Air Transport is used

as a guideline for public healthcare services in the collaboration [1].

[1] Department of Civil Protection and Emergency Management (Almannavarnadeild ríkislöggreglustjóra). 18 January 2018. "Response plan for disease prevention in international airports (Viðbragðsáætlun fyrir sóttvarnir á alþjóðaflugvöllum)". [<https://www.almannavarnir.is/utgefid-efni/vidbragdsaaetlun-fyrir-sottvarnir-a-althjodaflugvolum-utgafa-januar-2018/>]. Accessed 17 October 2020.

2.6 EPIDEMIOLOGY WORKFORCE

2.6.1 Applied epidemiology training program, such as the field epidemiology training program, for public health professionals and veterinarians (e.g., Field Epidemiology Training Program [FETP] and Field Epidemiology Training Program for Veterinarians [FETPV])

2.6.1a

Does the country meet one of the following criteria?

- Applied epidemiology training program (such as FETP) is available in country
- Resources are provided by the government to send citizens to another country to participate in applied epidemiology training programs (such as FETP)

Needs to meet at least one of the criteria to be scored a 1 on this measure. , Yes for both = 1 , Yes for one = 1 , No for both = 0

Current Year Score: 1

According to the website for European Center for Disease Prevention and Control (ECDC), Icelandic citizens are eligible to participate in field epidemiology training through the European Program for Training in Epidemiological Interventions (EPIET) programs by the ECDC. These trainings do not, however, take place in Iceland [1]. The University of Iceland offers a master's study in epidemiology, however that as an academic study rather than applied [2].

[1] European Centre for Disease Prevention and Control (ECDC). "ECDC traineeship Program". [<https://ecdc.europa.eu/en/about-uswork-us/ecdc-traineeship-programme>]. Accessed 5 September 2020.

[2] University of Iceland (Haskoli islands). "Epidemiology (Faraldsfraedi)". [<https://www.hi.is/faraldsfraedi>]. Accessed 5 September 2020.

2.6.1b

Are the available field epidemiology training programs explicitly inclusive of animal health professionals or is there a specific animal health field epidemiology training program offered (such as FETPV)?

Yes = 1 , No = 0

Current Year Score: 1

According to the website for European Center for Disease Prevention and Control (ECDC), Icelandic citizens are eligible to participate in field epidemiology training through the European Program for Intervention Epidemiology Training (EPIET) programs offered by the ECDC, which are inclusive of animal health professionals. These trainings do not, however, take place in Iceland [1, 2].

[1] European Centre for Disease Prevention and Control (ECDC). "Fellowship program: EPIET/EUPHEM". [<https://www.ecdc.europa.eu/en/epiet-euphem/about/intro>]. Accessed 17 October 2020.

[2] European Centre for Disease Prevention and Control (ECDC). "ECDC Fellowship Program".
[https://www.ecdc.europa.eu/sites/portal/files/documents/ECDC%20Fellowship%20Manual%20Cohort%202018_1.pdf]. Accessed 17 October 2020.

2.6.2 Epidemiology workforce capacity

2.6.2a

Is there public evidence that the country has at least 1 trained field epidemiologist per 200,000 people?

Yes = 1 , No = 0

Current Year Score: 0

2020

Completed JEE assessments; Economist Impact analyst qualitative assessment based on official national sources, which vary by country

Category 3: Rapid response to and mitigation of the spread of an epidemic

3.1 EMERGENCY PREPAREDNESS AND RESPONSE PLANNING

3.1.1 National public health emergency preparedness and response plan

3.1.1a

Does the country have an overarching national public health emergency response plan in place which addresses planning for multiple communicable diseases with epidemic or pandemic potential?

Evidence that there is a plan in place, and the plan is publicly available = 2, Evidence that the plan is in place, but the plan is not publicly available OR, Disease-specific plans are in place, but there is no evidence of an overarching plan = 1, No evidence that such a plan or plans are in place = 0

Current Year Score: 2

There is evidence that Iceland has an overarching national public health emergency response plan in place which addresses planning for multiple communicable diseases with epidemic or pandemic potential. On the website for the Directorate of Health, there is publicly available a document titled 'Pandemic - National plan'. The plan was published and came into place May 25th 2020. The plan is an improved update on a previous plan titled the 'Icelandic Pandemic Influenza Preparedness Plan', made in the light of Covid-19 events in the start of 2020. This 2020 version is an overarching plan meant to outline planning and responses to any type of a pandemic outbreak. The plan contains chapters on activation, emergency levels, public and private actors, risk assessment and monitoring and communication. The plan also covers the quarantine of bays and airports, which support existing emergency response plans [1].

[1] Directorate of Health (Embætti Landlæknis). 2020. "Pandemic - National plan (Heimsfaraldur, landsáætlun)". [<https://www.landlaeknir.is/servlet/file/store93/item29596/Viðbragðsáætlun%20heimsfaraldur%203.1%2025052020.pdf>].

Accessed 7 April 2021.

3.1.1b

If an overarching plan is in place, has it been updated in the last 3 years?

Yes = 1 , No /no plan in place= 0

Current Year Score: 1

An overarching plan is in place in the form of a publicly available document titled 'Pandemic - National plan' [1]. The response plan was last updated on May 25th, 2020.

[1] Directorate of Health (Embætti Landlæknis). 2020. "Pandemic - National plan (Heimsfaraldur, landsáætlun)".
[<https://www.landlaeknir.is/servlet/file/store93/item29596/Viðbragðsáætlun%20heimsfaraldur%203.1%2025052020.pdf>].
Accessed 5 September 2020.

3.1.1c

If an overarching plan is in place, does it include considerations for pediatric and/or other vulnerable populations?

Yes = 1 , No /no plan in place= 0

Current Year Score: 0

There is no evidence that the overarching plan that is in place includes considerations for pediatric and/or other vulnerable populations [1]. The plan includes considerations for vulnerable populations like the elderly and families with young children in terms of public relations and information relay to the public but none in terms of health-related aspects.

[1] Directorate of Health (Embætti Landlæknis). 2020. "Pandemic - National plan (Heimsfaraldur, landsáætlun)".
[<https://www.landlaeknir.is/servlet/file/store93/item29596/Viðbragðsáætlun%20heimsfaraldur%203.1%2025052020.pdf>].
Accessed 5 September 2020.

3.1.1d

Does the country have a publicly available plan in place specifically for pandemic influenza preparedness that has been updated since 2009?

Yes = 1 , No = 0

Current Year Score: 1

2020

WHO Strategic Partnership for IHR and Health Security (SPH)

3.1.2 Private sector involvement in response planning

3.1.2a

Does the country have a specific mechanism(s) for engaging with the private sector to assist with outbreak emergency preparedness and response?

Yes = 1 , No = 0

Current Year Score: 0

There is no public evidence that Iceland has a specific mechanism(s) for engaging with the private sector to assist with outbreak emergency preparedness and response, in the national response plan, nor on the websites for the Ministry of Health, Directorate of Health, National University Hospital of Iceland, or Department of Civil Protection and Emergency Management [1, 2, 3, 4, 5].

- [1] Directorate of Health (Embætti landlæknis). 2020. "Pandemic - National plan (Heimsfaraldur, landsáætlun)". [<https://www.landlaeknir.is/servlet/file/store93/item29596/Viðbragðsþjálfun%20heimsfaraldur%203.1%2025052020.pdf>]. Accessed 5 September 2020
- [2] Ministry of Health. [<https://www.gov.is/ministries/ministry-of-health/>]. Accessed 25 August 2020.
- [3] Directorate of Health (Embætti landlæknis). [<https://www.landlaeknir.is>]. Accessed 25 August 2020.
- [4] National University Hospital of Iceland (Landspítali Íslands). [<https://www.landspitali.is>]. Accessed 25 August 2020.
- [5] Department of Civil Protection and Emergency Management (Almannavarnadeild ríkislöggreglustjóra"). [<https://www.almannavarnir.is>]. Accessed 25 August 2020.

3.1.3 Non-pharmaceutical interventions planning

3.1.3a

Does the country have a policy, plan and/or guidelines in place to implement non-pharmaceutical interventions (NPIs) during an epidemic or pandemic?

Yes, a policy, plan and/or guidelines are in place for more than one disease = 2, Yes, but the policy, plan and/or guidelines exist only for one disease = 1, No = 0

Current Year Score: 1

There is evidence that Iceland has a general policy, plan or guideline in place to implement non-pharmaceutical interventions NPIs during an epidemic or pandemic. The Directorate of Health and Department of Civil Protection and Emergency Management have established several NPIs, with accompanying regulations, during the Covid-19 epidemic, which mainly include social distancing, mask requirements and a ban on gatherings [1]. There is however no evidence of a plan, regulation or guideline for NPIs in general on the website for the Ministry of Health, Directorate of Health, Ministry of Agriculture, National University Hospital of Iceland [2, 3, 4, 5].

- [1] Directorate of Health and Department of Civil Protection and Emergency Management (Embætti Landlæknis og Almannavarnadeild ríkislöggreglustjóra). "Restrictions in effect during ban on gatherings (Gildandi takmörkun á samkomum)". [<https://www.covid.is/flokkar/gildandi-takmarkanir-i-samkomubanni>]. Accessed 7 April 2021.
- [2] Ministry of Health (Heilbrigðisráðuneytið). [<https://www.gov.is/ministries/ministry-of-health/>]. Accessed 25 August 2020.
- [3] Directorate of Health (Embætti Landlæknis). [<https://www.landlaeknir.is>]. Accessed 25 August 2020.
- [4] Minister of Agriculture (Sjávarútvegs- og landbúnaðaráðherra). [<https://www.stjornarradid.is/raduneyti/atvinnuvega-og-nyskopunarraduneytid/>]. Accessed 25 August 2020.
- [5] National University Hospital of Iceland (Landspítali Íslands). [<https://www.landspitali.is>]. Accessed 25 August 2020.

3.2 EXERCISING RESPONSE PLANS

3.2.1 Activating response plans

3.2.1a

Does the country meet one of the following criteria?

- Is there evidence that the country has activated their national emergency response plan for an infectious disease outbreak in the past year?
- Is there evidence that the country has completed a national-level biological threat-focused exercise (either with WHO or separately) in the past year?

Needs to meet at least one of the criteria to be scored a 1 on this measure. , Yes for both = 1 , Yes for one = 1 , No for both = 0

Current Year Score: 1

Iceland has activated their national emergency response plan for an infectious disease outbreak in January 2020 when a state of uncertainty was declared in the light of the Covid-19 pandemic. The 'Icelandic Pandemic Influenza Preparedness Plan' served as a basis for responses to the pandemic [1, 7]. A revised national 'Pandemic response plan' was subsequently published in May 2020 [6]. There is no evidence that Iceland has completed a national-level biological threat-focused exercise in the past year [2, 3, 4, 5].

[1] Department of Civil Protection and Emergency Management (Almannavarnadeild ríkislöggreglustjóra). "Uncertainty phase due to coronavirus (2019-n-CoV) (Óvissustig vegna kórónaveiru (2019-nCoV))". 27 January 2020.

[<https://www.almannavarnir.is/frettir/ovissustig-vegna-korонaveiru-2019-ncov/>]. Accessed 5 September 2020.

[2] Directorate of Health (Embætti Landlæknis). [<https://www.landlaeknir.is>]. Accessed 17 October 2020.

[3] Department of Civil Protection and Emergency Management (Almannavarnadeild).

[<https://www.almannavarnir.is/english/about-the-department-of-civil-protection-and-emergency-management/>] Accessed 17 October 2020.

[4] Ministry of Health (Heilbrigðisráðuneytið). [<https://www.gov.is/ministries/ministry-of-health/>]. Accessed 17 October 2020.

[5] World Health Organization (WHO). 'Simulation Exercise'. [<https://extranet.who.int/sph/simulation-exercise>]. Accessed 17 October 2020.

[6] Directorate of Health (Landlæknir). 3 March 2020. "National pandemic plan 3rd edition 2020 (Landsáætlun um heimsfaraldur, 3. útg. 2020)". [<https://www.landlaeknir.is/utgefild-efni/skjali/item29596/>]. Accessed 25 October 2020.

[7] Department of Civil Protection and Emergency Management (Almannavarnadeild ríkislöggreglustjóra). "Icelandic Pandemic Influenza Preparedness Plan - 2nd edition (Landsáætlun vegna heimsfaraldurs inflúensu)". 2016.

[https://www.almannavarnir.is/wp-content/uploads/2016/05/N%C3%BDHeimsfaraldur-infl%C3%BAensu-Lands%C3%A1%C3%A6tlun-utgafa-2_0_2]. Accessed 25 October 2020.

3.2.1b

Is there evidence that the country in the past year has identified a list of gaps and best practices in response (either through an infectious disease response or a biological-threat focused exercise) and developed a plan to improve response capabilities?

Yes, the country has developed and published a plan to improve response capacity = 2 , Yes, the country has developed a plan to improve response capacity, but has not published the plan = 1 , No = 0

Current Year Score: 1

There is evidence that Iceland has identified some gaps in best practices in responses and developed a plan to improve response capabilities. Though there is no evidence of a publishing of such a plan. Iceland has published a new CBRNE response plan and an updated national pandemic response plan, which replaces the national response plan for influenza pandemics [1, 2]. According to the World Health Organization (WHO) website, Iceland conducted an After Action Review (AAR) on 20 September 2019 [3]. However, there is no evidence that a plan was developed and published following this review.

[1] Directorate of Health. 21 October 2019. "Response plan for Chemical, Biological, Radiological, Nuclear, Explosives (CBRNE) incidents". [<https://www.landlaeknir.is/um-embaettid/frettir/frett/item38074/vidbragdsaaetlun-vegna-cbrne-atvika>]. Accessed 5 September 2020.

[2] Directorate of Health. 3 March 2020. "National pandemic plan 3rd edition 2020". [<https://www.landlaeknir.is/utgefild-efni/skjal/item29596/>]. Accessed 5 September 2020.

[3] World Health Organization (WHO). "After Action Review". [<https://extranet.who.int/sph/after-action-review>]. Accessed 17 October 2020.

3.2.2 Private sector engagement in exercises

3.2.2a

Is there evidence that the country in the past year has undergone a national-level biological threat-focused exercise that has included private sector representatives?

Yes = 1 , No = 0

Current Year Score: 0

There is no evidence that Iceland has completed a national-level biological threat-focused exercise in the past year on the websites for the Department of Civil Protection and Emergency Management, Ministry of Health, Directorate of Health, Ministry of Agriculture, National University Hospital of Iceland, or the World Health Organization [1, 2, 3, 4, 5, 6].

[1] Department of Civil Protection and Emergency Management (Almannavarnadeild).

[<https://www.almannavarnir.is/english/about-the-department-of-civil-protection-and-emergency-management/>] Accessed 13 September 2020.

[2] Ministry of Health. [<https://www.government.is/ministries/ministry-of-health/>]. Accessed 13 September 2020.

[3] Directorate of Health (Embætti landlæknis). [<https://www.landlaeknir.is>] Accessed 13 September 2020.

[4] Minister of Agriculture. [<https://www.stjornarradid.is/raduneyti/atvinnuvega-og-nyskopunarraduneytid/>]. Accessed 13 September 2020.

[5] National University Hospital of Iceland (Landspítali Íslands). [<https://www.landspitali.is>]. Accessed 13 September 2020.

[6] World Health Organization (WHO). "Simulation Exercise". [<https://extranet.who.int/sph/simulation-exercise>]. Accessed 17 October 2020.

3.3 EMERGENCY RESPONSE OPERATION

3.3.1 Emergency response operation

3.3.1a

Does the country have in place an Emergency Operations Center (EOC)?

Yes = 1 , No = 0

Current Year Score: 1

The Department of Civil Protection and Emergency Management (Almannavarnadeild), which serves as an emergency operations center in Iceland, is located in Reykjavik [1].

"Civil Protection in Iceland falls under the Ministry of Justice (former Ministry of the Interior). Civil Protection responsibilities at the national level are delegated to the National Commissioner of the Icelandic Police (NCIP). The NCIP runs a Department of Civil Protection and Emergency Management which is responsible for daily administration of Civil Protection matters, maintains a national co-ordination/command center which can be activated at any time and is also responsible for operating the center in emergency situations. The NCIP is also responsible for monitoring and supporting research and studies related to risk factors and natural catastrophes, and co-ordination and support measures aimed at reducing risks of bodily harm. The day-to-day functions of the Department of Civil Protection and Emergency Management of the NCIP include risk analysis, mitigation and co-ordination (i.e. planning, training and equipment) and recovery. The role of the NCIP during emergency operations is to procure and deliver all outside assistance (national or international) for a stricken area, which is deemed necessary by the local Chief of Police" [2].

There is evidence that the Department of Civil Protection and Emergency Management is the EOC for public health emergencies, as it oversaw a previous influenza emergency preparedness drill in 2008. [3]

[1] Department of Civil Protection and Emergency Management (Almannavarnir). [<https://www.almannavarnir.is/>]. Accessed 5 September 2020.

[2] Department of Civil Protection and Emergency Management (Almannavarnir). 18 May 2018. "About the Department of Civil Protection and Emergency Management". [<https://www.almannavarnir.is/english/about-the-department-of-civil-protection-and-emergency-management/>]. Accessed 5 September 2020.

[3] Department for Civil Protection and Emergency Management (Almannavarnir). 2 March 2017. "Published Material (Ãštgefið efni)". [<https://www.almannavarnir.is/utgefild-efni/?wpdmc=skyrlur-um-aefingar>]. Accessed 5 September 2020.

3.3.1b

Is the Emergency Operations Center (EOC) required to conduct a drill for a public health emergency scenario at least once per year or is there evidence that they conduct a drill at least once per year?

Yes = 1 , No = 0

Current Year Score: 0

There is no public evidence that the Department for Civil Protection and Emergency Management (DCPEM) is required to conduct annual health outbreak related drills according to the website for the Ministry of Health, or the DCPEM [1, 2] The DCPEM does conduct annual drills however, that focus on various emergencies (stranded ships, volcanic eruptions, etc.), and there is evidence that some drills have focused on responding to a disease outbreak, like the one conducted in 2008, which focused on response to influenza pandemics [3, 4].

[1] Ministry of Health. [<https://www.government.is/ministries/ministry-of-health/>]. Accessed 5 September 2020.

[2] Department of Civil Protection and Emergency Management (Almannavarnir). [<https://www.almannavarnir.is/english/>]. Accessed 5 September 2020.

[3] Department for Civil Protection and Emergency Management (Almannavarnir). "Drills". [<https://www.almannavarnir.is/forvarnir-og-fraedsla/aefingar/>]. Accessed 5 September 2020.

[4] Department for Civil Protection and Emergency Management. 2 March 2017. "Published Material (Ãštgefið efni)".

[<https://www.almannavarnir.is/utgefid-efni/?wpdmc=skyrslur-um-aefingar>]. Accessed 5 September 2020.

3.3.1c

Is there public evidence to show that the Emergency Operations Center (EOC) has conducted within the last year a coordinated emergency response or emergency response exercise activated within 120 minutes of the identification of the public health emergency/scenario?

Yes = 1 , No = 0

Current Year Score: 0

There is no public evidence that the Department for Civil Protection and Emergency Management (DCPEM) can conduct, or has conducted within the last year, a coordinated emergency response or emergency response exercise activated within 120 minutes of the identification of the public health emergency/scenario, according to the website for the Ministry of Health, or the DCPEM [1, 2]

The DCPEM, which is responsible for national emergencies, including health related emergencies, conducted at least three drills in 2018. That year's focus is aviation accidents. These drills are coordinated responses from local authorities, police, fire-department, search and rescue units, and the Red Cross and healthcare personnel [3].

The DCPEM publishes reports on all of their drills. In recent years drills, the reports state explicitly that the reported response time, no matter the emergency, has always been way below the 120-minute mark [4].

[1] Ministry of Health. [<https://www.government.is/ministries/ministry-of-health/>]. Accessed 5 September 2020.

[2] Department of Civil Protection and Emergency Management (Almannavarnir). [<https://www.almannavarnir.is/english/>]. Accessed 5 September 2020.

[3] Department for Civil Protection and Emergency Management. 9 June 2018. "Aviation accident drill at the Vopnafjörður airport, June 9th 2018". [<https://www.almannavarnir.is/frettir/fluglysaaefing-a-vopnafjardarflugvelli-9-juni-2018/>]. Accessed 5 September 2020.

[4] Department for Civil Protection and Emergency Management (Almannavarnir). 2 March 2017. "Published Material". [<https://www.almannavarnir.is/utgefid-efni/?wpdmc=skyrslur-um-aefingar>]. Accessed 5 September 2020.

3.4 LINKING PUBLIC HEALTH AND SECURITY AUTHORITIES

3.4.1 Public health and security authorities are linked for rapid response during a biological event

3.4.1a

Does the country meet one of the following criteria?

- Is there public evidence that public health and national security authorities have carried out an exercise to respond to a potential deliberate biological event (i.e., bioterrorism attack)?
- Are there publicly available standard operating procedures, guidelines, memorandums of understanding (MOUs), or other agreements between the public health and security authorities to respond to a potential deliberate biological event (i.e., bioterrorism attack)?

Needs to meet at least one of the criteria to be scored a 1 on this measure., Yes for both = 1, Yes for one = 1, No for both = 0

Current Year Score: 0

There is no public evidence that Iceland's public health and national security authorities have carried out an exercise to respond to a potential deliberate biological event, or if there are any publicly available standard operating procedures, guidelines, MOUs or other agreements between the public health and security authorities to respond to a potential deliberate biological event. There is no public evidence via the websites for the Ministry of Health, Directorate of Health, or Department of Civil Protection and Emergency Management (DCPEM), Ministry of Justice, or in any reports on the drills that the DCPEM has conducted [1, 2, 3, 4, 5]. The national Chemical, Biological, Radiological, Nuclear, and Explosives (CBRNE) response plan mentions substances that can be used in bioterrorism attacks, but does not specify guidelines for such events. The plan does however include MOUs between the public health and security authorities which could be used in response to a potential deliberate biological event [6]. In a report published by the National Commissioner of the Icelandic Police - Department of Analysis, on the risk of terrorism, there is no mention of bioterrorism [7].

- [1] Ministry of Health. [<https://www.government.is/ministries/ministry-of-health/>]. Accessed 5 September 2020.
- [2] Directorate of Health. [<https://www.landlaeknir.is>]. Accessed 5 September 2020.
- [3] Department of Civil Protection and Emergency Management (Almannavarnir). [<https://www.almannavarnir.is/>]. Accessed 5 September 2020.
- [4] Ministry of Justice. [<https://www.government.is/ministries/ministry-of-justice/>]. Accessed 5 September 2020.
- [5] Department for Civil Protection and Emergency Management. 2 March 2017. "Published Material". [<https://www.almannavarnir.is/utgefid-efni/?wpdmc=skyrslur-um-aefingar>]. Accessed 5 September 2020.
- [6] Directorate of Health. 21 October 2019. "Response plan for Chemical, Biological, Radiological, Nuclear, Explosives (CBRNE) incidents". [<https://www.landlaeknir.is/um-embaettid/frettir/frett/item38074/vidbragdsaaetlun-vegna-cbrne-atvika>]. Accessed 5 September 2020.
- [7] Department of Analysis for National Commissioner of the Icelandic Police. 30 January 2017. "The Commissioner's assessment of the risk of terrorism". [<https://www.almannavarnir.is/utgefid-efni/?wpdmc=skyrslur>]. Accessed 5 September 2020.

3.5 RISK COMMUNICATIONS

3.5.1 Public communication

3.5.1b

Does the risk communication plan (or other legislation, regulation or strategy document used to guide national public health response) outline how messages will reach populations and sectors with different communications needs (eg different languages, location within the country, media reach)?

Yes = 1 , No = 0

Current Year Score: 0

There is no public evidence that the three national strategies for health emergencies outline how messages will reach populations and sectors with different communications needs (e.g. different languages, location within country, media reach, etc., according to the website for the Ministry of Health or the Department of Civil Protection and Emergency (DCPEM) [1, 2]. The three national strategies for health emergencies all explicitly state that special considerations have to be made for those who have limited access to information, during health emergencies, but do not outline how this will be done [3, 4, 5]. The Web Policy of The Directorate of Health, who is responsible for flow of information in health emergencies, describes how the Directorate intends to utilize different media platforms and states that the main language of all digital media and services of the Directorate is Icelandic. Key information and other important information shall be provided in English, and other languages, if need be. The website of the Directorate of Health underwent changes in 2017 in accordance with 'Web Content Accessibility Guidelines (WCAG 2.0 - AA), which made the website better accessible to the elderly, blind individuals, people

with limited sight, dyslexic and disabled people [6].

- [1] Ministry of Health. [<https://www.government.is/ministries/ministry-of-health/>]. Accessed 12 September 2020.
- [2] Department of Civil Protection and Emergency Management (Almannavarnir). [<https://www.almannavarnir.is/english/>]. Accessed 12 September 2020.
- [3] Directorate of Health. 3 March 2020. "National pandemic plan 3rd edition 2020". [<https://www.landlaeknir.is/utgefid-efni/skjal/item29596/>]. Accessed 12 September 2020.
- [4] Chief Epidemiologist, Isavia, and The Civil Protection Department of the National Commissioner of Police. 2018. "International Aviation Security, A National Plan, 3rd edition". [<https://www.landlaeknir.is/servlet/file/store93/item34067/Vi%C3%B0brag%C3%B0s%C3%A1%C3%A6tlun%20s%C3%B3tt-%20og%20al%C3%BEj%C3%B3%C3%B0aflugvellir.%203.%20%C3%BAtg%C3%A1fa%202018.pdf>]. Accessed 12 September 2020.
- [5] Chief Epidemiologist and The Civil Protection Department of the National Commissioner of Police. 2017. "Quarantines of Ships and Harbors, A National Plan". [<https://www.landlaeknir.is/servlet/file/store93/item31414/lokaskjal-%20s%C3%B3tt-%20hafnir%20og%20skip.%2031.%20jan.%202017.pdf>]. Accessed 12 September 2020.
- [6] Directorate of Health (Embætti landlæknis). 7 October 2015. "Web policy of The Directorate of Health (Vefstefna Embættis landlæknis)". [<https://www.landlaeknir.is/um-embaettid/greinar/grein/item27702/vefstefna-embaettis-landlæknis>]. Accessed 12 September 2020.

3.5.1 Risk communication planning

3.5.1a

Does the country have in place, either in the national public health emergency response plan or in other legislation, regulation, or strategy documents, a section detailing a risk communication plan that is specifically intended for use during a public health emergency?

Yes = 1 , No = 0

Current Year Score: 1

Iceland has three emergency health plans that focus on response to disease outbreaks, which all have a section detailing a risk communication plan that is specifically intended for use during a public health emergency. The three plans are 'The national pandemic plan', 'The national plan for disease prevention measures for ships and harbors', and 'The national plan for disease prevention measures for international airports'. The latter two are for general health emergencies, while the first one focuses solely on influenza. The plans do not mention specific diseases, but refer to regulation 221/2012, which lists all reportable diseases [1, 2, 3, 4]. All three plans have a chapter dedicated to risk communication, where they explain the importance of keeping the population well updated, and which ministry/agency is responsible to report on which part of the emergency. In all plans the main tasks are defined as; Sending out a news report as soon as possible and follow up with regular reports, appointing contacts for media, create a media center if needed, where staff and media can get information and set up regular appointments for media. More information can be found in chapter 5.11 in 'The national pandemic plan', chapter 5.7 in 'The national plan for disease prevention measures for ships and harbors', and chapter 5.11 in 'The national plan for disease prevention measures for international airports' [1, 2, 3].

- [1] Directorate of Health. 3 March 2020. "National pandemic plan 3rd edition 2020". [<https://www.landlaeknir.is/utgefid-efni/skjal/item29596/>]. Accessed 5 September 2020
- [2] Directorate of Health. July 2017. "The national plan for disease prevention for ships and Harbors". [<https://www.landlaeknir.is/utgefid-efni/skjal/item31414/>]. Accessed 5 September 2020.
- [3] Chief Epidemiologist, Isavia, and The Civil Protection Department of the National Commissioner of Police. 2018. "The

national plan for disease prevention for international airports', 3rd edition". [<https://www.landlaeknir.is/utgefид-efni/skjal/item34067/>]. Accessed 5 September 2020.

[4] Parliament of Iceland (Alþingi). Law nr 221/2012 of 23 February 2012. "Regulation on Reporting of Infectious Diseases" [<https://www.reglugerd.is/reglugerdir/eftir-raduneytum/heilbrigdis/nr/17760>]. Accessed 5 September 2020.

[5] Department of Civil Protection and Emergency Management (Almannavarnir). 23 December 2013. "Health services, civil protection and emergency management". [<https://www.almannavarnir.is/utgefид-efni/handbok-heilbrigdisthjonustan-og-almannavarnir-2017/>]. Accessed 5 September 2020.

3.5.1c

Does the risk communication plan (or other legislation, regulation or strategy document used to guide national public health response) designate a specific position within the government to serve as the primary spokesperson to the public during a public health emergency?

Yes = 1 , No = 0

Current Year Score: 1

The national plans for disease prevention measures, 'The national pandemic plan', 'The national plan for disease prevention measures for ships and harbors', and 'The national plan for disease prevention measures for international airports', all state that information relay is the responsibility of The Chief Epidemiologist, The National Commissioner of the Icelandic Police, and any relevant Chiefs of Police (depending on the areas in question). [1, 2, 3]. The handbook for collaboration between the health services and Department of Civil Protection and Emergency Management states that the Chief Epidemiologist should be the main public spokesperson during a health emergency [4].

[1] Directorate of Health. 3 March 2020. "National pandemic plan 3rd edition 2020". [<https://www.landlaeknir.is/utgefид-efni/skjal/item29596/>]. Accessed 5 September 2020

[2] Directorate of Health. July 2017. "The national plan for disease prevention for ships and Harbors". [<https://www.landlaeknir.is/utgefид-efni/skjal/item31414/>]. Accessed 5 September 2020.

[3] Chief Epidemiologist, Isavia, and The Civil Protection Department of the National Commissioner of Police. January 2018. "The national plan for disease prevention for international airports', 3rd edition". [<https://www.landlaeknir.is/utgefид-efni/skjal/item34067/>]. Accessed 5 September 2020.

[4] Department of Civil Protection and Emergency Management (Almannavarnir). 23 December 2013. "Health services, civil protection and emergency management ". [<https://www.almannavarnir.is/utgefид-efni/handbok-heilbrigdisthjonustan-og-almannavarnir-2017/>]. Accessed 5 September 2020.

3.5.2 Public communication

3.5.2a

In the past year, is there evidence that the public health system has actively shared messages via online media platforms (e.g. social media, website) to inform the public about ongoing public health concerns and/or dispel rumors, misinformation or disinformation?

Public health system regularly shares information on health concerns = 2, Public health system shares information only during active emergencies, but does not regularly utilize online media platforms = 1, Public health system does not regularly utilize online media platforms, either during emergencies or otherwise = 0

Current Year Score: 2

There is evidence that the Directorate of Health, which is responsible for public health surveillance, utilizes both websites and social media to inform the public of any information regarding public health, including health emergencies [1, 2]. The social media platforms that the Directorate has begun to utilize are Facebook, Twitter and YouTube. The website policy and the social media policy, which describe how the Directorate intends to utilize different media platforms, were made effective in October 2015 and in August 2017, respectively.

During the Covid-19 pandemic the Directorate of Health has utilized both Facebook, Twitter and YouTube to convey new rules and regulations as well as best practices for the public in disease prevention [4, 5, 6].

The Directorate gives the public bulletin updates on any health-risk related incidents as they come along. An update on the Directorate's webpage from 3 January 2019 reports and explains the developing cases of influenza that have been reported to The National University Hospital of Iceland as well as to give comparison to the status in the rest of Europe. In the same bulletin, they also give an update on RSV virus cases and gastrointestinal infections [3].

- [1] Directorate of Health (Embætti landlæknis). 19 September 2017. "Web policy of The Directorate of Health".
[<https://www.landlaeknir.is/um-embaettid/greinar/grein/item27702/vefstefna-embaettis-landlaeknis>] Accessed 5 September 2020.
- [2] Directorate of Health (Embætti landlæknis). 29 November 2017. "Social Media Policy of The Directorate of Health".
[<https://www.landlaeknir.is/servlet/file/store93/item33815/Samf%C3%A9lagsmi%C3%B0lastefna%20Emb%C3%A6ttis%20lan%20knis%202017.pdf>]. Accessed 5 September 2020.
- [3] Directorate of Health. 3 January 2019. "Flu and other diseases - week 51 and 52 of 2018".
[<https://www.landlaeknir.is/um-embaettid/frettir/frett/item36140/flensur-og-adrar-pestir-vikur-51-52-2018>]. Accessed 16 January 2019.
- [4] Directorate of Health (Embætti landlæknis). "Facebook page". [<https://www.facebook.com/landlaeknir>]. Accessed 6 September 2020.
- [5] Directorate of Health (Embætti landlæknis). Twitter page". [<https://twitter.com/landlaeknir>]. Accessed 6 September 2020.
- [6] "Directorate of Health (Embætti landlæknis). "YouTube Channel".
[<https://www.youtube.com/channel/UC6Qocsu5kYltdO4wZZDKyOw>]. Accessed 6 September 2020.

3.5.2b

Is there evidence that senior leaders (president or ministers) have shared misinformation or disinformation on infectious diseases in the past two years?

No = 1, Yes = 0

Current Year Score: 1

There is no evidence on any of the major news outlets that the Icelandic president or ministers have shared misinformation or disinformation on infectious diseases in the past two years [1, 2, 3].

- [1] Visir. [<https://www.visir.is/>]. Accessed 6 September 2020.
- [2] Kjarninn. [<https://kjarninn.is/>]. Accessed 6 September 2020.
- [3] Stundin. [<https://stundin.is/>]. Accessed 6 September 2020.

3.6 ACCESS TO COMMUNICATIONS INFRASTRUCTURE

3.6.1 Internet users

3.6.1a

Percentage of households with Internet

Input number

Current Year Score: 99.01

2019

International Telecommunication Union (ITU)

3.6.2 Mobile subscribers

3.6.2a

Mobile-cellular telephone subscriptions per 100 inhabitants

Input number

Current Year Score: 121.95

2019

International Telecommunication Union (ITU)

3.6.3 Female access to a mobile phone

3.6.3a

Percentage point gap between males and females whose home has access to a mobile phone

Input number

Current Year Score: 0

2019

Gallup; Economist Impact calculation

3.6.4 Female access to the Internet

3.6.4a

Percentage point gap between males and females whose home has access to the Internet

Input number

Current Year Score: 0

2019

Gallup; Economist Impact calculation

3.7 TRADE AND TRAVEL RESTRICTIONS

3.7.1 Trade restrictions

3.7.1a

In the past year, has the country issued a restriction, without international/bilateral support, on the export/import of medical goods (e.g. medicines, oxygen, medical supplies, PPE) due to an infectious disease outbreak?

Yes = 0 , No = 1

Current Year Score: 1

There is no public evidence that Iceland has, in the past year, issued a restriction on the export/import of medical goods, stating that was due to the risk posed by an infectious disease outbreak, on the website for the Minister of Health, The Directorate of Health, the periodical newsletter 'Outbreak News', published by the Directorate of Health, or Ministry of Agriculture [1, 2, 3, 4].

There is no evidence of an outbreak on the website for World Health Organization (WHO)'s Disease Outbreak News, but according to the World Organization for Animal Health (OIE) Weekly Disease Information on world animal health, four outbreaks have been recorded since 2019. Responses to those outbreaks have not involved restrictions on export or import on medical goods [5, 6].

[1] Ministry of Health. [<https://www.government.is/ministries/ministry-of-health/>]. Accessed 6 September 2020.

[2] Directorate of Health (Embætti landlæknis). [<https://www.landlaeknir.is>] Accessed 6 September 2020.

[3] Directorate of Health (Embætti landlæknis). "Outbreak News". [<https://www.landlaeknir.is/um-embaettid/frettir/farsottafrettir/>] Accessed 6 September 2020.

[4] Minister of Agriculture. [<https://www.stjornarradid.is/raduneyti/atvinnuvega-og-nyskopunarraduneytid/>]. Accessed 6 September 2020.

[5] World Health Organization. "Disease Outbreak News - Iceland". [<http://www.who.int/csr/don/archive/country/isl/en/>]. Accessed 6 September 2020.

[6] World Organisation for Animal Health (OIE). "Weekly Disease Information". [https://www.oie.int/wahis_2/public/wahid.php/Diseaseinformation/WI]. Accessed 6 September 2020.

3.7.1b

In the past year, has the country issued a restriction, without international/bilateral support, on the export/import of non-medical goods (e.g. food, textiles, etc) due to an infectious disease outbreak?

Yes = 0 , No = 1

Current Year Score: 1

There is no publicly available evidence that there have been restrictions on the export/import of non-medical goods from another country, due to the risk posed by an infectious disease outbreak, via the website for the Minister of Health, Ministry for Foreign Affairs, Directorate of Health, or in the periodical newsletter 'Outbreak News', published by the Directorate of Health, the World Health Organization (WHO) Disease Outbreak News, or World Organization for Animal Health (OIE) Weekly disease information [1, 2, 3, 4, 5, 6].

According to the OIE Weekly Disease Information on world animal health, four outbreaks have been recorded since 2019. Responses to these outbreaks have not involved restrictions on export or import on non-medical goods [6]. There is a permanent ban on the import of horses and most things related to horse-riding (saddles, reins, mules, covers, used gloves, etc.). This is due to geographical isolation and to prevent serious infectious diseases in animals [7].

- [1] Ministry of Health. [<https://www.government.is/ministries/ministry-of-health/>]. Accessed 6 September 2020.
- [2] Directorate of Health (Embætti landlæknis). [<https://www.landlaeknir.is>] Accessed 6 September 2020.
- [3] Directorate of Health (Embætti landlæknis). "Outbreak News". [<https://www.landlaeknir.is/um-embaettid/frettir/farsottafrettir/>] Accessed 6 September 2020.
- [4] Minister of Agriculture. [<https://www.stjornarradid.is/raduneyti/atvinnuvega-og-nyskopunarraduneytid/>]. Accessed 6 September 2020.
- [5] World Health Organization. "Disease Outbreak News - Iceland". [<http://www.who.int/csr/don/archive/country/isl/en/>]. Accessed 6 September 2020.
- [6] World Organisation for Animal Health (OIE). "Weekly Disease Information". [https://www.oie.int/wahis_2/public/wahid.php?Information/WI]. Accessed 6 September 2020.
- [7] Icelandic Food and Veterinary Authority. January 2009. "Import of horses and horse sperm". [<http://www.mast.is/inn-ogutflutningur/dyr/innflutningurhrossaoghrossasaedis/>]. Accessed 6 September 2020.

3.7.2 Travel restrictions

3.7.2a

In the past year, has the country implemented a ban, without international/bilateral support, on travelers arriving from a specific country or countries due to an infectious disease outbreak?

Yes = 0 , No = 1

Current Year Score: 0

There is evidence that Iceland has implemented bans or restrictions without international/bilateral support according to the website for the Minister of Health, Ministry for Foreign Affairs, Directorate of Health, the periodical newsletter 'Outbreak News', published by the Directorate of Health, the World Health Organization (WHO) Disease Outbreak News, World Organization for Animal Health (OIE) weekly disease information [1, 2, 3, 4, 5, 6]. Iceland has implemented travel restrictions on travelers arriving from specific countries due to Covid-19 which were made in accordance with European Union (EU) and Schengen regulations [7].

- [1] Ministry of Health. [<https://www.government.is/ministries/ministry-of-health/>]. Accessed 6 September 2020.
- [2] Directorate of Health (Embætti landlæknis). [<https://www.landlaeknir.is>] Accessed 6 September 2020.
- [3] Directorate of Health (Embætti landlæknis). "Outbreak News". [<https://www.landlaeknir.is/um-embaettid/frettir/farsottafrettir/>] Accessed 6 September 2020.
- [4] Minister of Agriculture. [<https://www.stjornarradid.is/raduneyti/atvinnuvega-og-nyskopunarraduneytid/>]. Accessed 6 September 2020.
- [5] World Health Organization. "Disease Outbreak News - Iceland". [<http://www.who.int/csr/don/archive/country/isl/en/>]. Accessed 6 September 2020.
- [6] World Organisation for Animal Health (OIE). "Weekly Disease Information". [https://www.oie.int/wahis_2/public/wahid.php?Information/WI]. Accessed 6 September 2020.
- [7] Directorate of Immigration. 15 July 2020. "Travel restrictions on some countries outside of Schengen lifted". [<https://utl.is/index.php/um-utlendingastofnun/frettir/1121-ferdatakmunkunum-aflett-gagnvart-ibuum-12-rikja-utan->

schengen]. Accesed 6 September 2020.

Category 4: Sufficient and robust health sector to treat the sick and protect health workers

4.1 HEALTH CAPACITY IN CLINICS, HOSPITALS, AND COMMUNITY CARE CENTERS

4.1.1 Available human resources for the broader healthcare system

4.1.1a

Doctors per 100,000 people

Input number

Current Year Score: 407.78

2018

WHO; national sources

4.1.1b

Nurses and midwives per 100,000 people

Input number

Current Year Score: 1621.32

2018

WHO; national sources

4.1.1c

Does the country have a health workforce strategy in place (which has been updated in the past five years) to identify fields where there is an insufficient workforce and strategies to address these shortcomings?

Yes = 1 , No = 0

Current Year Score: 1

There is evidence that Iceland has a health workforce strategy in place, published in 2019, to identify fields where there is an insufficient workforce. Iceland's health system policy for 2019-2030 discusses the evolving health workforce needs in the years to come. In section 3 - 'People in the first place' it states that "In February 2018, the Prime Minister, the Minister of Health and the Minister of Finance and Economic Affairs signed a declaration in connection with the collective agreements between the constituent unions of the Association of University Graduates and the state, in which it was said that a special

project to forecast the human resources needs of the health system for the next 5-10 years would be undertaken". The report "Nurses, staffing, education and working conditions", written by the National Audit Office in 2017, has been used as a reference point, but seems to lack more exact reference figures. The Health Policy until 2030 will be implemented by means of five-year action plans, which will be revised annually during the lifetime of the policy and submitted to the Althingi (national parliament of Iceland) by the Minister of Health [1].

The first five-year plan was published in July 2020 and includes a two-, three- and five-year workforce milestones and a list of tasks that should be undertaken to accomplish those [2].

[1] Government of Iceland - Ministry of Health. 2019. "Health Policy: A policy for Iceland's health services until 2030". [https://www.government.is/library/01-Ministries/Ministry-of-HealTh/PDF-skjol/Heilbrigdisstefna_english.pdf]. Accessed 9 September 2020.

[2] Government of Iceland - Ministry of Health. June 2020. [https://www.stjornarradid.is/library/04-Raduneytin/Heilbrigdisraduneytid/ymsar-skrar/Fimm%20%C3%A1ra%20%C3%A1%C3%A6tlun-2020_Prent.pdf]. Accessed 9 September 2020.

4.1.2 Facilities capacity

4.1.2a

Hospital beds per 100,000 people

Input number

Current Year Score: 283

2019

WHO/World Bank; national sources

4.1.2b

Does the country have the capacity to isolate patients with highly communicable diseases in a biocontainment patient care unit and/or patient isolation room/unit located within the country?

Yes = 1 , No = 0

Current Year Score: 1

The National University Hospital of Iceland has rooms specially equipped to isolate patients with infectious diseases. These rooms have separate entrances, and they have regulated ventilation and pressure adjustments. There are at least 12 rooms within different departments of the hospital (infectious disease department, pediatric, ER, intensive, etc.) that are especially designed for isolation, other department are able to alter some of their usual rooms into temporary isolation facilities [1]. Some evidence of isolation facilities could be found for the three main hospitals in the rest of the country, but no description of the facilities is publicly available [2, 3, 4, 5, 6].

[1] Andreassen, Æ. et al 2013. "Within four walls (Innan fjögurra veggja)".

[<https://skemman.is/bitstream/1946/15234/3/Innan%20fj%C3%B6gurra%20veggja.pdf>]. Accessed 9 September 2020.

[2] Akureyri Hospital. [<https://www.sak.is/is/akureyri-hospital>]. Accessed 6 September 2020.

[3] Health Directorate of East Iceland. [<http://www.hsa.is/index.php/information>]. Accessed 6 September 2020.

[4] Health Directorate of South Iceland. [<https://www.hsu.is/>]. Accessed 9 September 2020.

[5] Health Directorate of West Iceland. [<https://www.hve.is/>]. Accessed 9 September 2020.

[6] Health Directorate of North Iceland. [<https://www.hsn.is/>]. Accessed 9 September 2020.

4.1.2c

Does the country meet one of the following criteria?

- Is there evidence that the country has demonstrated capacity to expand isolation capacity in response to an infectious disease outbreak in the past two years?
- Is there evidence that the country has developed, updated or tested a plan to expand isolation capacity in response to an infectious disease outbreak in the past two years?

Yes = 1, No = 0

Current Year Score: 0

There is insufficient evidence that Iceland has demonstrated capacity to expand isolation capacity in the past two years. In light of Covid-19, the National University Hospital has set up special procedures for isolation of Covid-19 patients, which are documented in the quality manual [1, 2]. In March 2021, regulation 355/2021 came in effect, which requires travelers, from defined risk areas, to stay in government quarantine facilities until Covid-19 testing had been carried out [3, 4].

[1] National University Hospital of Iceland (Landspítalinn). 2021. "Corona Virus Covid-19 (Kórónuveiran Covid-19)".

[<https://www.landspitali.is/sjuklingar-adstandendur/hagnyar-upplysingar/sykingavarnir-/koronaveiran-covid-19/>]. Accessed 7 April 2021.

[2] National University Hospital of Iceland (Landspítali Íslands). Quality Manual (Gæðahandbók). 3 March 2020.

[<https://traveler.lsh.is/focal/gaedahandbaekur/ghskurda.nsf/0/E22BEBFC9E936AF40025852700059D02>]. Accessed 7 April 2021.

[3] Ministry of Justice (Dómsmálaráðuneytið). March 2021. Regulation nr. 355/2021 of 30 March 2021. "Regulation on quarantine and isolation and testing on the Icelandic border due to Covid-19 (Reglugerð um sóttkví og einangrun og sýnatöku við landamæri Íslands vegna COVID-19)". [<https://www.reglugerd.is/reglugerdir/eftir-raduneytum/hrn/nr/22423>]. Accessed 7 April 2021.

[4] Directorate of Health and Department of Civil Protection and Emergency Management (Embætti Landlæknis og Almannavarnadeild ríkislöggreglustjóra). "Travel to and in Iceland (Ferðalög til og á Íslandi)".

[<https://www.covid.is/flokkar/ferdalogs-til-og-a-islandi>]. Accessed 7 April 2021.

4.2 SUPPLY CHAIN FOR HEALTH SYSTEM AND HEALTHCARE WORKERS

4.2.1 Routine health care and laboratory system supply

4.2.1a

Is there a national procurement protocol in place which can be utilized by the Ministries of Health and Agriculture for the acquisition of laboratory supplies (e.g. equipment, reagents and media) and medical supplies (e.g. equipment, PPE) for routine needs?

Yes for both laboratory and medical supply needs = 2, Yes, but only for one = 1, No = 0

Current Year Score: 1

There is evidence that there is a national procurement protocol in place which can be utilized by the Ministries of Health and Agriculture for the acquisition of laboratory needs (such as equipment, reagents and media) and medical supplies, although

specific procurement access portals are not publicly available. The Icelandic Procurement policy, which was published in 2002, was established by the then financial minister, and has not been updated since. The policy is created in accordance with law number 94/2001, on procedures for government purchases. All governmental units operate under this guideline, but can have more detailed procurement policies. According to the policy the Central Public Procurement (Ríkiskaup) operates under the auspices of the Ministry of Finance and handles procurement on supplies and services in domestic and foreign markets for state institutions and state corporations, including the Ministry of Health and Agriculture. Neither the Procurement Policy nor the law for government purchases explicitly mention laboratory needs and medical supplies, but according to the Central Public Procurement's site there is a framework for purchase of medical supplies [1, 2].

Information on whether ministries have utilized the procurement protocol to obtain laboratory need or medical supplies could not be found on the websites for the Ministry of Health, Directorate of Health, Ministry of Fishery and Agriculture, or the Icelandic Food and Veterinary Authority [3, 4, 5, 6, 7].

The National University Hospital of Iceland also has a procurement protocol in place, however, a 2017 audit found that it is not used in most cases [8, 9]. The procurement department of the National University Hospital of Iceland has four departments that oversee purchases of products, instruments and services, purchases of medicine, supply management and support services. How, and through which means purchases are made, is not specified [9].

- [1] Central Public Procurement (Ríkiskaup). 2002. "National Procurement Protocol (Innkaupastefna ríkisins)". [<https://www.rikiskaup.is/is/um-rikiskaup/utgefild-efni/innkaupastefna-rikisins>]. Accessed 6 September 2020.
- [2] Parliament of Iceland (Alþingi). Law nr 94 of 7 31. May 2001. "Law on government purchases (Lög um opinber innkaup)". [<https://www.althingi.is/lagas/nuna/2016120.html>]. Accessed 17 October 2020.
- [3] Ministry of Health (Heilbrigðisráðuneytið). [<https://www.government.is/ministries/ministry-of-health/>]. Accessed 6 September 2020.
- [4] Directorate of Health (Embætti Landlæknis). [<https://www.landlaeknir.is>] Accessed 6 September 2020.
- [5] Minister of Agriculture (Sjávarútvegs- og landbúnaðarráðherra). 2018. [<https://www.stjornarradid.is/raduneyti/atvinnuvega-og-nyskopunarraduneytid/>]. Accessed 6 September 2020.
- [6] Icelandic Food and Veterinary Authority (Matvælastofnun). 2018. [<http://www.mast.is>]. Accessed 6 September 2020.
- [7] National University Hospital of Iceland (Landspítali Íslands). August 2004. "Purchases of materials and services (Stefna, markmið og aðgerðir Landspítala - háskólasjúkrahúss í kaupum á vörum og þjónustu)". [<http://landspitali.is/lisalib/getfile.aspx?itemid=19268&download=true>]. Accessed 6 September 2020.
- [8] Icelandic National Audit System (Ríkisendurskoðun). July 2018. "2017 Audit (Endurskoðunarskýrsla 2017)". [<https://rikisendurskodun.is/wp-content/uploads/2018/07/08-873-Landspítali-Endurskodunarskýrsla-2017.pdf>]. Accessed 6 September 2020.
- [9] National University Hospital of Iceland (Landspítali Íslands). "Procurement". [<https://www.landspitali.is/sjuklingar-adstandendur/deildir-og-thjonusta/innkaupadeild/>]. Accessed 9 September 2020.

4.2.2 Stockpiling for emergencies

4.2.2a

Does the country have a stockpile of medical supplies (e.g. MCMs, medicines, vaccines, medical equipment, PPE) for national use during a public health emergency?

Yes = 2, Yes, but there is limited evidence about what the stockpile contains = 1, No = 0

Current Year Score: 2

There is evidence that Iceland has a stockpile of medical supplies (e.g. medical countermeasures (MCM), medicines, vaccines, medical equipment, Personal Protective Equipment (PPE)) for national use during a public health emergency. The National Pandemic Plan states that each region should have a stockpile of medicine and personal protective equipment, in case of a health emergency [1]. According to the Directorate of Health made in 2018 a stockpile is in place which consists of reagents media and medicines that should last 3-4 months, antivirals for 40,000 individuals and vaccines and PPE for 150,000 individuals [2]. According to statements, made by representatives of the Directorate of health in 2020, Iceland had a stockpile of medical supplies [3, 4]. No further information could be found on the websites for the Ministry of Health, Directorate of Health, the National University Hospital of Iceland or in the Icelandic Pandemic response plan [5, 6, 7, 8].

- [1] Directorate of Health (Landlæknir). 3 March 2020. "National pandemic plan 3rd edition 2020 (Landsáætlun um heimsfaraldur, 3. útg. 2020)". [<https://www.landlaeknir.is/utgefid-efni/skjal/item29596/>]. Accessed 5 September 2020.
- [2] Directorate of Health (Landlæknir). 2 October 2018. "Are Icelanders badly prepared for the next influenza pandemic? (Eru Íslendingar illa undirbúnir fyrir næsta heimsfaraldur inflúensu?)". [<https://www.landlaeknir.is/um-embaettid/frettir/frett/item35457/eru-islendingar-illa-undirbunir-fyrir-naesta-heimsfaraldur-influensu>]. Accessed 12 September 2020.
- [3] RÚV - Ríkisútvarpið (The State Media). 19 March 2020. "Plenty of medical supplies (Nægar birgðir af læknigavörum)". [<https://www.ruv.is/frett/naegar-birgdir-af-laekningavorum>]. Accessed 12 September 2020.
- [4] Morgunblaðið. 14 March 2020. "Plenty of medicine, food and essentials" (Nog til að lyfjum, mat og nauðsynjavörum)". [https://www.mbl.is/frettir/innlent/2020/03/14/nog_til_af_lyfjum_mat_og_naudsynjavorum]. Accessed 18 October 2020.
- [5] Ministry of Health (Heilbrigðisráðuneytið). [<https://www.govt.is/ministries/ministry-of-health>]. Accessed 7 April 2021.
- [6] Directorate of Health (Embætti Landlæknis). [<https://www.landlaeknir.is>] Accessed 7 April 2021.
- [7] National University Hospital of Iceland (Landspítali Íslands). [<http://landspitali.is>]. Accessed 7 April 2021.
- [8] Directorate of Health (Landlæknir). 3 March 2020. "National pandemic plan 3rd edition 2020 (Landsáætlun um heimsfaraldur, 3. útg. 2020)". [[https://www.landlaeknir.is/utgefid-efni/skjal/item29596/](https://www.landlaeknir.is/utgefid-efni/skjal/item29596)]. Accessed 7 April 2021.

4.2.2b

Does the country have a stockpile of laboratory supplies (e.g. reagents, media) for national use during a public health emergency?

Yes = 2, Yes, but there is limited evidence about what the stockpile contains = 1, No = 0

Current Year Score: 2

There is evidence that Iceland has a stockpile of laboratory supplies (e.g. reagents, media) for national use during a public health emergency. The National Pandemic Plan states that each region should have a stockpile of laboratory supplies (e.g. reagents, media), in case of a health emergency [1]. According to a statement from the Directorate of Health the stockpile is in place and consists of reagents media and medicines that should last 3-4 months, antivirals for 40,000 individuals and vaccines and PPE for 150,000 individuals [2, 3].

- [1] Directorate of Healt. 3 March 2020. "National pandemic plan 3rd edition 2020". [[https://www.landlaeknir.is/utgefid-efni/skjal/item29596/](https://www.landlaeknir.is/utgefid-efni/skjal/item29596)]. Accessed 5 September 2020.
- [2] Directorate of Health. 2 October 2018. "Are Icelanders badly prepared for the next influenza pandemic?". [<https://www.landlaeknir.is/um-embaettid/frettir/frett/item35457/eru-islendingar-illa-undirbunir-fyrir-naesta-heimsfaraldur-influensu>]. Accessed 12 September 2020.

4.2.2c

Is there evidence that the country conducts or requires an annual review of the national stockpile to ensure the supply is sufficient for a public health emergency?

Yes = 1, No = 0

Current Year Score: 0

There is no publicly available evidence that Iceland conducts or requires an annual review of the national stockpile to ensure the supply is sufficient for a public health emergency. No information on this can be found in the National Pandemic Plan, or on the website for the Department of Civil Protection and Emergency Management, Minister of Health, Directorate of Health, or National University Hospital of Iceland [1, 2, 3, 4, 5].

[1] Department of Civil Protection and Emergency Management (Almannavarnir). [<https://www.almannavarnir.is/english/>]. Accessed 7 April 2021.

[2] Minister of Health (Heilbrigðisráðherra). [<https://www.govt.is/ministries/ministry-of-welfare/minister-of-health/>]. Accessed 7 April 2021.

[3] Directorate of Health (Embætti Landlæknis). [<https://www.landlaeknir.is>]. Accessed 7 April 2021.

[4] National University Hospital of Iceland (Landspítali Íslands). [<https://www.landspitali.is>]. Accessed 7 April 2021.

[5] Directorate of Health (Landlæknir). 3 March 2020. "National pandemic plan 3rd edition 2020 (Landsáætlun um heimsfaraldur, 3. útg. 2020)". [<https://www.landlaeknir.is/utgefild-efni/skjal/item29596/>]. Accessed 7 April 2021.

4.2.3 Manufacturing and procurement for emergencies

4.2.3a

Does the country meet one of the following criteria?

- Is there evidence of a plan/agreement to leverage domestic manufacturing capacity to produce medical supplies (e.g. MCMs, medicines, vaccines, equipment, PPE) for national use during a public health emergency?
- Is there evidence of a plan/mechanism to procure medical supplies (e.g. MCMs, medicines, vaccines, equipment, PPE) for national use during a public health emergency?

Needs to meet at least one of the criteria to be scored a 1 on this measure., Yes for both = 1, Yes for one = 1, No for both = 0

Current Year Score: 1

There is evidence of a mechanism to procure medical supplies (e.g. Medical Countermeasures (MCM), medicines, vaccines, equipment, PPE) for national use during a public health emergency. The 3rd edition of the National pandemic plan, published in March 2020, includes an agreement with the Icelandic Medicines Agency to request additional production and/or imports of medical countermeasures. The plan does not go into detail on how medical countermeasures will be procured.

Furthermore, the plan states that pharmaceutical manufacturers and importers should collaborate with the National University Hospital of Iceland in reconstitution and distribution under the guideline of the Chief Epidemiologist [1].

Iceland is part of the European Union (EU) Joint Procurement Agreement to produce medical countermeasures, which ensures that EU member states have access to medical countermeasures from abroad if necessary when a serious cross-border threat to health is registered. [2] The agreement aims to "secure more equitable access to specific medical countermeasures and improved security of supply", as well as balancing prices for EU members. [2] It is also designed to ensure acquisition of vaccines, antivirals and medical countermeasures for serious cross-border threats to health. [2] There is, however, no evidence of a plan or agreement to leverage domestic manufacturing capacity to produce medical supplies in the National Pandemic Plan, or on the websites for Central Public Procurement, Minister of health, Directorate of

Health, or National University Hospital of Iceland [3, 4, 5, 6].

- [1] Central Public Procurement (Ríkiskaup). 2002. "National Procurement Protocol (Innkaupastefna ríkisins)". [http://www.rikiskaup.is/media/vinnuskjol/fraedsla/Innkaupastefna_rikisins.doc]. Accessed 6 September 2020.
- [2] European Commission. "Joint Procurement of medical countermeasures". [https://ec.europa.eu/health/preparedness_response/joint_procurement_en]. Accessed 8 November 2020.
- [3] Minister of Health (Heilbrigðisráðherra). [<https://www.govt.is/ministries/ministry-of-welfare/minister-of-health/>]. Accessed 6 September 2020.
- [4] Directorate of Health (Embætti Landlæknis). [<https://www.landlaeknir.is>] Accessed 6 September 2020.
- [5] National University Hospital of Iceland (Landspítali Íslands). "Procurement". [<https://www.landspitali.is/sjuklingar-adstandendur/deildir-og-thjonusta/innkaupadeild/>]. Accessed 9 September 2020.
- [6] Directorate of Health (Landlæknir). 3 March 2020. "National pandemic plan 3rd edition 2020 (Landsáætlun um heimsfaraldur, 3. útg. 2020)". [<https://www.landlaeknir.is/utgefild-efni/skjal/item29596/>]. Accessed 5 September 2020.

4.2.3b

Does the country meet one of the following criteria?

- Is there evidence of a plan/agreement to leverage domestic manufacturing capacity to produce laboratory supplies (e.g. reagents, media) for national use during a public health emergency?
- Is there evidence of a plan/mechanism to procure laboratory supplies (e.g. reagents, media) for national use during a public health emergency?

Needs to meet at least one of the criteria to be scored a 1 on this measure., Yes for both = 1, Yes for one = 1, No for both = 0

Current Year Score: 0

There is no evidence of a plan or an agreement to leverage domestic manufacturing capacity to produce or to procure laboratory supplies for national use during a public health emergency via the websites of the Central Public Procurement, Minister of health, Directorate of health, or National University Hospital of Iceland [1, 2, 3, 4]. The National Pandemic Plan does not mention anything of the sort either [5].

- [1] Central Public Procurement (RÍ-kiskaup). 2002. "National Procurement Protocol (Innkaupastefna rÍ-kisins)". [http://www.rikiskaup.is/media/vinnuskjol/fraedsla/Innkaupastefna_rikisins.doc]. Accessed 6 September 2020.
- [2] Minister of Health. [<https://www.govt.is/ministries/ministry-of-welfare/minister-of-health/>]. Accessed 6 September 2020.
- [3] Directorate of Health (Embætti landlæknis). [<https://www.landlaeknir.is>] Accessed 6 September 2020.
- [4] National University Hospital of Iceland (Landspítali Íslands). "Procurement". [<https://www.landspitali.is/sjuklingar-adstandendur/deildir-og-thjonusta/innkaupadeild/>]. Accessed 9 September 2020.
- [5] Directorate of Health. 3 March 2020. "National pandemic plan 3rd edition 2020". [<https://www.landlaeknir.is/utgefild-efni/skjal/item29596/>]. Accessed 5 September 2020.

4.3 MEDICAL COUNTERMEASURES AND PERSONNEL DEPLOYMENT

4.3.1 System for dispensing medical countermeasures (MCM) during a public health emergency

4.3.1a

Does the country have a plan, program, or guidelines in place for dispensing medical countermeasures (MCM) for national use during a public health emergency (i.e., antibiotics, vaccines, therapeutics and diagnostics)?

Yes = 1 , No = 0

Current Year Score: 0

There is insufficient public evidence that Iceland has a plan, program, or guidelines in place for dispensing medical countermeasures (MCMs) for national use during a public health emergency, according to the websites of the Ministry of Health, Directorate of Health, Ministry of Justice and Department of Civil Protection and Emergency Management [1, 2, 3, 4].

In case of a health emergency, the 'National pandemic plan', published in March 2020, states that the Chief Epidemiologist of Iceland is responsible for maintaining a stockpile of medical countermeasures, which is stored in Reykjavik, and to assure that this can be distributed at short notice. It states that in case of an emergency, the Chief Epidemiologist is responsible for planning the distribution of MCMs, but no further evidence has been found on said plan of how this it to be done [5]. The same applies for the other national emergency response plans: 'Disease prevention measures for international airports', 'Disease prevention measures for ships and harbors', and the national 'Response plan for Chemical, Biological, Radiological, Nuclear, and high-yield Explosives (CBRNE) incidents'. These plans also have no elaboration of how the distribution itself would be undertaken [6, 7, 8].

- [1] Ministry of Health. [<https://www.government.is/ministries/ministry-of-health/>]. Accessed 12 September 2020.
- [2] Directorate of Health (Embætti landlæknis). [<https://www.landlaeknir.is>]. Accessed 12 September 2020.
- [3] Ministry of Justice. [<https://www.government.is/ministries/ministry-of-justice/>]. Accessed 12 September 2020.
- [4] Department of Civil Protection and Emergency Management (Almannavarnir). [<https://www.almannavarnir.is/english/>]. Accessed 12 September 2020.
- [5] Directorate of Health. 3 March 2020. "National pandemic plan 3rd edition 2020". [<https://www.landlaeknir.is/utgefidefnir/skjal/item29596/>]. Accessed 12 September 2020.
- [6] Directorate of Health. 21 October 2019. "Response plan for Chemical, Biological, Radiological, Nuclear, Explosives (CBRNE) incidents". [<https://www.landlaeknir.is/um-embaettid/frettir/frett/item38074/vidbragdsaaetlun-vegna-cbrne-atvika>]. Accessed 12 September 2020.
- [7] Chief Epidemiologist, Isavia, and The Civil Protection Department of the National Commissioner of Police. 2018. "Disease prevention measures for international airports, A National Plan, 3rd edition". [<https://www.landlaeknir.is/servlet/file/store93/item34067/Vi%C3%B0obrag%C3%B0os%C3%A1%C3%A6tlun%20s%C3%B3tt-%20og%20al%C3%BEj%C3%B3%C3%B0aflugvellir.%203.%20%C3%BAtg%C3%A1fa%202018.pdf>]. Accessed 12 September 2020.
- [8] Chief Epidemiologist and The Civil Protection Department of the National Commissioner of Police. 2017. "Disease Prevention Measures for Ships and Harbors, A National Plan)". [<https://www.landlaeknir.is/servlet/file/store93/item31414/lokaskjal-%20s%C3%B3tt-%20hafnir%20og%20skip.%2031.%20jan.%202017.pdf>]. Accessed 12 September 2020.

4.3.2 System for receiving foreign health personnel during a public health emergency

4.3.2a

Is there a public plan in place to receive health personnel from other countries to respond to a public health emergency?

Yes = 1, No = 0

Current Year Score: 0

There is no public evidence that Iceland has a plan in place to receive health personnel from other countries to respond to a public health emergency, on the websites for the Ministry of Health, Directorate of Health, Ministry of Justice, and Department of Civil Protection and Emergency Management, nor in any of the national response plans to health emergencies; 'Disease prevention measures for international airports', 'Disease prevention measures for ships and harbors', 'Response plan for Chemical, Biological, Radiological, Nuclear, and high-yield Explosives (CBRNE) incidents' and the 'National pandemic plan' [1, 2, 3, 4, 5, 6, 7, 8].

- [1] Ministry of Health. [<https://www.government.is/ministries/ministry-of-health/>]. Accessed 12 September 2020.
 - [2] Directorate of Health (Embætti landlæknis). [<https://www.landlaeknir.is>]. Accessed 12 September 2020.
 - [3] Ministry of Justice. [<https://www.government.is/ministries/ministry-of-justice/>]. Accessed 12 September 2020.
 - [4] Department of Civil Protection and Emergency Management (Almannavarnir). [<https://www.almannavarnir.is/english/>]. Accessed 12 September 2020.
 - [5] Directorate of Health. 3 March 2020. "National pandemic plan 3rd edition 2020". [<https://www.landlaeknir.is/utgefidefniskjal/item29596/>]. Accessed 12 September 2020.
 - [6] Directorate of Health. 21 October 2019. "Response plan for Chemical, Biological, Radiological, Nuclear, Explosives (CBRNE) incidents". [<https://www.landlaeknir.is/um-embaettid/frettir/frett/item38074/vidbragdsaaetlun-vegna-cbrne-atvika>]. Accessed 12 September 2020.
 - [7] Chief Epidemiologist, Isavia, and The Civil Protection Department of the National Commissioner of Police. 2018. "Disease prevention measures for international airports, A National Plan, 3rd edition". [<https://www.landlaeknir.is/servlet/file/store93/item34067/Vi%C3%B0obrag%C3%B0os%C3%A11%C3%A6tlun%20s%C3%B3tt%20og%20al%C3%BEj%C3%B3%C3%B0aflugvelliir.%203.%20%C3%BAtg%C3%A1fa%202018.pdf>]. Accessed 12 September 2020.
 - [8] Chief Epidemiologist and The Civil Protection Department of the National Commissioner of Police. 2017. "Disease Prevention Measures for Ships and Harbors, A National Plan". [<https://www.landlaeknir.is/servlet/file/store93/item31414/lokaskjal-%20s%C3%B3tt-%20hafnir%20og%20skip.%2031.%20jan.%202017.pdf>]. Accessed 12 September 2020.

4.4 HEALTHCARE ACCESS

4.4.1 Access to healthcare

4.4.1a

Does the constitution explicitly guarantee citizens' right to medical care?

Guaranteed free = 4, Guaranteed right = 3, Aspirational or subject to progressive realization = 2, Guaranteed for some groups, not universally = 1, No specific provision = 0

Current Year Score: 0

2020

World Policy Analysis Center

4.4.1b

Access to skilled birth attendants (% of population)

Input number

Current Year Score: 97.9

2016

WHO/World Bank/United Nations Children's Fund (UNICEF)

4.4.1c

Out-of-pocket health expenditures per capita, purchasing power parity (PPP; current international \$)

Input number

Current Year Score: 778.11

2017

WHO Global Health Expenditure database

4.4.2 Paid medical leave

4.4.2a

Are workers guaranteed paid sick leave?

Paid sick leave = 2, Unpaid sick leave = 1, No sick leave = 0

Current Year Score: 2

2020

World Policy Analysis Center

4.4.3 Healthcare worker access to healthcare

4.4.3a

Has the government issued legislation, a policy, or a public statement committing to provide prioritized healthcare services to healthcare workers who become sick as a result of responding to a public health emergency?

Yes = 1 , No = 0

Current Year Score: 0

There is no public evidence that the Icelandic government has issued legislation, a policy or a public statement committing to provide prioritized healthcare services to healthcare workers who become sick as a result of responding to a public health emergency on the websites of the Ministry of Health, Directorate of Health, or National University Hospital of Iceland [1, 2, 3]. Chapter 5.1 in the 3rd edition of the National Pandemic plan, published in 2020, says that it is the main objective of the

government to ensure the safety and good health of its citizens, and therefore needs to carefully prioritize its objectives. Protecting personnel who are responsible for maintaining the healthcare system, providing emergency assistance and are in charge of national security, is clearly stated. However, the plan does not explicitly state that healthcare workers get prioritized healthcare [4].

There is no further evidence on the matter in the 'Disease prevention measures for international airports', 'Disease prevention measures for ships and harbors', or the national 'Response plan for Chemical, Biological, Radiological, Nuclear, and high-yield Explosives (CBRNE) incidents [5, 6, 7].

- [1] Ministry of Health. [<https://www.government.is/ministries/ministry-of-health/>]. Accessed 12 September 2020.
- [2] Directorate of Health (Embætti landlæknis). [<https://www.landlaeknir.is>] Accessed 12 September 2020.
- [3] National University Hospital of Iceland (Landspítali Islands). [<https://www.landspitali.is>]. Accessed 12 September 2020.
- [4] Directorate of Health. 3 March 2020. "National pandemic plan 3rd edition 2020 ". [<https://www.landlaeknir.is/utgefild-efni/skjal/item29596/>]. Accessed 12 September 2020.
- [5] Directorate of Health. 21 October 2019. "Response plan for Chemical, Biological, Radiological, Nuclear, Explosives (CBRNE) incidents." [<https://www.landlaeknir.is/um-embaettid/frettir/frett/item38074/vidbragdsaaetlun-vegna-cbrne-atvika>]. Accessed 17 October 2020.
- [6] Chief Epidemiologist, Isavia, and The Civil Protection Department of the National Commissioner of Police. 2018. "Disease prevention measures for international airports, A National Plan, 3rd edition". [<https://www.landlaeknir.is/servlet/file/store93/item34067/Vi%C3%B0brag%C3%B0s%C3%A1%C3%A6tlun%20s%C3%B3tt-%20og%20al%C3%BEj%C3%B3%C3%B3%C3%B0aflugvellir.%203.%20%C3%BAtg%C3%A1fa%202018.pdf>]. Accessed 17 October 2020
- [7] Chief Epidemiologist and The Civil Protection Department of the National Commissioner of Police. 2017. "Disease Prevention Measures for Ships and Harbors, A National Plan". [<https://www.landlaeknir.is/servlet/file/store93/item31414/lokaskjal-%20s%C3%B3tt-%20hafnir%20og%20skip.%2031.%20jan.%202017.pdf>]. Accessed 17 October 2020.

4.5 COMMUNICATIONS WITH HEALTHCARE WORKERS DURING A PUBLIC HEALTH EMERGENCY

4.5.1 Communication with healthcare workers

4.5.1a

Is there a system in place for public health officials and healthcare workers to communicate during a public health emergency?

Yes = 1 , No = 0

Current Year Score: 1

Iceland has a system in place for public health officials and healthcare workers to communicate during a public health emergency. In each of the three national plans for health emergencies; 'The national pandemic response plan', 'Disease prevention measures for international airports', and 'Disease prevention measures for ships and harbors', there is a section on communications in emergencies [1, 2, 3]. The sections explain which actors (agencies, departments, ministries, etc.) should report to whom and through which channels. This includes the National University Hospital of Iceland and all other regional healthcare units. All communications in health emergencies should happen through TETRA (terrestrial trunked radio), which is specifically designed for use by government agencies and emergency services, for public safety networks.

- [1] Directorate of Health. 3 March 2020. "National pandemic plan 3rd edition 2020." [<https://www.landlaeknir.is/utgefild-efni/skjal/item29596/>]. Accessed 12 September 2020.
- [2] Chief Epidemiologist, Isavia, and The Civil Protection Department of the National Commissioner of Police. 2018. "Disease prevention measures for international airports, A National Plan, 3rd edition". [<https://www.landlaeknir.is/servlet/file/store93/item34067/Vi%C3%B0obrag%C3%B0os%C3%A1%C3%A6tlun%20s%C3%B3tt-%20og%20al%C3%BEj%C3%B3%C3%B3%C3%BAflugvelliir.%203.%20C3%BAtg%C3%A1fa%202018.pdf>]. Accessed 12 September 2020.
- [3] Chief Epidemiologist and The Civil Protection Department of the National Commissioner of Police. 2017. Disease prevention measures for ships and Harbors, A National Plan". [<https://www.landlaeknir.is/servlet/file/store93/item31414/lokaskjal-%20s%C3%B3tt-%20hafnir%20og%20skip.%2031.%20jan.%202017.pdf>]. Accessed 12 September 2020.

4.5.1b

Does the system for public health officials and healthcare workers to communicate during an emergency encompass healthcare workers in both the public and private sector?

Yes = 1 , No = 0

Current Year Score: 0

There is no public evidence that the system for public health officials and healthcare workers to communicate during an emergency encompasses healthcare workers in both the public and private sector. Iceland has a system in place for public health officials and healthcare workers to communicate during a public health emergency [1,2,3]. Which actors (agencies, departments, ministries, etc.) should report to whom and through which channels is clearly defined. This includes the National University Hospital of Iceland and all other regional healthcare units, but there is no mention of private healthcare workers. Iceland's healthcare system is almost entirely public, but there are a few private providers. No further evidence was found on the websites for The Department of Civil Protection and Emergency Management, Ministry of Health, Directorate of Health, or National University Hospital of Iceland [4,5,6,7].

- [1] Directorate of Health (Landlæknir). 3 March 2020. "National pandemic plan 3rd edition 2020 (Landsáætlun um heimsfaraldur, 3. útg. 2020)". [<https://www.landlaeknir.is/utgefild-efni/skjal/item29596/>]. Accessed 12 September 2020.
- [2] Chief Epidemiologist, Isavia, and The Civil Protection Department of the National Commissioner of Police (Sóttvarnalæknir, Isavia og Almannavarnadeild Ríkislöggreglustjóra). 2018. "Disease prevention measures for international airports, A National Plan, 3rd edition (Sóttvarnar Alþjóðaflugvalla, Landsáætlun, 3. útgáfa)". [<https://www.landlaeknir.is/servlet/file/store93/item34067/Vi%C3%B0obrag%C3%B0os%C3%A1%C3%A6tlun%20s%C3%B3tt-%20og%20al%C3%BEj%C3%B3%C3%B3%C3%BAflugvelliir.%203.%20C3%BAtg%C3%A1fa%202018.pdf>]. Accessed 12 September 2020.
- [3] Chief Epidemiologist and The Civil Protection Department of the National Commissioner of Police (Sóttvarnalæknir og Almannavarnadeild Ríkislöggreglustjóra). 2017. Disease prevention measures for ships and Harbors, A National Plan (Sóttvarnar Hafna og Skipa, Landsáætlun)". [<https://www.landlaeknir.is/servlet/file/store93/item31414/lokaskjal-%20s%C3%B3tt-%20hafnir%20og%20skip.%2031.%20jan.%202017.pdf>]. Accessed 12 September 2020.
- [4] Department of Civil Protection and Emergency Management (Almannavarnir). [<https://www.almannavarnir.is/english/>]. Accessed 12 September 2020.
- [5] Ministry of Health (Heilbrigðisráðuneytið). [<https://www.government.is/ministries/ministry-of-health/>]. Accessed 12 September 2020.
- [6] Directorate of Health (Embætti Landlæknis). [<https://www.landlaeknir.is>] Accessed 12 September 2020.
- [7] National University Hospital of Iceland (Landspítali Íslands). [<https://www.landspitali.is>]. Accessed 12 September 2020.

4.6 INFECTION CONTROL PRACTICES AND AVAILABILITY OF EQUIPMENT

4.6.1 Healthcare associated infection (HCAI) prevention and control programs

4.6.1a

Is there evidence that the national public health system is monitoring for and tracking the number of healthcare associated infections (HCAI) that take place in healthcare facilities?

Yes = 1 , No = 0

Current Year Score: 1

There is evidence that the national public health system in Iceland is monitoring for and tracking the number of healthcare-associated infections (HCAI) that take place in healthcare facilities.

According to regulation nr. 817/2012, every hospital in Iceland is required to have an active 'infection control department'. This department's objective is to monitor and document any HCAI and report the information to the Chief Epidemiologist of Iceland, who is responsible for monitoring and tracking HCAs on a national level [1, 2].

The National University Hospital of Iceland registers HCAs four times per year under the supervision of the quality and infection control department, which operates under regulation nr. 817/2012, to evaluate and reduce the number of HCAs [3]. In October 2019, the Chief Epidemiologist, in collaboration with the quality and infection control department of the National University Hospital of Iceland released instructions for the public health system for antimicrobial resistance (AMR)-related HCAs [4].

[1] Ministry of Justice (Dómsmálaráðuneytið). 21 September 2020. Regulation nr. 817/2012 of 21. September 2012.

"Regulation on disease prevention and control (Reglugerð um sóttvarnaráðstafanir)".

[<https://www.reglugerd.is/reglugerdir/eftir-raduneytum/heilbrigdisraduneyti/nr/18334>]. Accessed 12 September 2020.

[2] Directorate of Health (Embætti landlæknis). 16 June 2020. "Contamination control within healthcare services (Sýingavarnir innan heilbrigðisó/4jónustu)". [<https://www.landlaeknir.is/smit-og-sottvarnir/sykingavarnir-innanheilbrigdisthjonstu/>]. Accessed 12 September 2020.

[3] National University Hospital of Iceland (Landspítali Íslands). "Infection control (Sýkingavarnir)".

[<https://www.landspitali.is/sjuklingar-adstandendur/hagnyar-upplysingar/sykingavarnir-/>]. Accessed 17 October 2020.

[4] Directorate of Health (Embætti Landlæknis). October 2019. "Testing, tracing and infection prevention for antimicrobial-resistant bacteria in healthcare (Skimun, smitrakning og sýkingavarnir vegna sýklalyfjaónæmra bakteríu í heilbrigðisþjónustu)".

[<https://www.landlaeknir.is/servlet/file/store93/item37686/Skimun%20og%20sykingavarnir%20vegna%20onaemra%20bakteria%20%C3%AD%20heilbrig%C3%8D%20isthjonstu%202019.pdf>]. Accessed 17 October 2020.

4.7 CAPACITY TO TEST AND APPROVE NEW MEDICAL COUNTERMEASURES

4.7.1 Regulatory process for conducting clinical trials of unregistered interventions

4.7.1a

Is there a national requirement for ethical review (e.g., from an ethics committee or via Institutional Review Board approval) before beginning a clinical trial?

Yes = 1 , No = 0

Current Year Score: 1

There is evidence of a national requirement for ethical review (e.g. from an ethics committee or via Institutional Review Board approval) before beginning a clinical trial. According to chapter 3, article 9 of law nr 44/2014 on scientific experiments within healthcare, which took effect on May 24th 2014, an approval from The National Bioethics Committee (VSN) is required for all experiments with new medical devices, drugs, vaccines or medicinal preparations in humans, altered drug use, as well as other clinical trials performed to test or improve disease management and involve risks to patients, significant interference or discomfort for privacy or personal information [1].

[1] Parliament of Iceland. Law nr. 44/2014 of 24 May 2014. "Law on scientific experiments within healthcare".

[<https://www.althingi.is/lagas/nuna/2014044.html>]. Accessed 12 September 2020.

4.7.1b

Is there an expedited process for approving clinical trials for unregistered medical countermeasures (MCM) to treat ongoing epidemics?

Yes = 1 , No = 0

Current Year Score: 0

There is no public evidence that Iceland has an expedited process for approving clinical trials for unregistered medical countermeasures to treat ongoing pandemics, via the websites for the Minister of Health, the Directorate of Health, the National Bioethics Committee, the Icelandic Medicines Agency, or via law nr 44/2014 on scientific experiments within healthcare [1, 2, 3, 4, 5].

The third edition of the National Pandemic Plan, published in 2020, states that the Icelandic Parliament should expedite bills that relate to pandemic responses, but does not go into further details [6].

[1] Ministry of Health. [<https://www.government.is/ministries/ministry-of-health/>]. Accessed 12 September 2020.

[2] Directorate of Health (Embætti landlæknis). [<https://www.landlaeknir.is>]. Accessed 12 September 2020.

[3] National Bioethics Committee. [<http://vsn.is>]. Accessed 12 September 2020.

[4] Icelandic Medicines Agency (Lyfjastofnun). [<https://www.lyfjastofnun.is/>]. Accessed 12 September 2020.

[5] Parliament of Iceland (Alþingi). Law nr. 44/2014 of 24 May 2014. "Law on scientific experiments within healthcare". [<https://www.althingi.is/lagas/nuna/2014044.html>]. Accessed 12 September 2020.

[6] Directorate of Health. 3 March 2020. "National pandemic plan 3rd edition 2020". [<https://www.landlaeknir.is/utgefidefni/skjal/item29596/>]. Accessed 12 September 2020.

4.7.2 Regulatory process for approving medical countermeasures

4.7.2a

Is there a government agency responsible for approving new medical countermeasures (MCM) for humans?

Yes = 1 , No = 0

Current Year Score: 1

Iceland has a government agency responsible for approving new medical countermeasures for humans. The Icelandic Medicines Agency, which sits within the Ministry of Welfare, functions to issue marketing authorizations for medicines in Iceland in collaboration with regulatory authorities in the European Economic Area (EEA), ensure control and surveillance of the pharmaceutical industry in Iceland and contribute to making available to health professionals and consumers professional and unbiased information on medicines. Before a new medicinal product can be placed on the market, the applicant must perform extensive toxicological, quality and clinical studies. The regulatory authorities assesses the results of these studies to confirm the quality and safety of the medicine. Only then can the medicine be released on the market to the consumers [1].

[1] Icelandic Medicines Agency (Lyfjastofnun). "About Icelandic Medicines Agency". [https://www.ima.is/ima/about_ima/]. Accessed 12 September 2020.

4.7.2b

Is there an expedited process for approving medical countermeasures (MCM) for human use during public health emergencies?

Yes = 1 , No = 0

Current Year Score: 0

There is no publicly available evidence that suggests Iceland has an expedited process for approving medical countermeasures (MCM) for human use during public health emergencies on the websites of the Ministry of Health, Directorate of Health, National Bioethics Committee, Icelandic Medicines Agency, or via law nr 44/2014 on scientific experiments within healthcare [1, 2, 3, 4, 5].

The third edition of the National Pandemic Plan, published in 2020, states that the Icelandic Parliament should expedite bills that relate to pandemic responses, but does go into further details [6].

[1] Ministry of Health. [<https://www.government.is/ministries/ministry-of-health/>]. Accessed 12 September 2020.

[2] Directorate of Health (Embætti landlæknis). [<https://www.landlaeknir.is>]. Accessed 12 September 2020.

[3] National Bioethics Committee. [<http://vsn.is>]. Accessed 12 September 2020.

[4] Icelandic Medicines Agency (Lyfjastofnun). [<https://www.lyfjastofnun.is/>]. Accessed 12 September 2020.

[5] Parliament of Iceland (Alþingi). Law nr. 44/2014 of 24 May 2014. "Law on scientific experiments within healthcare". [<https://www.althingi.is/lagas/nuna/2014044.html>]. Accessed 12 September 2020.

[6] Directorate of Health. 3 March 2020. "National pandemic plan 3rd edition 2020". [<https://www.landlaeknir.is/utgefidefniskjal/item29596/>]. Accessed 12 September 2020.

Category 5: Commitments to improving national capacity, financing plans to address gaps, and adhering to global norms

**5.1 INTERNATIONAL HEALTH REGULATIONS (IHR) REPORTING
COMPLIANCE AND DISASTER RISK REDUCTION**

5.1.1 Official IHR reporting

5.1.1a

Has the country submitted IHR reports to the WHO for the previous calendar year?

Yes = 1 , No = 0

Current Year Score: 0

2020

World Health Organization

5.1.2 Integration of health into disaster risk reduction

5.1.2a

Are epidemics and pandemics integrated into the national risk reduction strategy or is there a standalone national disaster risk reduction strategy for epidemics and pandemics?

Yes = 1 , No = 0

Current Year Score: 0

There is no public evidence that suggests Iceland has a risk reduction strategy that includes pandemics, nor a standalone risk reduction strategy for pandemics, on the website for the Minister of Health, The Directorate of Health or The Department of Civil Protection and Emergency Management [1, 2, 3].

[1] Ministry of Health. [<https://www.government.is/ministries/ministry-of-health/>]. Accessed 12 September 2020.

[2] Directorate of Health (Embætti landlæknis). [<https://www.landlaeknir.is>]. Accessed 12 September 2020.

[3] Department of Civil Protection and Emergency Management (Almannavarnir). [<https://www.almannavarnir.is/english/>]. Accessed 12 September 2020.

**5.2 CROSS-BORDER AGREEMENTS ON PUBLIC HEALTH AND ANIMAL
HEALTH EMERGENCY RESPONSE**

5.2.1 Cross-border agreements

5.2.1a

Does the country have cross-border agreements, protocols, or MOUs with neighboring countries, or as part of a regional group, with regards to public health emergencies?

Yes = 2, Yes, but there is evidence of gaps in implementation = 1, No = 0

Current Year Score: 2

There is public evidence that Iceland has cross-border agreements, protocols or MOUs with neighboring countries, or as part of a regional group, with regard to public health emergencies. Iceland is a part of the EU Network Committee on Communicable Diseases, which advises the European Commission in decisions on government actions regarding surveillance and response to diseases. The Chief Epidemiologist for Iceland sits as a representative (as all EEA countries have a representative in the committee). The Chief Epidemiologist for Iceland also serves as a representative for Iceland in the European Center for Disease Prevention and Control (ECDC), and the Permanent Secretary for the Ministry of Welfare is a part of the initiative's management. The ECDC's aim is to strengthen Europe's defenses against infectious diseases, but serves primarily as a defense measure. Iceland also sits on the EU Health Security Committee, which consults on matters regarding response to threats caused by pathogens, toxins and radioactive agents. The Permanent Secretary for the Ministry of Welfare is Iceland's representative on this committee and the Chief Epidemiologist is her stand-in [1]. A report prepared by the Icelandic Department of the Nordic Council from a summit on Nordic cooperation in 2016 puts great emphasis on collaboration between Nordic countries in regard to healthcare [2]. This report does not specifically mention health emergencies.

[1] Directorate of Health (Embætti landlæknis). January 2017. "International disease prevention methods."

[<https://www.landlaeknir.is/smit-og-sottvarnir/althjodassottvarnir/>]. Accessed 13 September 2020.

[2] Icelandic Parliament. 29 March 2017. "Report by the Icelandic Department of the Nordic Council about Nordic co-operation in the year 2016". [<https://www.althingi.is/altext/146/s/0627.html>]. Accessed 13 September 2020.

[3] Nordic Co-operation. 2018. "Nordic health co-operation". [<https://www.norden.org/en/information/Nordic-health-co-operation>]. Accessed 13 September 2020.

5.2.1b

Does the country have cross-border agreements, protocols, or MOUs with neighboring countries, or as part of a regional group, with regards to animal health emergencies?

Yes = 2, Yes, but there is evidence of gaps in implementation = 1, No = 0

Current Year Score: 0

There is no publicly available evidence that Iceland has cross-border agreements, protocols or MOUs with neighboring countries, or as part of a regional group, with regard to animal health emergencies, via the websites for The Minister of Health, Directorate of Health, Department for Civil Protection and Emergency Management or the World Organization for Animal Health (OIE)'s PVS Evaluation Report [1, 2, 3, 4]. A report by the Icelandic Department of the Nordic Council from a summit on Nordic cooperation in 2016 puts great emphasis on collaboration between the Nordic countries in regard to healthcare [5]. This report does not mention specifically animal health emergencies. The website on Nordic health co-operation doesn't mention animal health emergencies either [6].

[1] Ministry of Health. [<https://www.government.is/ministries/ministry-of-health/>]. Accessed 13 September 2020.

[2] Directorate of Health (Embætti landlæknis). [<https://www.landlaeknir.is>] Accessed 13 September 2020.

[3] Department of Civil Protection and Emergency Management (Almannavarnir). [<https://www.almannavarnir.is/english/>] Accessed 13 September 2020.

[4] World Organization For Animal Health (OIE). July 2017. "PVS Evaluation Report - Iceland".

[http://www.oie.int/fileadmin/Home/eng/Support_to_OIE_Members/pdf/20170727_OIE-PVS_Evaluation_IcelandFINAL.pdf]. Accessed 15 November 2018.

[5] Icelandic Parliament. 29 March 2017. "Report by the Icelandic Department of the Nordic Council about Nordic co-

operation in the year 2016". [<https://www.althingi.is/altext/146/s/0627.html>]. Accessed 13 September 2020.
[6] Nordic Co-operation. 2018. "Nordic health co-operation". [<https://www.norden.org/en/information/Nordic-health-co-operation>]. Accessed 13 September 2020.

5.3 INTERNATIONAL COMMITMENTS

5.3.1 Participation in international agreements

5.3.1a

Does the county have signatory and ratification (or same legal effect) status to the Biological Weapons Convention?

Signed and ratified (or action having the same legal effect) = 2, Signed = 1, Non-compliant or not a member = 0

Current Year Score: 2

2021

Biological Weapons Convention

5.3.1b

Has the country submitted confidence building measures for the Biological Weapons Convention in the past three years?

Yes = 1 , No = 0

Current Year Score: 0

2021

Biological Weapons Convention

5.3.1c

Has the state provided the required United Nations Security Council Resolution (UNSCR) 1540 report to the Security Council Committee established pursuant to resolution 1540 (1540 Committee)?

Yes = 1 , No = 0

Current Year Score: 1

2021

Biological Weapons Convention

5.3.1d

Extent of United Nations Security Council Resolution (UNSCR) 1540 implementation related to legal frameworks and enforcement for countering biological weapons:

Very good (60+ points) = 4, Good (45–59 points) = 3, Moderate (30–44 points) = 2, Weak (15–29 points) = 1, Very weak (0–14 points) or no matrix exists/country is not party to the BWC = 0

Current Year Score: 2

2021

Biological Weapons Convention

5.3.2 Voluntary memberships

5.3.2a

Does the country meet at least 2 of the following criteria?

- Membership in Global Health Security Agenda (GHSA)
- Membership in the Alliance for Country Assessments for Global Health Security and IHR Implementation (JEE Alliance)
- Membership in the Global Partnership Against the Spread of Weapons and Materials of Mass Destruction (GP)
- Membership in the Australia Group (AG)
- Membership in the Proliferation Security Initiative (PSI)

Needs to meet at least two of the criteria to be scored a 1 on this measure. , Yes for five = 1 , Yes for four = 1 , Yes for three = 1 , Yes for two = 1 , Yes for one = 0 , No for all = 0

Current Year Score: 1

2021

Global Health Security Agenda; JE Alliance; Global Partnership; Australia Group; PSI

5.4 JOINT EXTERNAL EVALUATION (JEE) AND PERFORMANCE OF VETERINARY SERVICES PATHWAY (PVS)

5.4.1 Completion and publication of a Joint External Evaluation (JEE) assessment and gap analysis

5.4.1a

Has the country completed a Joint External Evaluation (JEE) or precursor external evaluation (e.g., GHSA pilot external assessment) and published a full public report in the last five years?

Yes = 1 , No = 0

Current Year Score: 0

2021

WHO Strategic Partnership for IHR and Health Security (SPH); Global Health Security Agenda

5.4.1b

Has the country completed and published, within the last five years, either a National Action Plan for Health Security (NAPHS) to address gaps identified through the Joint External Evaluation (JEE) assessment or a national GHSA roadmap that sets milestones for achieving each of the GHSA targets?

Yes = 1 , No = 0

Current Year Score: 0

2021

WHO Strategic Partnership for IHR and Health Security (SPH); Global Health Security Agenda

5.4.2 Completion and publication of a Performance of Veterinary Services (PVS) assessment and gap analysis

5.4.2a

Has the country completed and published a Performance of Veterinary Services (PVS) assessment in the last five years?

Yes = 1 , No = 0

Current Year Score: 0

2021

OIE PVS assessments

5.4.2b

Has the country completed and published a Performance of Veterinary Services (PVS) gap analysis in the last five years?

Yes = 1 , No = 0

Current Year Score: 0

2021

OIE PVS assessments

5.5 FINANCING

5.5.1 National financing for epidemic preparedness

5.5.1a

Is there evidence that the country has allocated national funds to improve capacity to address epidemic threats within the past three years?

Yes = 1 , No = 0

Current Year Score: 0

There is no public evidence that Iceland has allocated national funds to improve capacity to address epidemic threats within the past three years, via the websites of the Minister of Health, Directorate of Health, or the Icelandic Parliament [1, 2, 3]

[1] Ministry of Health. [<https://www.government.is/ministries/ministry-of-health/>]. Accessed 13 September 2020.

[2] Directorate of Health (Embætti landlæknis). [<https://www.landlaeknir.is>] Accessed 13 September 2020.

[3] Parliament of Iceland (Alþingi). [<https://www.althingi.is/english>]. Accessed 12 September 2020.

5.5.2 Financing under Joint External Evaluation (JEE) and Performance of Veterinary Services (PVS) reports and gap analyses

5.5.2a

Does the Joint External Evaluation (JEE) report, National Action Plan for Health Security (NAPHS), and/or national GHSA roadmap allocate or describe specific funding from the national budget (covering a time-period either in the future or within the past five years) to address the identified gaps?

Yes = 1 , No/country has not conducted a JEE = 0

Current Year Score: 0

2021

WHO Strategic Partnership for IHR and Health Security (SPH); Global Health Security Agenda

5.5.2b

Does the Performance of Veterinary Services (PVS) gap analysis and/or PVS assessment allocate or describe specific funding from the national budget (covering a time-period either in the future or within the past five years) to address the identified gaps?

Yes = 1 , No/country has not conducted a PVS = 0

Current Year Score: 0

2021

OIE PVS assessments

5.5.3 Financing for emergency response

5.5.3a

Is there a publicly identified special emergency public financing mechanism and funds which the country can access in the face of a public health emergency (such as through a dedicated national reserve fund, an established agreement with the World Bank pandemic financing facility/other multilateral emergency funding mechanism, or other pathway identified through a public health or state of emergency act)?

Yes = 1 , No = 0

Current Year Score: 0

There is no publicly identified special emergency public financing mechanism or funds that Iceland can access in the face of a public health emergency. Iceland is not eligible for International Development Association (IDA) or World Bank pandemic financing, nor was there any evidence of such a fund on the website for the Minister of Health, Directorate of Health, Icelandic Parliament or Department of Civil Protection and Emergency Management, nor in the third edition of the National Pandemic Plan, published in 2020 [1, 2, 3, 4, 5, 6, 7].

[1] International Development Association. [<http://ida.worldbank.org/about/borrowing-countries>]. Accessed 12 September 2020.

[2] World Bank. "Pandemic Financing Facility". [<http://pubdocs.worldbank.org/en/119961516647620597/PEF-Operational-Brief-Dec-2017.pdf>] Accessed 12 September 2020.

- [3] Ministry of Health. [<https://www.government.is/ministries/ministry-of-health/>]. Accessed 13 September 2020.
- [4] Directorate of Health (Embætti landlæknis). [<https://www.landlaeknir.is>] Accessed 13 September 2020.
- [5] Parliament of Iceland. [<https://www.althingi.is/english>]. Accessed 12 September 2020.
- [6] Department of Civil Protection and Emergency Management (Almannavarnir). [<https://www.almannavarnir.is/english/>]. Accessed 12 September 2020.
- [7] Directorate of Health (Embætti landlæknis). 3 March 2020. "National pandemic response plan 3rd edition 2020". [<https://www.landlaeknir.is/utgefid-efni/skjal/item29596/>]. Accessed 5 September 2020.

5.5.4 Accountability for commitments made at the international stage for addressing epidemic threats

5.5.4a

Is there evidence that senior leaders (president or ministers), in the past three years, have made a public commitment either to:

- Support other countries to improve capacity to address epidemic threats by providing financing or support?
- Improve the country's domestic capacity to address epidemic threats by expanding financing or requesting support to improve capacity?

Needs to meet at least one of the criteria to be scored a 1 on this measure., Yes for both = 1, Yes for one = 1, No for both = 0

Current Year Score: 0

There is no public evidence that Iceland's senior leaders (president or ministers) have made a public commitment either to support other countries to improve capacity to address epidemic threats by providing financing or support or to expand financing in order to improve its capacity to address epidemic threats in the past three years on the websites for the Ministry of Health, Directorate of Health, Ministry for Foreign Affairs, Global Health Security Tracker, or the World Health Organization [1, 2, 3, 4, 5]. Iceland is a part of the EU Network Committee on Communicable Diseases, European Center for Disease Prevention and Control (ECDC), EU Health Security Committee, and Nordic Council, which puts great emphasis on collaboration between the Nordic countries in regard to healthcare [6, 7]. There is no public information that this has included making a public commitment to support other countries to improve capacity to address epidemic threats by providing financing or support or to expand financing in order to improve its capacity to address epidemic threats

- [1] Ministry of Health. [<https://www.government.is/ministries/ministry-of-health/>]. Accessed 12 September 2020.
- [2] Directorate of Health (Embætti landlæknis). [<https://www.landlaeknir.is>] Accessed 12 September 2020.
- [3] Ministry for Foreign Affairs. [<https://www.government.is/ministries/ministry-for-foreign-affairs/>]. Accessed 12 September 2020.
- [4] Georgetown Infectious Disease Atlas (GIDA). "Global Health Security Tracker - Iceland". [<https://tracking.ghscosting.org/details/111/recipient>]. Accessed 12 September 2020.
- [5] World Health Organization (WHO). "Iceland". [<http://www.who.int/countries/isl/en/>]. Accessed 12 September 2020.
- [6] Directorate of Health (Embætti landlæknis). January 2017. "International disease prevention methods (Alþjóðlegt Ástættvarnir)". [<https://www.landlaeknir.is/smit-og-sottvarnir/althjodassottvarnir/>]. Accessed 12 September 2020.
- [7] Icelandic Parliament. 29 March 2017. "Report by the Icelandic Department of the Nordic Council about Nordic co-operation in the year 2016". [<https://www.althingi.is/altext/146/s/0627.html>]. Accessed 12 September 2020.

5.5.4b

Is there evidence that the country has, in the past three years, either:

- Provided other countries with financing or technical support to improve capacity to address epidemic threats?

- Requested financing or technical support from donors to improve the country's domestic capacity to address epidemic threats?

Needs to meet at least one of the criteria to be scored a 1 on this measure., Yes for both = 1, Yes for one = 1, No for both = 0

Current Year Score: 0

There is insufficient public evidence that Iceland has provided other countries with financial or technical support to improve capacity to address epidemic threats or requested financing or technical support from donors to improve the country's domestic capacity to address epidemic threats, on the websites for the Ministry of Health, Directorate of Health, Ministry for Foreign Affairs, Global Health Security Tracker, or the World Health Organization [1, 2, 3, 4, 5]. Iceland is a part of the EU Network Committee on Communicable Diseases, the European Center for Disease Prevention and Control (ECDC), the EU Health Security Committee, and the Nordic Council, which puts great emphasis on collaboration between the Nordic countries in regard to healthcare [6, 7]. There is no public information that this has included making a public commitment to support other countries to improve capacity to address epidemic threats by providing financing or support or to expand financing in order to improve its capacity to address epidemic threats.

[1] Ministry of Health (Heilbrigðisráðuneytið). [<https://www.government.is/ministries/ministry-of-health/>]. Accessed 12 September 2020.

[2] Directorate of Health (Embætti Landlæknis). [<https://www.landlaeknir.is>] Accessed 12 September 2020.

[3] Ministry for Foreign Affairs. [<https://www.government.is/ministries/ministry-for-foreign-affairs/>]. Accessed 12 September 2020.

[4] Georgetown Infectious Disease Atlas (GIDA). "Global Health Security Tracker - Iceland".
[<https://tracking.ghscosting.org/details/111/recipient>]. Accessed 12 September 2020.

[5] World Health Organization (WHO). "Iceland". [<http://www.who.int/countries/isl/en/>]. Accessed 12 September 2020.

[6] Directorate of Health (Embætti Landlæknis). January 2017. "International disease prevention methods (Alþjóðasóttvarnir)". [<https://www.landlaeknir.is/smit-og-sottvarnir/althjodassottvarnir/>]. Accessed 13 September 2020.

[7] Icelandic Parliament. 29 March 2017. "Report by the Icelandic Department of the Nordic Council about Nordic co-operation in the year 2016 (Skýrsla Íslandsdeildar Norðurlandaráðs um norrænt samstarf árið 2016)".
[<https://www.althingi.is/altext/146/s/0627.html>]. Accessed 13 September 2020.

5.5.4c

Is there evidence that the country has fulfilled its full contribution to the WHO within the past two years?

Yes = 1 , No = 0

Current Year Score: 1

2021

Economist Impact analyst qualitative assessment based on official national sources, which vary by country

5.6 COMMITMENT TO SHARING OF GENETIC AND BIOLOGICAL DATA AND SPECIMENS

5.6.1 Commitment to sharing genetic data, clinical specimens, and/or isolated specimens (biological materials) in both emergency and nonemergency research

5.6.1a

Is there a publicly available plan or policy for sharing genetic data, clinical specimens, and/or isolated specimens (biological materials) along with the associated epidemiological data with international organizations and/or other countries that goes beyond influenza?

Yes = 1 , No = 0

Current Year Score: 0

There is no publicly available plan or policy for sharing genetic data, epidemiological data etc., with international organizations and/or other countries, on the website for the Ministry of Health, Directorate of Health, or Pathology and Virology department of the National University Hospital of Iceland, and related sites [1, 2, 3]. Iceland is a part of the EU Network Committee on Communicable Diseases, the European Center for Disease Prevention and Control (ECDC), the EU Health Security Committee, and the Nordic Council, which puts great emphasis on collaboration between the Nordic countries in regard to healthcare [4, 5]. There is no public information that these require sharing of genetic data, epidemiological data etc.

[1] Ministry of Health. [<https://www.government.is/ministries/ministry-of-health/>]. Accessed 12 September 2020.

[2] Directorate of Health (Embætti landlæknis). [<https://www.landlaeknir.is>]. Accessed 12 September 2020.

[3] National University Hospital of Iceland (Landspítali Íslands). "Pathology and virology department".

[<https://www.landspitali.is/sjuklingar-adstandendur/deildir-og-thjonusta/sykla-og-veirufraedideild/>]. Accessed 12 September 2020.

[4] Directorate of Health (Embætti landlæknis). January 2017. "International disease prevention methods".

[<https://www.landlaeknir.is/smit-og-sottvarnir/althjodassottvarnir/>]. Accessed 12 September 2020.

[5] Icelandic Parliament. 29 March 2017. "Report by the Icelandic Department of the Nordic Council about Nordic co-operation in the year 2016". [<https://www.althingi.is/altext/146/s/0627.html>]. Accessed 12 September 2020.

5.6.1b

Is there public evidence that the country has not shared samples in accordance with the Pandemic Influenza Preparedness (PIP) framework in the past two years?

Yes = 0 , No = 1

Current Year Score: 1

There is no public evidence that Japan has not shared samples in accordance with the Pandemic Influenza Preparedness (PIP) framework in the past two years. The World Health Organization's PIP Framework shows no evidence of Japan not sharing samples nor is any evidence available from major media outlets. [1].

[1] World Health Organization. 2020. "Virus sharing". [http://www.who.int/influenza/pip/virus_sharing/en/]. Accessed 13 September 2020.

[2] Morgunblaðið. [https://www.mbl.is/frettir/?]. Accessed 13 September 2020.

- [3] Visir. 2018. [<http://www.visir.is/>]. Accessed 13 September 2020.
[4] Kjarninn miðlar. [<https://kjarninn.is/frettir/>] Accessed 13 September 2020.

5.6.1c

Is there public evidence that the country has not shared pandemic pathogen samples during an outbreak in the past two years?

Yes = 0 , No = 1

Current Year Score: 1

There is no public evidence that Iceland has not shared pandemic pathogen samples during an outbreak on the website of the World Health Organization, or the websites of the top international and local media outlets. Furthermore, there is no reporting of not sharing in the context of Covid-19 [1, 2, 3, 4].

[1] World Health Organization. 2020. "Iceland". [<http://www.who.int/countries/isl/en/>]. Accessed 13 September 2020.

[2] Morgunblaðið. [<https://www.mbl.is/frettir/?>]. Accessed 13 September 2020.

[3] Vi-sir. 2018. [<http://www.visir.is/>]. Accessed 13 September 2020.

[4] Kjarninn miðlar. [<https://kjarninn.is/frettir/>] Accessed 13 September 2020.

Category 6: Overall risk environment and vulnerability to biological threats

6.1 POLITICAL AND SECURITY RISK

6.1.1 Government effectiveness

6.1.1a

Policy formation (Economist Intelligence score; 0-4, where 4=best)

Input number

Current Year Score: 3

2020

Economist Intelligence

6.1.1b

Quality of bureaucracy (Economist Intelligence score; 0-4, where 4=best)

Input number

Current Year Score: 3

2020

Economist Intelligence

6.1.1c

Excessive bureaucracy/red tape (Economist Intelligence score; 0-4, where 4=best)

Input number

Current Year Score: 4

2020

Economist Intelligence

6.1.1d

Vested interests/cronyism (Economist Intelligence score; 0-4, where 4=best)

Input number

Current Year Score: 3

2020

Economist Intelligence

6.1.1e

Country score on Corruption Perception Index (0-100, where 100=best)

Input number

Current Year Score: 75

2020

Transparency International

6.1.1f

Accountability of public officials (Economist Intelligence score; 0-4, where 4=best)

Input number

Current Year Score: 3

2020

Economist Intelligence

6.1.1g

Human rights risk (Economist Intelligence score; 0-4, where 4=best)

Input number

Current Year Score: 4

2020

Economist Intelligence

6.1.2 Orderly transfers of power

6.1.2a

How clear, established, and accepted are constitutional mechanisms for the orderly transfer of power from one government to another?

Very clear, established and accepted = 4, Clear, established and accepted = 3, One of the three criteria (clear, established, accepted) is missing = 2, Two of the three criteria (clear, established, accepted) are missing = 1, Not clear, not established, not accepted = 0

Current Year Score: 4

2021

Economist Intelligence

6.1.3 Risk of social unrest

6.1.3a

What is the risk of disruptive social unrest?

Very low: Social unrest is very unlikely = 4, Low: There is some prospect of social unrest, but disruption would be very limited = 3, Moderate: There is a considerable chance of social unrest, but disruption would be limited = 2, High: Major social unrest is likely, and would cause considerable disruption = 1, Very high: Large-scale social unrest on such a level as to seriously challenge government control of the country is very likely = 0

Current Year Score: 3

2021

Economist Intelligence

6.1.4 Illicit activities by non-state actors

6.1.4a

How likely is it that domestic or foreign terrorists will attack with a frequency or severity that causes substantial disruption?

No threat = 4, Low threat = 3, Moderate threat = 2, High threat = 1, Very high threat = 0

Current Year Score: 4

2021

Economist Intelligence

6.1.4b

What is the level of illicit arms flows within the country?

4 = Very high, 3 = High, 2 = Moderate, 1 = Low, 0 = Very low

Current Year Score: 4

2020

UN Office of Drugs and Crime (UNODC)

6.1.4c

How high is the risk of organized criminal activity to the government or businesses in the country?

Very low = 4, Low = 3, Moderate = 2, High = 1, Very high = 0

Current Year Score: 3

2021

Economist Intelligence

6.1.5 Armed conflict

6.1.5a

Is this country presently subject to an armed conflict, or is there at least a moderate risk of such conflict in the future?

No armed conflict exists = 4, Yes; sporadic conflict = 3, Yes; incisional conflict = 2, Yes, low-level insurgency = 1, Yes; territorial conflict = 0

Current Year Score: 4

2021

Economist Intelligence

6.1.6 Government territorial control

6.1.6a

Does the government's authority extend over the full territory of the country?

Yes = 1, No = 0

Current Year Score: 1

2021

Economist Intelligence

6.1.7 International tensions

6.1.7a

Is there a threat that international disputes/tensions could have a negative effect?

No threat = 4, Low threat = 3, Moderate threat = 2, High threat = 1, Very high threat = 0

Current Year Score: 4

2021

Economist Intelligence

6.2 SOCIO-ECONOMIC RESILIENCE

6.2.1 Literacy

6.2.1a

Adult literacy rate, population 15+ years, both sexes (%)

Input number

Current Year Score: 99.9

2008-2018

United Nations Development Programme (UNDP); United Nations Educational, Scientific and Cultural Organization (UNESCO);
The Economist Intelligence Unit

6.2.2 Gender equality

6.2.2a

United Nations Development Programme (UNDP) Gender Inequality Index score

Input number

Current Year Score: 0.94

2018

United Nations Development Programme (UNDP); The Economist Intelligence Unit

6.2.3 Social inclusion

6.2.3a

Poverty headcount ratio at \$1.90 a day (2011 PPP) (% of population)

Input number

Current Year Score: 0

2015

World Bank; Economist Impact

6.2.3b

Share of employment in the informal sector

Greater than 50% = 2, Between 25-50% = 1, Less than 25% = 0

Current Year Score: 0

According to a report published by ILOSTAT in 2018 the share of employment in the informal sector in Iceland is 4.6% [1].

[1] International Labor Office (ILO). 2018. "Women and men in the informal economy: A statistical picture. Third edition". [https://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/documents/publication/wcms_626831.pdf]. Accessed 17 October 2020.

6.2.3c

Coverage of social insurance programs (% of population)

Scored in quartiles (0-3, where 3=best)

Current Year Score: 3

2016, or latest available

World Bank; Economist Impact calculations

6.2.4 Public confidence in government

6.2.4a

Level of confidence in public institutions

Input number

Current Year Score: 1

2021

Economist Intelligence Democracy Index

6.2.5 Local media and reporting

6.2.5a

Is media coverage robust? Is there open and free discussion of public issues, with a reasonable diversity of opinions?

Input number

Current Year Score: 2

2021

Economist Intelligence Democracy Index

6.2.6 Inequality

6.2.6a

Gini coefficient

Scored 0-1, where 0=best

Current Year Score: 0.26

Latest available.

World Bank; Economist Impact calculations

6.3 INFRASTRUCTURE ADEQUACY

6.3.1 Adequacy of road network

6.3.1a

What is the risk that the road network will prove inadequate to meet needs?

Very low = 4, Low = 3, Moderate = 2, High = 1, Very high = 0

Current Year Score: 3

2021

Economist Intelligence

6.3.2 Adequacy of airports

6.3.2a

What is the risk that air transport will prove inadequate to meet needs?

Very low = 4, Low = 3, Moderate = 2, High = 1, Very high = 0

Current Year Score: 3

2021

Economist Intelligence

6.3.3 Adequacy of power network

6.3.3a

What is the risk that power shortages could be disruptive?

Very low = 4, Low = 3, Moderate = 2, High = 1, Very high = 0

Current Year Score: 4

2021

Economist Intelligence

6.4 ENVIRONMENTAL RISKS

6.4.1 Urbanization

6.4.1a

Urban population (% of total population)

Input number

Current Year Score: 93.86

2019

World Bank

6.4.2 Land use

6.4.2a

Percentage point change in forest area between 2006–2016

Input number

Current Year Score: 0.08

2008-2018

World Bank; Economist Impact

6.4.3 Natural disaster risk

6.4.3a

What is the risk that the economy will suffer a major disruption owing to a natural disaster?

Very low = 4, Low = 3, Moderate = 2, High = 1, Very high = 0

Current Year Score: 3

2021

Economist Intelligence

6.5 PUBLIC HEALTH VULNERABILITIES

6.5.1 Access to quality healthcare

6.5.1a

Total life expectancy (years)

Input number

Current Year Score: 82.86

2018

United Nations; World Bank, UNICEF; Institute for Health Metrics and Evaluation (IHME); Central Intelligence Agency (CIA)
World Factbook

6.5.1b

Age-standardized NCD mortality rate (per 100 000 population)

Input number

Current Year Score: 304.9

2019

WHO

6.5.1c

Population ages 65 and above (% of total population)

Input number

Current Year Score: 15.19

2019

World Bank

6.5.1d

Prevalence of current tobacco use (% of adults)

Input number

Current Year Score: 13.8

2018

World Bank

6.5.1e

Prevalence of obesity among adults

Input number

Current Year Score: 21.9

2016

WHO

6.5.2 Access to potable water and sanitation

6.5.2a

Percentage of homes with access to at least basic water infrastructure

Input number

Current Year Score: 99

2017

UNICEF; Economist Impact

6.5.2b

Percentage of homes with access to at least basic sanitation facilities

Input number

Current Year Score: 98.78

2017

UNICEF; Economist Impact

6.5.3 Public healthcare spending levels per capita

6.5.3a

Domestic general government health expenditure per capita, PPP (current international \$)

Input number

Current Year Score: 4211.85

2018

WHO Global Health Expenditure database

6.5.4 Trust in medical and health advice

6.5.4a

Trust medical and health advice from the government

Share of population that trust medical and health advice from the government , More than 80% = 2, Between 60-80%, or no data available = 1, Less than 60% = 0

Current Year Score: 1

2018

Wellcome Trust Global Monitor 2018

6.5.4b

Trust medical and health advice from medical workers

Share of population that trust medical and health advice from health professionals , More than 80% = 2, Between 60-80%, or no data available = 1, Less than 60% = 0

Current Year Score: 2

2018

Wellcome Trust Global Monitor 2018