Finland

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

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: 2

Finland has a national AMR plan for the surveillance, detection and reporting of priority AMR pathogens. The Ministry of Social Affairs and Health has published the National Action Plan on Antimicrobial Resistance 2017-2021 in 2017. The plan describes present control measures of antimicrobial resistance in Finland and proposes new actions to correct observed defects and to strengthen different areas of resistance control in the future. The plan covers surveillance, detection and reporting of AMR pathogens as well as training and education. It is publicly available on the Ministry of Social Affairs and Health web site and includes an English language summary. [1]

[1] Ministry of Social Affairs and Health in Finland. 12 May 2017. "The National Action Plan on Antimicrobial Resistance 2017-2021." [https://stm.fi/documents/1271139/1359637/12_17_National_Action_Plan_on_Antimicrobial_Resistance_2017_2021_V1+%28002%29.pdf/9ff43364-6cc2-4e39-b0cf-5664460a3d9e/12_17_National_Action_Plan_on_Antimicrobial_Resistance_2017_2021_V1+%28002%29.pdf.pdf]. Accessed 7 October 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 the laboratory system in Finland tests for most, but not all 7+1 priority AMR pathogens. In Finland, detection of infections or acute epidemics caused by resistant microbes is a responsibility of all clinical laboratories and infectious disease teams, but in outbreak investigations the reference laboratories are needed for pathogen typing. [1,2] The WHO's Joint External Evaluation (JEE) report for Finland, conducted in March 2017 (prior to the publication of the National Action Plan on AMR) notes that in the public health sector, "designated sentinel sites have conducted surveillance of infections caused by all priority AMR pathogens for five years with a system for continuous improvement." Specifically, the report makes note of testing for M. tuberculosis and methicillin-resistant S. aureus. [2] However, in the National Action Plan on AMR, only four of 7+1 priority pathogens are mentioned by name (Mycobacterium tuberculosis, E.coli, S. Aureus and K. pneumoniae). In addition, Finland is a member in the European Antimicrobial Resistance Surveillance Network (EARS-Net) and according to the Network's website, provides the Network with AMR information on a further one of 7+1 priority pathogens (S. pneumoniae). [1,3] Finally, each clinical laboratory is obliged, according to the Communicable Disease Act

(Article 28) to, notify the National Institute for Health and Welfare (THL) about specific pathogens and their antimicrobial resistance findings. [4] The list of these pathogens, available on the THL website, makes specific mention of resistance testing for E.coli, K. pneumoniae and S.aureus. [5] Furthermore, the Finnish Study Group for Antimicrobial Resistance (FiRE), a collaborative body based on voluntariness, produces resistance data on a list of pathogens, which includes N. gonorrhea. [6] However, there is no evidence on either of these lists of ongoing resistance testing for Salmonella spp. or Shigella spp.

[1] Ministry of Social Affairs and Health in Finland. 12 May 2017. "The National Action Plan on Antimicrobial Resistance 2017-2021."
[https://stm.fi/documents/1271139/1359637/12_17_National_Action_Plan_on_Antimicrobial_Resistance_2017_2021_V1+%28002%29.pdf/9ff43364-6cc2-4e39-b0cf-5664460a3d9e/12_17_National_Action_Plan_on_Antimicrobial_Resistance_2017_2021_V1+%28002%29.pdf.pdf]. Accessed 7 October 2020.
[2] World Health Organization. March 2017. "Joint External Evaluation of IHR Core Capacities of the Republic of Finland". [http://apps.who.int/iris/bitstream/handle/10665/255690/WHO-WHE-CPI-2017.24-Report-eng.pdf?sequence=1]. Accessed 7 October 2020.
[3] European Centre for Disease Control. "European Antimicrobial Resistance Surveillance Network (EARS-Net)". [https://ecdc.europa.eu/en/about-us/partnerships-and-networks/disease-and-laboratory-networks/ears-net]. Accessed 7 October 2020.
[4] Republic of Finland. 1227/2016. "Communicable Diseases Act (Tartuntatautilaki)". [https://www.finlex.fi/fi/laki/alkup/2016/20161227]. Accessed 7 October 2020.
[5] National Institute for Health and Welfare (THL). 2 March 2020. "Notifiable diseases and microbes (Ilmoitettavat taudit ja mikrobit)". [https://thl.fi/fi/web/infektiotaudit/seuranta-ja-epidemiat/tartuntatautirekisteri/ilmoitettavat-taudit-ja-mikrobit]. Accessed 7 October 2020.
[6] National Institute for Health and Welfare (THL). 5 June 2020. "Surveillance of antimicrobial resistance". [https://thl.fi/en/web/infectious-diseases-and-vaccinations/surveillance-and-registers/surveillance-of-antimicrobial-resistance]. Accessed 7 October 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: 0

There is insufficient evidence that the government is conducting detection or surveillance activities for antimicrobial residues or AMR organisms in the environment. The National Action Plan on Antimicrobial Resistance 2017-2021 explicitly states:"No environmental antimicrobial resistance surveillance takes place in Finland." It goes on to state however that: "The Finnish Environment Institute performs research on the environmental impacts of pharmaceutical substances".[1] There is also evidence of recent research being conducted on how antimicrobial residues and antimicrobial-resistant bacteria spread via the manure chain from the dairy cows treated with antimicrobials to the farm environment and manure storages. Furthermore, the EPIC (Efficient Treatment of Pharmaceutical Residue at source) programme undertook screenings on the active pharmaceutical ingredients content, including antimicrobial residues, of wastewaters (water and sludge) at three hospitals, a supported living unit, three household sewage systems and three wastewater treatment plants. [3,4]. No evidence was found to support the existence of nation-wide detection or surveillance activities in relation to antimicrobial residues or AMR organisms via the Ministry of Agriculture and Forestry, the Ministry of the Environment, the Finnish Environment Institute, the Ministry of Social Affairs and Health, the Finnish Food Safety Authority or the National Institute for Health and Welfare. [2,3,4,5,6,7] There is also no further evidence via the Joint External Evaluation report for Finland,

conducted in March 2017. [8]

[1] Ministry of Social Affairs and Health in Finland. 12 May 2017. "The National Action Plan on Antimicrobial Resistance 2017-2021." [https://stm.fi/documents/1271139/1359637/12_17_National_Action_Plan_on_Antimicrobial_Resistance_2017_2021_V1+%28002%29.pdf/9ff43364-6cc2-4e39-b0cf-5664460a3d9e/12_17_National_Action_Plan_on_Antimicrobial_Resistance_2017_2021_V1+%28002%29.pdf.pdf]. Accessed 7 October 2020.
[2] Finnish Food Authority. November 2019. "Antimicrobial Resistance and Residues on Cattle Farms - Effects on the Environment and Health (NAMI)". [https://www.ruokavirasto.fi/globalassets/tietoa-meista/julkaisut/julkaisusarjat/tutkimukset/2019_4-ruokaviraston_tutkimuksia.pdf]. Accessed 7 October 2020.
[3] Finnish Environment Institute. 26 February 2020. "Efficient Treatment of Pharmaceutical Residue At Source - EPIC Final Report: Emissions And Risk Identification (Wp1)". [https://www.syke.fi/download/noname/%7BC07254AC-6149-4A61-B3EB-208577B9D8E0%7D/157581]. Accessed 7 October 2020.
[4] Ministry of Agriculture and Forestry in Finland. "Ministry of Agriculture and Forestry of Finland website". [https://mmm.fi/etusivu]. Accessed 7 October 2020.
[5] Ministry of the Environment in Finland. "Ministry of the Environment website". [http://www.ym.fi/fi-FI]. Accessed 7 October 2020.
[6] Finnish Environment Institute. "Finnish Environment Institute website". [http://www.syke.fi/fi-FI]. Accessed 7 October 2020.
[7] Ministry of Social Affairs and Health in Finland. "Ministry of Social Affairs and Health in Finland website". [https://stm.fi/etusivu]. Accessed 7 October 2020.
[8] Finnish Food Authority. "Finnish Food Authority website". [https://www.ruokavirasto.fi]. Accessed 7 October 2020.
[9] National Institute for Health and Welfare (THL). "THL website". [https://thl.fi/fi/]. Accessed 7 October 2020.
[10] World Health Organization. March 2017. "Joint External Evaluation of IHR Core Capacities of the Republic of Finland". [http://apps.who.int/iris/bitstream/handle/10665/255690/WHO-WHE-CPI-2017.24-Report-eng.pdf?sequence=1]. Accessed 7 October 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

Finland has national legislation and regulation requiring prescriptions for antibiotic use for humans. The Decree on Medicines 693/1987 stipulates that the Finnish Medicines Agency (Fimea) decides whether a medicine, upon reception of a marketing authorisation, requires a prescription or not. [1] A list is available on the Agency's website and was issued in 2003 by the Agency's predecessor, the National Agency for Medicines (Lääkelaitos). This includes all medicines that require a prescription, amongst others antibiotics. [2] The regulation is the same for both humans and animals. According to the WHO's Joint External Evaluation (JEE) report for Finland, published in 2017, Finland has a long tradition of prudent use of antibiotics in the public health sector. [3] In the National Plan on AMR (2017-2021), the plan states that the country has an electronic database tracking antimicrobial prescriptions, and that Fimea is investigating the possibility of using the data of the dispensed electronic prescriptions as a tool for more detailed surveillance of the consumption of antimicrobial[s]". [4] There is no evidence of gaps in enforcement the existing regulation on the websites of the Finnish Medicines Agency or the Ministry of

Social Affairs and Health in Finland. [5,6]

[1] Republic of Finland. 24.7.1987/693. "Decree on Medicines (Lääkeasetus)". [https://www.finlex.fi/fi/laki/ajantasa/1987/19870693]. Accessed 7 October 2020.
[2] Finnish Medicines Agency (Fimea). 5 February 2003. "List of pharmaceutical products that require a prescription (Luettelo lääkeaineista ja -valmisteista, joita saa toimittaa ainoastaan lääkemääräyksellä)". [https://www.fimea.fi/documents/160140/764653/16974_muu_ohjeistus_Resepti_2003_suomi.pdf]. Accessed 7 October 2020.
[3] World Health Organization. March 2017. "Joint External Evaluation of IHR Core Capacities of the Republic of Finland". [http://apps.who.int/iris/bitstream/handle/10665/255690/WHO-WHE-CPI-2017.24-Report-eng.pdf?sequence=1]. Accessed 7 October 2020.
[4] Ministry of Social Affairs and Health in Finland. 12 May 2017. "The National Action Plan on Antimicrobial Resistance 2017-2021." [https://stm.fi/documents/1271139/1359637/12_17_National_Action_Plan_on_Antimicrobial_Resistance_2017_2021_V1+%28002%29.pdf/9ff43364-6cc2-4e39-b0cf-5664460a3d9e/12_17_National_Action_Plan_on_Antimicrobial_Resistance_2017_2021_V1+%28002%29.pdf.pdf]. Accessed 7 October 2020.
[5] Finnish Medicines Agency (Fimea). "Fimea website". [https://www.fimea.fi/web/en/frontpage]. Accessed 7 October 2020.
[6] Ministry of Social Affairs and Health in Finland. "Ministry of Social Affairs and Health in Finland website". [https://stm.fi/etusivu]. Accessed 7 October 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

There is national legislation and regulation in place requiring prescriptions for antibiotic use for animals in Finland. The Decree on Medicines 693/1987 stipulates that the Finnish Medicines Agency (Fimea) decides whether a medicine (upon reception of a marketing authorisation) requires a prescription or not [1]. A list available from the Agency's web site under "guidelines", issued by this Agency's predecessor (National Agency for Medicines - Lääkelaitos) in 2003, includes all medicines that require a prescription, amongst other antibiotics. [2] The regulation is the same for both humans and animals. In addition, according to the WHO Joint External Evaluation of IHR Core Capacities in Finland from 2017, "Finland has a history of prudent, prescription-based use of antimicrobials in the animal health sector, dating back to 1949." [3] No evidence was recorded of gaps in enforcing the regulation on the the Finnish Medicines Agency, Ministry of Social Affairs and Health or the Ministry of Agriculture and Forestry in Finland websites. [4,5,6]

[1] Republic of Finland. 24.7.1987/693. "Decree on Medicines (Lääkeasetus)". [https://www.finlex.fi/fi/laki/ajantasa/1987/19870693]. Accessed 7 October 2020.
[2] Finnish Medicines Agency (Fimea). 5 February 2003. "List of pharmaceutical products that require a prescription (Luettelo lääkeaineista ja -valmisteista, joita saa toimittaa ainoastaan lääkemääräyksellä)". [https://www.fimea.fi/documents/160140/764653/16974_muu_ohjeistus_Resepti_2003_suomi.pdf]. Accessed 7 October 2020.
[3] World Health Organization. March 2017. "Joint External Evaluation of IHR Core Capacities of the Republic of Finland". [http://apps.who.int/iris/bitstream/handle/10665/255690/WHO-WHE-CPI-2017.24-Report-eng.pdf?sequence=1]. Accessed 7 October 2020.
[4] Finnish Medicines Agency (Fimea). "Fimea website". [https://www.fimea.fi/web/en/frontpage]. Accessed 7 October 2020.

[5] Ministry of Social Affairs and Health in Finland. "Ministry of Social Affairs and Health in Finland website". [https://stm.fi/etusivu]. Accessed 17 November 2020.
[6] Ministry of Agriculture and Forestry in Finland. "Ministry of Agriculture and Forestry in Finland website". [https://mmm.fi/etusivu]. Accessed 7 October 2020.

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

There is a national strategy document on zoonotic disease in Finland. The Finnish zoonosis strategy 2013-2017 (Suomen zoonoosistrategia) is an intersectoral revision of the previous intersectoral strategy from 2003, by the Ministry of Agriculture and Forestry and Ministry of Social Affairs and Health.[1] On the Finnish Food Authority website summarising the follow-up report of the Zoonosis strategy 2013-2017 it is stated that: "The preparation of the next zoonosis strategy will start in 2020". [2] Furthermore in an interview with YLE news in May 2020: "According to [the director of the zoonosis centre Saara] Raulo, Finland is one of the only countries in the world with an inter-ministerial zoonosis strategy. [The zoonosis strategy] was drawn up already in the early 2000s". [3] The strategy includes general prevention and control activities as well as activities specific to the most significant zoonoses (such as Campylobacter) and antimicrobial resistance. The plan covers food and water-borne zoonoses as well as zoonoses transmitted directly from animals and vectors. [1]

[1] Ministry of Agriculture and Forestry in Finland & Ministry of Social Affairs and Health in Finland. 2013. The Finnish Zoonosis Strategy 2013-2017 (Suomen zoonoosistrategia 2013-2017). [https://mmm.fi/documents/1410837/1723887/MMM-TRM-2013-1/b3419885-4c38-4275-8a43-a6d0ce7662a8/MMM-TRM-2013-1.pdf]. Accessed 7 October 2020.
[2] Finnish Food Authority. 13 September 2019. "Finland's zoonosis strategy objectives have been reasonably achieved, but risks are mounting (Suomen zoonoosistrategian tavoitteisiin päästiin melko hyvin, mutta riskit kasvavat)". [https://www.ruokavirasto.fi/teemat/zoonoosikeskus/uutiset/2019/suomen-zoonoosistrategian-tavoitteisiin-paastiin-melko-hyvin-mutta-riskit-kasvavat/]. Accessed 17 November 2020.
[3] YLE news. 1 May 2020. "Will pandemics end if we become vegans, and could a communicable disease start spreading from Finland? (Loppuvatko pandemiat, jos ryhdymme vegaaneiksi, entä voisiko tartuntatauti lähteä liikkeelle Suomesta?). [https://yle.fi/uutiset/3-11301388]. Accessed 18 November 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: 1

There is a national strategy document which includes measures for risk identification and reduction for zoonotic disease spillover events from animals to humans. The Finnish zoonosis strategy 2013-2017 (Suomen zoonoosistrategia) is an intersectoral revision of the previous intersectoral strategy from 2003, by the Ministry of Agriculture and Forestry and

Ministry of Social Affairs and Health. The strategy includes risk identification and risk reduction for zoonotic disease spillover events from animals to humans, e.g. regarding nephropatia epidemica (Puumala virus, vole to human). The Puumala virus is identified as one of the priority 10 zoonoses and section 4.9 of the strategy lists risk reduction action points for it: "Continuing and intensifying communication to the public about how to protect oneself from the Puumala virus; Using the [Finnish Forest Research Institute] database on the tracking of vole populations to identify risk periods; Focusing research on the identification of further mechanisms of contagion and protection from the disease; Supporting programmes aiming at vaccine development." [1] On the Finnish Food Authority website summarising the follow-up report of the Zoonosis strategy 2013-2017 it is stated that: "The preparation of the next zoonosis strategy will start in 2020". [2] Furthermore in an interview with YLE news in May 2020: "According to [the director of the zoonosis centre Saara] Raulo, Finland is one of the only countries in the world with an inter-ministerial zoonosis strategy. [The zoonosis strategy] was drawn up already in the early 2000s". [3]

[1] Ministry of Agriculture and Forestry in Finland & Ministry of Social Affairs and Health in Finland. 2013. The Finnish Zoonosis Strategy 2013-2017 (Suomen zoonoosistrategia 2013-2017). [https://mmm.fi/documents/1410837/1723887/MMM-TRM-2013-1/b3419885-4c38-4275-8a43-a6d0ce7662a8/MMM-TRM-2013-1.pdf]. Accessed 7 October 2020.
[2] Finnish Food Authority. 13 September 2019. "Finland's zoonosis strategy objectives have been reasonably achieved, but risks are mounting (Suomen zoonoosistrategian tavoitteisiin päästiin melko hyvin, mutta riskit kasvavat)". [https://www.ruokavirasto.fi/teemat/zoonoosikeskus/uutiset/2019/suomen-zoonoosistrategian-tavoitteisiin-paastiin-melko-hyvin-mutta-riskit-kasvavat/]. Accessed 17 November 2020.
[3] YLE news. 1 May 2020. "Will pandemics end if we become vegans, and could a communicable disease start spreading from Finland? (Loppuvatko pandemiat, jos ryhdymme vegaaneiksi, entä voisiko tartuntatauti lähteä liikkeelle Suomesta?). [https://yle.fi/uutiset/3-11301388]. Accessed 18 November 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: 1

There is a national plan that accounts for the surveillance and control of multiple zoonotic pathogens of public health concern. According to the WHO's Joint External Evaluation (JEE) report for Finland, published in 2017, Finland scored 5/5 for the indicator P.4.1 Surveillance systems in place for priority zoonotic diseases/pathogens. [1] According to the WHO JEE Tool this score translates into: "Zoonotic surveillance systems in place for five or more zoonotic diseases/ pathogens of greatest public health concern with system in place for continuous improvement". [2] The Finnish Zoonosis Strategy 2013-2017 accounts for surveillance of multiple zoonotic pathogens and singles out several pathogens in terms of their control including: Campylobacteria, Salmonella, Yersinia, Listeria, Enterohemorrhagic E. Coli, norovirus, rabies, Puumala virus, tick-borne encephalitis and borreliosis. [3] It addresses zoonotic diseases from a One Health perspective and includes six strategic action points such as ensuring timeliness, effectiveness and efficiency of control measures, ensuring effective functioning in special situations such as epidemics, ensuring adequate data produced by monitoring and surveillance activities etc. [3] On the Finnish Food Authority website summarising the follow-up report of the Zoonosis strategy 2013-2017 it is stated that: "The preparation of the next zoonosis strategy will start in 2020". [4] Furthermore in an interview with YLE news in May 2020: "According to [the director of the zoonosis centre Saara] Raulo, Finland is one of the only countries in the world with an inter-ministerial zoonosis strategy. [The zoonosis strategy] was drawn up already in the early 2000s". [5]

[1] World Health Organization. March 2017. "Joint External Evaluation of IHR Core Capacities of the Republic of Finland". [http://apps.who.int/iris/bitstream/handle/10665/255690/WHO-WHE-CPI-2017.24-Report-eng.pdf?sequence=1]. Accessed 7 October 2020.
[2] World Health Organization. 2016. WHO Joint External Evaluation Tool: International Health Regulations (2005). [http://apps.who.int/iris/bitstream/handle/10665/204368/9789241510172_eng.pdf?sequence=1]. Accessed 7 October 2020.
[3] Ministry of Agriculture and Forestry in Finland & Ministry of Social Affairs and Health in Finland. 2013. The Finnish Zoonosis Strategy 2013-2017 (Suomen zoonoosistrategia 2013-2017). [https://mmm.fi/documents/1410837/1723887/MMM-TRM-2013-1/b3419885-4c38-4275-8a43-a6d0ce7662a8/MMM-TRM-2013-1.pdf]. Accessed 7 October 2020.
[4] Finnish Food Authority. 13 September 2019. "Finland's zoonosis strategy objectives have been reasonably achieved, but risks are mounting (Suomen zoonoosistrategian tavoitteisiin päästiin melko hyvin, mutta riskit kasvavat)". [https://www.ruokavirasto.fi/teemat/zoonoosikeskus/uutiset/2019/suomen-zoonoosistrategian-tavoitteisiin-paastiin-melko-hyvin-mutta-riskit-kasvavat/]. Accessed 17 November 2020.
[5] YLE news. 1 May 2020. "Will pandemics end if we become vegans, and could a communicable disease start spreading from Finland? (Loppuvatko pandemiat, jos ryhdymme vegaaneiksi, entä voisiko tartuntatauti lähteä liikkeelle Suomesta?). [https://yle.fi/uutiset/3-11301388]. Accessed 18 November 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: 1

There is a unit dedicated to zoonotic diseases that functions across ministries.

The Finnish Zoonosis Centre (FZC, Zoonoosikeskus) was established by decree in 2007 [1]. It is based at the Finnish Food Authority (Ruokavirasto) and composed of experts from the Finnish Food Authority and the National Institute for Health and Welfare (THL) as well as representatives from the Ministry of Agriculture and Forestry and the Ministry of Social Affairs and Health. It also collaborates closely with zoonosis centres in other Nordic countries. [1,2]

According to the WHO's Joint External Evaluation (JEE) report for Finland, "Finland has a number of active One Health entities that support research, analysis, and decision-making regarding zoonotic diseases. These include: 1- The Finnish Zoonosis Centre (FZC), which was established by decree in 2007. The Director of the FZC is the only permanent staff member, hosted by Evira. The FZC forms a co-operation body between Evira and the National Institute for Health and Welfare (THL), ensuring close co-operation between public health, animal health and food and feed safety. 2- The steering committee of the FZC, which has been chaired by the MAF since 2007, includes representatives from the MAF, MSAH, THL and Evira. The FZC's tasks are specified in the Zoonosis Centre Decree. 3- The Standing National Committee for Infectious Diseases has been chaired by MSAH since 1992. It connects central and regional public health expertise with central animal health and food safety management authorities, including the MAF and Evira. 4- The Zoonoses Centre Group, which has been chaired by the Director of the FZC since 2007, steers the joint efforts of the public health, animal health and food safety units within Evira and THL. It also prepares the work plan and progress report of the FZS. 5- The National Expert Group on Antimicrobial Resistance, which has been chaired by THL since 2012, connects central and regional public health expertise with laboratory surveillance and animal health management expertise at Evira. 6- The Epi-meeting, which is a weekly meeting at THL that also includes experts from Evira. The focus is on ongoing outbreak investigations and human infectious disease signal monitoring and communication. 7- Outbreak investigation groups, which are multidisciplinary municipal or local investigation teams for food-borne outbreaks. They include a municipal infectious disease physician, a hygiene veterinarian and a health

inspector, as prescribed by legislation." [3]

[1] Republic of Finland. 2006. "Government decree on the Zoonosis centre (Valtioneuvoston asetus zoonoosikeskuksesta)". [https://www.finlex.fi/fi/laki/alkup/2006/20061166]. Accessed 7 October 2020.
[2] Finnish Food Authority. 2020. "Zoonosis centre (Zoonosikeskus)". [https://www.ruokavirasto.fi/teemat/zoonoosikeskus/]. Accessed 7 October 2020.
[3] World Health Organization. 2017. "Joint External Evaluation of IHR Core Capacities of the Republic of Finland". [http://apps.who.int/iris/bitstream/handle/10665/255690/WHO-WHE-CPI-2017.24-Report-eng.pdf?sequence=1]. Accessed 7 October 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 a mandatory mechanism to conduct and report on disease surveillance to a central government agency. There is a specific mandatory surveillance programme for Salmonella including specific types of henhouses, dairy farms and piggeries, according to the Finnish Food Authority website [1]. The web site also refers to the legal framework behind these programmes, including the Animal Diseases Act 441/2013, the Government Decree Animal Health Surveillance 838/2013 and the Ministry of Agriculture and Forestry Decree on Salmonella surveillance in hens and turkeys 1037/2013. [2,3,4] According to the Decree on Salmonella surveillance, livestock owners need to collect samples and keep detailed books regarding the flock sizes. [3] According to the Government Decree, sample analysis and notification of positive cases must be conducted via the municipal veterinarian. It also states that: "[...] samples from animals are to be taken regularly. The samples are to be sent to a lab as defined in the Animal Diseases Act section 77." [4] The Finnish Food Authority website on reporting animal diseases does not sepcifically mention a mechanism, but lists which authority or agency needs to be contacted by the livestock owners for reporting. The page also includes links to a selection of forms that may be used for either regular reporting or reporting on specific diseases. [5] The WHO's Joint External Evaluation (JEE) report for Finland, published in 2017, does not include details on specific disease surveillance mechanisms for livestock owners. [6] The Finnish Food Authority also notes that there is voluntary health surveillance for fish BKD, Maedi-visna disease in sheep and caprine arthritis encephalitis (CAE) in goats and tuberculosis in deer, which is also defined by the Government Decree. [1,4] The Finnish Food Authority notes that these diseases can be reported in writing to the regional administrative agency. [1]

[1] Finnish Food Authority. 30 September 2020. "Health surveillance of animals (Eläinten terveysvalvonta)". [https://www.ruokavirasto.fi/viljelijat/elaintenpito/elainten-terveys-ja-elaintaudit/elaintautien-vastustaminen-ja-valvonta/terveysvalvonta/]. Accessed 7 October 2020.
[2] Republic of Finland. 441/2013. "Animal Diseases Act (Eläintautilaki)". [https://www.finlex.fi/fi/laki/ajantasa/2013/20130441]. Accessed 7 October 2020.
[3] Republic of Finland. 1037/2013. "Ministry of Agriculture and Forestry Decree on salmonella surveilance in hens and turkeys (Maa- ja metsätalousministeriön asetus kanojen ja kalkkunoiden salmonellavalvonnasta)". [https://www.finlex.fi/fi/laki/alkup/2013/20131037]. Accessed 7 October 2020.
[4] Republic of Finland. 838/2013. "Government Decree on Animal health surveillance" (Valtioneuvoston asetus eläinten terveysvalvonnasta sekä eläintautien vastustamisesta eläinten keinollisessa lisäämisessä). [https://www.finlex.fi/fi/laki/alkup/2013/20130838] Accessed 7 October 2020.

[5] Finnish Food Authority. 6 June 2019. "Reporting on animal disease (Eläintaudeista ilmoittaminen)". [https://www.ruokavirasto.fi/viljelijat/elaintenpito/elainten-terveys-ja-elaintaudit/elaintautien-vastustaminen-ja-valvonta/elaintaudeista-ilmoittaminen/]. Accessed 18 November 2020.
[6] World Health Organization. March 2017. "Joint External Evaluation of IHR Core Capacities of the Republic of Finland". [http://apps.who.int/iris/bitstream/handle/10665/255690/WHO-WHE-CPI-2017.24-Report-eng.pdf?sequence=1]. Accessed 7 October 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 insufficient evidence that Finland has any legislation and/or regulations that safeguard the confidentiality of information generated through surveillance activities for animals (for owners).
Health information of animals (including information about their owners) is always confidential, except in some specific cases such as for health protection purposes. [1] According to the Act on Openness of Government Activities (621/1999), Section 10 on the Access to a confidential document, "No access to a confidential document or its contents shall be granted, unless specifically provided otherwise in this Act.". [2] Authorities themselves however, in relation to animal health, should be granted access to animal health documents even if they are considered confidential, according to the Animal Diseases Act 441/2013 [3]. However, according to the preparatory document of this Act, e.g. animal producers' documents are not necessarily considered confidential if human or environmental health is are threatened. It goes on to propose that "In outbreak situations, authorities must carefully consider the type and contents of their communications in order not to touch upon private business activities [...]". [4]

[1] Republic of Finland. 29/2000. "Act on Access to and Pursuit of the Profession of Veterinary Surgeon (Laki eläinlääkärinammatin harjoittamisesta)". [https://www.finlex.fi/fi/laki/alkup/2000/20000029]. Accessed 7 October 2020.
[2] Republic of Finland. 621/1999. "Act on Openness of Government Activities 621/1999 (Laki viranomaisten toiminnan julkisuudesta)." [https://www.finlex.fi/en/laki/kaannokset/1999/en19990621_20150907.pdf]. Accessed 7 October 2020.
[3] Republic of Finland. 441/2013. "Animal Diseases Act (Eläintautilaki)". [https://www.finlex.fi/fi/laki/ajantasa/2013/20130441]. Accessed 7 October 2020.
[4] Republic of Finland. HE 130/2012. "Government proposal to the Parliament regarding the Animal Diseases Act and other related legislation (Hallituksen esitys eduskunnalle eläintautilaiksi sekä eräiksi siihen liittyviksi laeiksi)". [https://www.finlex.fi/fi/esitykset/he/2012/20120130]. Accessed 7 October 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 Finland conducts surveillance of zoonotic disease in wildlife. According to the Finnish Food Authority "wildlife disease surveillance includes two basic components, the targeted, or active, surveillance, and the general, or scanning, surveillance". Targeted surveillance includes rabies surveillance of small predators, such as foxes and raccoon dogs. In addition, the Finnish Food Authority conducts passive surveillance and has partnered with other institutions for other studies. For example, there is evidence of completed studies on zoonotic wildlife parasites by the Finnish Food Authority and

partner organisations: these were part of a 5-year research programme ran in 2012-2016, not part of surveillance. [2] Additionally, the Viral Zoonoses Research Unit at the University of Helsinki conducts research on wildlife, including mosquitoes, ticks, bats and rodents, of which the latter is done in partnership with the Natural Resource Institute Finland (LUKE, a governmental research institute). [3] The WHO's Joint External Evaluation (JEE) report for Finland, published in 2017, notes that "the rarity of zoonotic disease outbreaks in Finland suggests that the implementation of the FZS [Finnish Zoonoses Strategy] work plan, which should be expanded to cover the natural resource (wildlife) and environmental sectors, should be tested through robust exercises," but otherwise does not address wildlife surveillance. [4] In addition, there is evidence of passive, voluntary public monitoring of disease surveillance in wildlife. The Finnish Food Authortiy reports that members of the public, particularly hunters, can send a sample from deceased wildlife found in nature to the Finnish Food Authority who investigates all samples sent to them. The Finnish Food Authority specifically notes that there is a particular interest in identifying if wild boar have African swine fever or deer have ecinococcal disease [5,6] However no evidence of a more systematic surveillance system of zoonotic disease in wildlife was found on the Finnish Food Authority, Ministry of Environment or Ministry of Forestry and Agriculture websites. [7,8,9]

[1] Finnish Food Authority. 13 November 2018. "Food Agency Animal Animal Disease Surveillance (Ruokaviraston luonnonvaraisten eläinten tautiseuranta)". [https://www.ruokavirasto.fi/viljelijat/elaintenpito/elainten-terveys-ja-elaintaudit/elaintaudit/luonnonvaraiset-elaimet/luonnonvaraisten-elainten-tautiseuranta/]. Accessed 7 October 2020.
[2] Finnish Food Authority. 10 March 2020. "Wildlife parasite research in Finland (Luonnoneläinten loistutkimukset Suomessa)". [https://www.ruokavirasto.fi/yhteisot/tieteellinen-tutkimus/tutkimushankkeet/paattyneet/elainten-terveys--ja-hyvinvointitukimus/luonnonelainten-loistutkimukset-suomessa/]. Accessed 7 October 2020.
[3] University of Helsinki. 2020. "Viral zoonoses research unit". [https://www.helsinki.fi/en/researchgroups/viral-zoonoses-research-unit]. Accessed 7 October 2020.
[4] World Health Organization. March 2017. "Joint External Evaluation of IHR Core Capacities of the Republic of Finland". [http://apps.who.int/iris/bitstream/handle/10665/255690/WHO-WHE-CPI-2017.24-Report-eng.pdf?sequence=1]. Accessed 7 December 2018.
[5] Finnish Food Authority. Accessed 7 October 2020. "Inform on sighting of a deceased animal (Ilmoita havaintosi kuolleesta eläimestä)". [https://prod-ruokavirastofi.solitaonline.fi/henkiloasiakkaat/kalastus-metsastys-ja-villielaimet/ilmoita-havaintosi-kuolleesta-elaimesta/]. Accessed 7 October 2020.
[6] Finnish Food Authority. 23 March 2018. "Wild animals (Luonnonvaraiset eläimet)". [https://prod-ruokavirastofi.solitaonline.fi/viljelijat/elaintenpito/kuolleet-elaimet/luonnonvaraiset-elaimet/]. Accessed 7 October 2020.
[7] Ministry of Agriculture and Forestry in Finland. "Ministry of Agriculture and Forestry of Finland website". [https://mmm.fi/etusivu]. Accessed 7 October 2020.
[8] Finnish Food Authority. "The Finnish Food Authority". [https://www.ruokavirasto.fi]. Accessed 7 October 2020.
[9] Ministry of the Environment in Finland. "Ministry of the Environment website". [http://www.ym.fi/fi-FI]. Accessed 7 October 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: 0

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: 45.89

2018

OIE WAHIS database

1.2.4b

Number of veterinary para-professionals per 100,000 people

Input number

Current Year Score: 1.07

2018

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: 1

There is national legislation that include mechanisms for working with the private sector in controlling or responding to infectious diseases, including zoonoses. According to the Finnish Zoonosis Strategy (FZS), industry plays an important role in the control of zoonotic diseases. ETT ry (Eläinten terveys ry) is an association formed by Finnish dairies, slaughterhouses and egg packers, that according to the FZS plays a significant role in disease protection of farms, animal health stewardship and guidance as well documentation of situational analyses. [1] ETT ry has for example organised training workshops and seminars regarding feed hygiene and salmonella in collaboration with the Finnish Food Safety Authority for more than two decades [2]. As another example, the Communicable Diseases Act describes food or food service industry employers' duties, both public and private, regarding prevention and control of salmonella infections. [3] According to the WHO's Joint External Evaluation (JEE) report for Finland, published in 2017, the Communicable Diseases Act also: "[...]obliges private healthcare providers [...] to take responsibility for the prevention of communicable diseases in the settings where they are responsible healthcare." [3,4]

[1] Ministry of Agriculture and Forestry in Finland & Ministry of Social Affairs and Health in Finland. 2013. The Finnish Zoonosis Strategy 2013-2017 (Suomen zoonoosistrategia 2013-2017).

[https://mmm.fi/documents/1410837/1723887/MMM-TRM-2013-1/b3419885-4c38-4275-8a43-a6d0ce7662a8/MMM-TRM-2013-1.pdf]. Accessed 7 October 2020.
[2] Animal Health ETT (Eläinten terveys ry). 2019. "Feed seminars (Rehuseminaarit)". [https://www.ett.fi/rehuseminaari/]. Accessed 7 October 2020.
[3] Republic of Finland. 1227/2016. "Communicable Diseases Act (Tartuntatautilaki)". [https://www.finlex.fi/fi/laki/alkup/2016/20161227]. Accessed 7 October 2020.
[4] World Health Organization. March 2017. "Joint External Evaluation of IHR Core Capacities of the Republic of Finland". [http://apps.who.int/iris/bitstream/handle/10665/255690/WHO-WHE-CPI-2017.24-Report-eng.pdf?sequence=1]. Accessed 7 October 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 record of facilities in which especially dangerous pathogens and toxin are stored or processed. According to the WHO Joint External Evaluation of IHR Core Capacities of Finland, "There is no record of facilities housing risk group 3 or 4 pathogens, except for GMOs [genetically modified organisms]" and "Collections of pathogens and toxins have not been systematically identified. There is no list of dangerous pathogens other than the risk group classification related to the occupational health regulations, with the exception of GMOs." [1] Group 3 and 4 pathogens refer to occupational health hazard groups: group 3 includes pathogens that may cause severe disease, may cause serious hazard to employees, may spread to the community and there usually is effective prophylaxis or treatment available, whereas group 4 pathogens cause severe disease, serious hazard, are likely to spread to the community and there is usually no effective prophylaxis or treatment available. [2] No evidence was found to the establishment of such a list since the above mentioned Evaluation took place in 2017 on the Ministry of Social Affairs and Health, National Institute for Health and Welfare, Finnish Food Safety Authority, Ministry of Defence, Ministry of Agriculture and Forestry web sites, or the VERTIC database, or in the United Nations Office at Geneva Confidence building measure reports for Finland. [3,4,5,6,7,8,9]

[1] World Health Organization. March 2017. "Joint External Evaluation of IHR Core Capacities of the Republic of Finland". [http://apps.who.int/iris/bitstream/handle/10665/255690/WHO-WHE-CPI-2017.24-Report-eng.pdf?sequence=1]. Accessed 8 October 2020.
[2] National Institute for Health and Welfare (THL). 4 November 2019. "Classification of biological materials and safety levels of laboratories (Biologisten tekijöiden luokitus ja laboratorioiden eristystasot)". [https://thl.fi/fi/web/infektiotaudit/laboratoriotoiminta/biologisten-uhkien-osaamiskeskus/bioturva/biologisten-tekijoiden-luokitus-ja-laboratorioiden-eristystasot]. Accessed 8 October 2020.
[3] Ministry of Social Affairs and Health in Finland. "Ministry of Social Affairs and Health in Finland website". [https://stm.fi/etusivu]. Accessed 8 October 2020.
[4] National Institute for Health and Welfare (THL). "THL website". [https://thl.fi/fi/]. Accessed 8 October 2020.
[5] Finnish Food Authority. [https://www.ruokavirasto.fi]. Accessed 8 October 2020.
[6] Ministry of Defence in Finland. "Ministry of Defence website". [https://www.defmin.fi/]. Accessed 8 October 2020.

[7] Ministry of Agriculture and Forestry in Finland. "Ministry of Agriculture and Forestry of Finland website". [https://mmm.fi/etusivu]. Accessed 8 October 2020.
[8] VERTIC. 2018. "BWC Legislation, F". [https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/f/]. Accessed 17 November 2020.
[9] United Nations Office at Geneva. "Confidence building measures reports - Finland". [https://bwc-ecbm.unog.ch/state/finland]. Accessed 17 November 2020.

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 legislation or regulation in place related to biosecurity which address requirements for facilities that store or process especially dangerous pathogens and toxins. According to the WHO Joint External Evaluation of IHR Core Capacities of Finland, published in 2017, "Biosafety or biosecurity are only considered in an occupational health and safety context. [...] There is some multisectoral collaboration and networking on biosafety and biosecurity through the Finnish Biosafety and Biosecurity Network, which offers a forum for biosafety and biosecurity education free-of-charge." [1] According to the United Nations Office at Geneva Confidence building measure forms for 2020 for Finland: "No specific biosecurity legislation exists." [2] No further evidence to support the existence of biosecurity regulation in particular was found in legislation or the Ministry of Social Affairs and Health, National Institute for Health and Welfare, Finnish Food Safety Authority, Ministry of Defence or Ministry of Agriculture and Forestry websites, or the VERTIC database, or in the United Nations Office at Geneva Confidence building measure reports for Finland. [2,3,4,5,6,7,8,9]

[1] World Health Organization. March 2017. "Joint External Evaluation of IHR Core Capacities of the Republic of Finland". [http://apps.who.int/iris/bitstream/handle/10665/255690/WHO-WHE-CPI-2017.24-Report-eng.pdf?sequence=1]. Accessed 8 October 2020.
[2] Ministry of Social Affairs and Health in Finland. "Ministry of Social Affairs and Health in Finland website". [https://stm.fi/etusivu]. Accessed 8 October 2020.
[3] National Institute for Health and Welfare (THL). "THL website". [https://thl.fi/fi/]. Accessed 8 October 2020.
[4] Finnish Food Authority. [https://www.ruokavirasto.fi]. Accessed 8 October 2020.
[5] Ministry of Defence in Finland. "Ministry of Defence website". [https://www.defmin.fi/]. Accessed 8 October 2020.
[6] Ministry of Agriculture and Forestry in Finland. "Ministry of Agriculture and Forestry of Finland website". [https://mmm.fi/etusivu]. Accessed 8 October 2020.
[7] Ministry of Justice in Finland. "Finlex". [https://finlex.fi/fi/]. Accessed 8 October 2020.
[8] VERTIC. 2018. "BWC Legislation, F". [https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/f/]. Accessed 17 November 2020.
[9] United Nations Office at Geneva. "Confidence building measures reports - Finland". [https://bwc-ecbm.unog.ch/state/finland]. Accessed 17 November 2020.

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 established agency (or agencies) responsible for the enforcement of biosecurity legislation and regulations. According to the WHO Joint External Evaluation of IHR Core Capacities of Finland, "There is some multisectoral collaboration and networking on biosafety and biosecurity through the Finnish Biosafety and Biosecurity Network, which offers a forum for biosafety and biosecurity education free-of-charge. Good collaborative efforts are noted between the Centre for Biothreat Preparedness, the Zoonosis Centre, and the Biosafety and Biosecurity Network. Biosecurity is primarily the responsibility of laboratories." [1] In addition, the National Institute for Health and Welfare (THL) confirms that biosecurity matters are mostly in the hands of the laboratories themselves. [2,4] No evidence to support the existence of an established agency or agencies responsible for biosecurity issues was found on Ministry of Social Affairs and Health, National Institute for Health and Welfare, Finnish Food Safety Authority, Ministry of Defence or Ministry of Agriculture and Forestry websites, or the VERTIC database, or in the United Nations Office at Geneva Confidence building measure reports for Finland. [3,4,5,6,7,8,9]

[1] World Health Organization. 2017. "Joint External Evaluation of IHR Core Capacities of the Republic of Finland". [http://apps.who.int/iris/bitstream/handle/10665/255690/WHO-WHE-CPI-2017.24-Report-eng.pdf?sequence=1]. Accessed 8 October 2020.
[2] National Institute for Health and Welfare (THL). 2017. "Biosafety & biosecurity". [https://www.slideshare.net/THLfi/jee-biosafety-and-biosecurity]. Accessed 8 October 2020.
[3] Ministry of Social Affairs and Health in Finland. [https://stm.fi/etusivu]. Accessed 8 October 2020.
[4] National Institute for Health and Welfare (THL). 9 December 2019. "Biosecurity (Bioturvaaminen)". [https://thl.fi/fi/web/infektiotaudit/laboratoriotoiminta/biologisten-uhkien-osaamiskeskus/bioturva/bioturvaaminen]. Accessed 8 October 2020.
[5] Finnish Food Authority. [https://www.ruokavirasto.fi]. Accessed 8 October 2020.
[6] Ministry of Defence in Finland. "Ministry of Defence website". [https://www.defmin.fi/]. Accessed 8 October 2020.
[7] Ministry of Agriculture and Forestry in Finland. "Ministry of Agriculture and Forestry of Finland website". [https://mmm.fi/etusivu]. Accessed 8 October 2020.
[8] VERTIC. 2018. "BWC Legislation, F". [https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/f/]. Accessed 17 November 2020.
[9] United Nations Office at Geneva. "Confidence building measures reports - Finland". [https://bwc-ecbm.unog.ch/state/finland]. Accessed 17 November 2020.

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 shows that the country has taken action to consolidate its inventories of especially dangerous pathogens and toxins into a minimum number of facilities. No evidence was found to this effect in the WHO Joint External Evaluation of IHR Core Capacities of Finland report, published in 2017, in legislation or on the websites of Ministry of Social Affairs and Health, National Institute for Health and Welfare, Finnish Food Safety Authority, Ministry of Defence or Ministry of Agriculture and Forestry, or the VERTIC database, or in the United Nations Office at Geneva Confidence building measure reports for Finland. [1,2,3,4,5,6,7,8,9]

[1] World Health Organization. March 2017. "Joint External Evaluation of IHR Core Capacities of the Republic of Finland". [http://apps.who.int/iris/bitstream/handle/10665/255690/WHO-WHE-CPI-2017.24-Report-eng.pdf?sequence=1]. Accessed 8

October 2020.
[2] Ministry of Justice in Finland. "Finlex". [https://finlex.fi/fi/]. Accessed 8 October 2020.
[3] Ministry of Social Affairs and Health in Finland. "Ministry of Social Affairs and Health in Finland website". [https://stm.fi/etusivu]. Accessed 8 October 2020.
[4] National Institute for Health and Welfare (THL). "THL website". [https://thl.fi/fi/]. Accessed 8 October 2020.
[5] Finnish Food Authority. [https://www.ruokavirasto.fi]. Accessed 8 October 2020.
[6] Ministry of Defence in Finland. "Ministry of Defence website". [https://www.defmin.fi/]. Accessed 8 October 2020.
[7] Ministry of Agriculture and Forestry in Finland. "Ministry of Agriculture and Forestry of Finland website". [https://mmm.fi/etusivu]. Accessed 8 October 2020.
[8] VERTIC. 2018. "BWC Legislation, F". [https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/f/]. Accessed 17 November 2020.
[9] United Nations Office at Geneva. "Confidence building measures reports - Finland". [https://bwc-ecbm.unog.ch/state/finland]. Accessed 17 November 2020.

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 public evidence of in-country capacity to conduct Polymerase Chain Reaction (PCR)-based diagnostic testing for anthrax and Ebola, which would preclude culturing a live pathogen. The BSL3 level private lab HUSLAB has the anthrax test, including PCR, in its publicly available laboratory handbook [1]. In addition, HUSLAB is also able to run the Ebola-PCR test, according to a hospital district level guideline on Ebola in specialised care units and a National Institute for Health and Welfare (THL) guidance on Ebola published in 2014. [2,3] If confirmation or further testing is needed for Ebola, this can only be done in a BSL4 level lab: the closest one for Finland is Sweden and it is stated that collaboration with this lab exists in the THL guidance for Ebola and by an article appearing the Finnish Health Society's journal [2,3,4]. The Finnish Food Authority website also states that anthrax diagnostics from animal samples, including PCR, are done in their laboratory. [5]

[1] HUSLAB. 6 April 2020. "Bacillus Anthracis (Bacillus Anthracis)". [https://huslab.fi/ohjekirja/8802.html]. Accessed 8 October 2020.
[2] Southwest Finland Health Hospital district. 19 May 2020. "Ebola guideline for specialised care (Ebola-ohje erikoissairaanhoitoon". [https://hoito-ohjeet.fi/OhjepankkiVSSHP/Ebola-ohje%20erikoissairaanhoitoon.pdf].Accessed 8 October 2020.
[3] National Institute for Health and Welfare. 2017. Ebola 2014 - National Institute for Health and Welfare guidance since 2014 (Ebola 2017 - Terveyden ja hyvinvoinnin laitoksen ohjeistus vuodesta 2014 alkaen). Working paper 2/2017. [https://www.julkari.fi/bitstream/handle/10024/131874/URN_ISBN_978-952-302-810-4.pdf?sequence=1]. Accessed 8 October 2020.
[4] Vapalahti O, Kallio-Kokko H, Anttila VJ, Lyytikäinen O. 2014. "Ebola: virus, disease, transmission - and preparedness in Finland". Duodecim 130:2163-77. [https://www.terveyskirjasto.fi/xmedia/duo/duo11920.pdf].Accessed 8 October 2020.
[5] Finnish Food Authority. 12 November 2018. "Anthrax (Pernarutto eli anthrax)". [https://www.ruokavirasto.fi/viljelijat/elaintenpito/elainten-terveys-ja-elaintaudit/elaintaudit/usealle-elainlajille-yhteiset-taudit/pernarutto/]. Accessed 8 October 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

Finland does not require biosecurity training using a standardised, required approach for personnel working in facilities housing or working with especially dangerous pathogens, toxins or biological materials with pandemic potential. It is implied in the WHO Joint External Evaluation of IHR Core Capacities of Finland, published in 2017, that there are indeed no national requirements or standards for biosecurity training: "[...] there is a discrepancy between government-owned and -operated laboratories, such as those at THL and Evira (where BLS-3 personnel receive good training on biosafety and biosecurity and background checks are carried out on personnel working with dangerous pathogens) and other laboratories where there are no such standardized training procedures or background check". It goes on to recommends that Finland: "consider establishing a national mechanism to harmonize biosafety and biosecurity laboratory standards, personnel training in biosafety and biosecurity, and monitoring systems between government and non-government BSL-3 laboratories. Biosafety and biosecurity training need to be strengthened in vocational and higher educational institutes along with continuous training of professionals." [1] A presentation by a National Institute for Health and Welfare expert in 2017, confirms that biosecurity training is not systematic. [2] There is evidence of several recent biosecurity training sessions having been organised by the National Institute for Health and Welfare [3], however there is no indication of these session being a requirement for abovementioned personnel. No evidence to support the existence of requirements from biosecurity training in Finland was found on the websites of the Finnish Biosafety and Biosecurity Network, Ministry of Social Affairs and Health, National Institute for Health and Welfare, Finnish Food Safety Authority, Ministry of Defence or Ministry of Agriculture and Forestry websites, or the VERTIC database, or in the United Nations Office at Geneva Confidence building measure reports for Finland. [4,5,6,7,8,9,10,11,12]

[1] World Health Organization. 2017. "Joint External Evaluation of IHR Core Capacities of the Republic of Finland". [http://apps.who.int/iris/bitstream/handle/10665/255690/WHO-WHE-CPI-2017.24-Report-eng.pdf?sequence=1]. Accessed 8 October 2020.
[2] National Institute for Health and Welfare (THL). 2017. "Biosafety & biosecurity". [https://www.slideshare.net/THLfi/jee-biosafety-and-biosecurity]. Accessed 8 October 2020.
[3] National Institute for Health and Welfare (THL). 29 September 2020. "Biosecurity training" (Bioturva-koulutukset). [https://thl.fi/fi/web/infektiotaudit-ja-rokotukset/taudit-ja-torjunta/bioturva/bioturvakoulutukset]. Accessed 8 October 2020.
[4] National Institute for Health and Welfare (THL). 9 December 2019. "Biosecurity (Bioturvaaminen)". [https://thl.fi/fi/web/infektiotaudit/laboratoriotoiminta/biologisten-uhkien-osaamiskeskus/bioturva/bioturvaaminen]. Accessed 8 October 2020.
[5] Finnish Food Authority. [https://www.ruokavirasto.fi]. Accessed 8 October 2020.
[6] Ministry of Defence in Finland. "Ministry of Defence website". [https://www.defmin.fi/]. Accessed 8 October 2020.
[7] Ministry of Agriculture and Forestry in Finland. "Ministry of Agriculture and Forestry of Finland website". [https://mmm.fi/etusivu]. Accessed 8 October 2020.
[8] National Institute for Health and Welfare (THL). 20 June 2018. "Finnish Biosafety and Biosecurity Network (Suomen bioturvaverkosto)". [https://thl.fi/fi/web/infektiotaudit/laboratoriotoiminta/biologisten-uhkien-osaamiskeskus/suomen-bioturvaverkosto]. Accessed 8 October 2020.
[9] National Institute for Health and Welfare (THL). "THL website". [https://thl.fi/fi/]. Accessed 8 October 2020.
[10] Ministry of Social Affairs and Health in Finland. [https://stm.fi/etusivu]. Accessed 8 October 2020.

[11] VERTIC. 2018. "BWC Legislation, F". [https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/f/]. Accessed 17 November 2020.
[12] United Nations Office at Geneva. "Confidence building measures reports - Finland". [https://bwc-ecbm.unog.ch/state/finland]. Accessed 17 November 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 are no national requirements for biosecurity in terms of laboratory licensing and/or accreditation and therefore no requirement for personnel vetting. It is implied in the WHO Joint External Evaluation of IHR Core Capacities of Finland, published in 2017, that there are no national biosecurity requirements for laboratory licensing or accreditation as it states that: "[...] there is a discrepancy between government-owned and -operated laboratories, such as those at THL and Evira [Finnish Food Authority] (where BLS-3 personnel receive good training on biosafety and biosecurity and background checks are carried out on personnel working with dangerous pathogens) and other laboratories where there are no such standardized training procedures or background checks." It goes on to recommends that Finland should: "Review, establish, or update biosafety and biosecurity legislation [...] to include [...] requirements for biosafety and biosecurity laboratory licensing and/or accreditation." [1] In the Act on Background Checks (726/2014), sections 19-21, three levels of background checks are described, and section 21 states that: "A limited personal background check may be drawn for candidates or post-holders [...] [who] may have access to significant amounts of material, that may be used as a biological, chemical or toxic weapon." [2] However, it does not state that this would be a requirement or a licensing condition. No evidence to support the existence of such licensing conditions or requirements was found in the legislation or websites of the Ministry of Social Affairs and Health, National Institute for Health and Welfare, Finnish Food Safety Authority, Ministry of Defence or Ministry of Agriculture and Forestry, or the VERTIC database, or in the United Nations Office at Geneva Confidence building measure reports for Finland. [3,4,5,6,7,8,9]

[1] World Health Organization. March 2017. "Joint External Evaluation of IHR Core Capacities of the Republic of Finland". [http://apps.who.int/iris/bitstream/handle/10665/255690/WHO-WHE-CPI-2017.24-Report-eng.pdf?sequence=1]. Accessed 8 October 2020.
[2] Republic of Finland. 726/2014. "Act on Background Checks (Turvallisuusselvityslaki)". [https://www.finlex.fi/fi/laki/alkup/2014/20140726#Pidp446532544]. Accessed 8 October 2020.
[3] Ministry of Social Affairs and Health in Finland. "Ministry of Social Affairs and Health in Finland website". [https://stm.fi/etusivu]. Accessed 8 October 2020.
[4] National Institute for Health and Welfare (THL). "THL website". [https://thl.fi/fi/]. Accessed 8 October 2020.
[5] Finnish Food Authority. [https://www.ruokavirasto.fi]. Accessed 8 October 2020.
[6] Ministry of Defence in Finland. "Ministry of Defence website". [https://www.defmin.fi/]. Accessed 8 October 2020.
[7] Ministry of Agriculture and Forestry in Finland. "Ministry of Agriculture and Forestry of Finland website". [https://mmm.fi/etusivu]. Accessed 8 October 2020.
[8] VERTIC. 2018. "BWC Legislation, F". [https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/f/]. Accessed 17 November 2020.

[9] United Nations Office at Geneva. "Confidence building measures reports - Finland". [https://bwc-ecbm.unog.ch/state/finland]. Accessed 17 November 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

There is evidence that Finland has national regulations on the safe and secure transport of infectious substances (Categories A and B). Finland has laws regulating transport of dangerous substances (such as Act on the Transport of Dangerous Goods 719/1994, Government Decree on the Transport of Dangerous Goods on the road 194/2002, Government Decree on the Transport and Temporary Storage of Dangerous Goods in ports 251/2005, Decree on the Aerial Transport of Dangerous Goods 210/1997). [1,2,3,4] Supplementary regulations under the Act on the Transport of Dangerous Goods 719/1994 clearly outline packaging and shipping procedures for various infectious substances, including Category A and B substances. [5,6]

[1] Republic of Finland. Act on the Transport of Dangerous Goods 719/1994.
[https://www.finlex.fi/fi/laki/ajantasa/1994/19940719]. Accessed 9 October 2020.
[2] Republic of Finland. Government Decree on the Transport of Dangerous Goods on the road 194/2002,
[https://www.finlex.fi/fi/laki/ajantasa/2002/20020194]. Accessed 9 October 2020.
[3] Republic of Finland. Government Decree on the Transport and Temporary Storage of Dangerous Goods in ports 251/2005.
[https://www.finlex.fi/fi/laki/ajantasa/2005/20050251] Accessed 9 October 2020.
[4] Republic of Finland. Decree on the Aerial Transport of Dangerous Goods 210/1997.
[https://www.finlex.fi/fi/laki/ajantasa/1997/19970210]. Accessed 9 October 2020.
[5] TRAFICOM. "Road transport: Transport of dangerous goods on the road"
[https://www.finlex.fi/fi/viranomaiset/normi/454001/45007]. Accessed 9 October 2020.
[6] TRAFICOM. "Regulation on Act on the Transport of Dangerous Goods (719/1994): Annex A, B and C."
[https://www.finlex.fi/data/normit/45007/TRAFICOM_82133.03.04.03.00.2019.FI_Vaarallisten_aineiden_kuljetus_tiella.pdf].
Accessed 9 October 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: 1

There is national legislation in place to oversee the cross-border transfer and end-user screening of especially dangerous pathogens. The Act on the Transport of Dangerous Goods 124/2001 states that micro-organisms are considered as dangerous pathogens and that the supervisory authority is allowed to take necessary samples and conduct investigations in order to ensure supervision and monitoring of the regulations concerning the transport of dangerous substances [1]. There is also an Act on the Control of Export of Dual-Use Goods 562/1996 and a Government Decree on the Control of Exports of

Dual-Use Goods, which regulate the licenses needed to obtain for the export of biological materials that need to be supervised [2,3]. The aforementioned Government Decree states that the exporter must keep a list of information including the contact details of the recipients and end-users for at least 5 years after the completion of the export, and that this list must be made available to the supervisory authorities upon request. [3] In addition, it is stated that Finland follows the European Council regulation No 428/2009 regarding dual-use items, including its list of materials that need to be supervised, unless otherwise mentioned in the Finnish Act on the Control of Export of Dual-Use Goods 562/1996. [2] This list includes dangerous pathogens such as the Ebola virus, bacillus anthracis and the Lassa fever virus. [4]

[1] Republic of Finland. 2001. "Act on changing the Act on the Transport of Dangerous Goods (Laki vaarallisten aineiden kuljetuksesta annetun lain muuttamisesta)". [https://www.finlex.fi/fi/laki/alkup/2001/20010124]. Accessed 9 October 2020.
[2] Republic of Finland. 1996. "Act on the Control of Exports of Dual-Use Goods (Laki kaksikäyttötuotteiden vientivalvonnasta)". [https://www.finlex.fi/fi/laki/ajantasa/1996/19960562]. Accessed 9 October 2020.
[3] Republic of Finland. 2000. "Government Decree on the Control of Exports of Dual-Use Goods (Valtioneuvoston asetus kaksikäyttötuotteiden vientivalvonnasta)". [https://www.finlex.fi/fi/laki/alkup/2000/20000924]. Accessed 9 October 2020.
[4] European Union. 2009. Council Regulation (EC) No 428/2009: "Setting up a Community regime for the control of exports, transfer, brokering and transit of dual-use items". [http://data.europa.eu/eli/reg/2009/428/oj]. Accessed 9 October 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: 1

Finland has national biosafety legislation. The Government Decree on the protection of employees from biological hazards 933/2017 includes essential biosafety elements such as prevention of exposure and hazards, training, protection relevant to biosafety, prophylaxis and communication, mainly from the occupational health point of view. [1] According to the WHO's Joint External Evaluation (JEE) report for Finland, published in March 2017: "Finland has aligned its existing biosafety regulations with European Union directives. Biosafety practices, work on genetically modified organisms (GMO), and occupational health and safety are well regulated, but legislation is scattered." [2]

[1] Republic of Finland. 2017. "Government Decree on the Protection of Employees from Biological Hazards (Valtioneuvoston asetus työntekijöiden suojelemiseksi biologisista tekijöistä aiheutuvilta vaaroilta)".
[https://www.finlex.fi/fi/laki/alkup/2017/20170933]. Accessed 9 October 2020.
[2] World Health Organization. 2017. "Joint External Evaluation of IHR Core Capacities of the Republic of Finland".
[http://apps.who.int/iris/bitstream/handle/10665/255690/WHO-WHE-CPI-2017.24-Report-eng.pdf?sequence=1]. Accessed 9 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: 1

There are established agencies responsible for the enforcement of biosafety legislation and regulations in Finland. According to the WHO's Joint External Evaluation (JEE) report for Finland, published in 2017, "in Finland, a number of stakeholders are directly responsible for, or involved in the operation of biosafety of laboratories working with dangerous human and animal pathogens." [1] Essentially biosafety and safety of laboratory workers from an occupational health perspective fall under the stewardship of the Ministry of Social Affairs and Health, who has delegated supervision regarding occupational safety, including biosafety, to the Regional State Administrative Agencies. [2] According to the Occupational Safety and Health Administration website: "The Act on Occupational Safety and Health Enforcement and Cooperation on Occupational Safety and Health at Workplaces provides for a procedure to be followed by occupational safety and health authorities in monitoring compliance with provisions on occupational safety and health and on employment relationships", and this includes biosafety. [2,3]

[1] World Health Organization. 2017. "Joint External Evaluation of IHR Core Capacities of the Republic of Finland". [http://apps.who.int/iris/bitstream/handle/10665/255690/WHO-WHE-CPI-2017.24-Report-eng.pdf?sequence=1]. Accessed 9 October 2020.
[2] Regional State Administrative Agencies Occupational Safety and Health. 2017. "Functions of the occupational safety and health authorities". [https://www.tyosuojelu.fi/web/en/about-us/functions]. Accessed 9 October 2020.
[3] Republic of Finland. 2006. "Act on Occupational Safety and Health Enforcement and Cooperation on Occupational Safety and Health at Workplaces (Laki työsuojelun valvonnasta ja työpaikan työsuojelutoiminnasta)". [https://www.finlex.fi/fi/laki/ajantasa/2006/20060044]. Accessed 9 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 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: 1

There is evidence that Finland requires biosafety training, using a standardized, required approach. The Government Decree on the protection of employees from biological hazards 933/2017 includes a section (Article 9) on training and guidance to personnel that includes 5 points: 1) dangers to health of exposure to biological substances and prevention of exposure, 2) hygienic requirements, 3) use of protective gear and clothing, 4) what employees must do in danger situations and how to prevent danger situations, 5) any action that may be needed in order to correctly apply this Decree. [1] However, implementation of these trainings may be uneven for government laboratories and other laboratories, according to the WHO's Joint External Evaluation (JEE) report for Finland, published in 2017: "[...] there is a discrepancy between government-owned and -operated laboratories, such as those at THL and Evira (where BLS-3 personnel receive good training on biosafety and biosecurity and background checks are carried out on personnel working with dangerous pathogens) and other laboratories where there are no such standardized training procedures or background checks. [2] Also no further evidence of a standardized required approach was found on the Ministry of Social Affairs and Health, National Institute for Health and Welfare, Finnish Food Safety Authority or Ministry of Agriculture and Forestry websites. [3,4,5,6]

[1] Republic of Finland. 2017. "Government Decree on the Protection of Employees from Biological Hazards (Valtioneuvoston asetus työntekijöiden suojelemiseksi biologisista tekijöistä aiheutuvilta vaaroilta)". [https://www.finlex.fi/fi/laki/alkup/2017/20170933]. Accessed 9 October 2020.
[2] World Health Organization. 2017. "Joint External Evaluation of IHR Core Capacities of the Republic of Finland".

[http://apps.who.int/iris/bitstream/handle/10665/255690/WHO-WHE-CPI-2017.24-Report-eng.pdf?sequence=1]. Accessed 9 October 2020.
[3] Ministry of Social Affairs and Health in Finland. "Ministry of Social Affairs and Health in Finland website". [https://stm.fi/etusivu]. Accessed 9 October 2020.
[4] National Institute for Health and Welfare (THL). "THL website". [https://thl.fi/fi/]. Accessed 9 October 2020.
[5] Finnish Food Authority. "Finnish Food Authority website". [https://www.ruokavirasto.fi]. Accessed 9 October 2020.
[6] Ministry of Agriculture and Forestry in Finland. "Ministry of Agriculture and Forestry of Finland website". [https://mmm.fi/etusivu]. Accessed 9 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 publicly available evidence that Finland 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. There exists a Finnish Biosafety and Biosecurity network, that includes members working in institutions that host BSL-3 laboratories, and that has as one of its goals/tasks to map the different actors in the area, however no evidence of any published mapping or assessment regarding research on dangerous pathogens was found in the public domain. [1] There is also a mutual venture between the National Institute for Health and Welfare (THL) and the Finnish Defence Forces called the Knowledge Centre on Biological Threats (Biologisten uhkien osaamiskeskus) since 2005, however their activities or potential assessments of ongoing research dangerous pathogens are not available in the public domain. [2] According to the WHO's Joint External Evaluation (JEE) report for Finland, published in 2017, Finland has not systematically identified collections of pathogens and toxins in the country. [3] There is no publicly available evidence to suggest that an assessment on ongoing research has been conducted on the Responsible Research, Ministry of Agriculture and Forestry and the Ministry of Health and Social Affairs websites, or the VERTIC database, or in the United Nations Office at Geneva Confidence building measure reports for Finland. [4,5,6,7,8]

[1] National Institute for Health and Welfare (THL). 13 December 2019. "Finnish Biosafety and Biosecurity Network (Suomen bioturvaverkosto)". [https://thl.fi/fi/web/infektiotaudit/laboratoriotoiminta/biologisten-uhkien-osaamiskeskus/suomen-bioturvaverkosto]. Accessed 9 October 2020.
[2] National Institute for Health and Welfare (THL). 1 Noveber 2019. "Knowledge Centre on Biological Threats (Biologisten uhkien osaamiskeskus)." [https://thl.fi/fi/web/infektiotaudit/laboratoriotoiminta/biologisten-uhkien-osaamiskeskus]. Accessed 9 October 2020.
[3] World Health Organization. March 2017. "Joint External Evaluation of IHR Core Capacities of the Republic of Finland". [http://apps.who.int/iris/bitstream/handle/10665/255690/WHO-WHE-CPI-2017.24-Report-eng.pdf?sequence=1]. Accessed 9 October 2020.
[4] Responsible Research. 23.5.2018. "The ethics and risks of dual use research". [https://www.vastuullinentiede.fi/en/planning/ethics-and-risks-dual-use-research]. Accessed 9 October 2020.
[5] Ministry of Agriculture and Forestry in Finland. "Ministry of Agriculture and Forestry of Finland website".

[https://mmm.fi/etusivu]. Accessed 9 October 2020.
[6] Ministry of Social Affairs and Health in Finland. "Ministry of Social Affairs and Health in Finland website". [https://stm.fi/etusivu]. Accessed 9 October 2020.
[7] VERTIC. 2018. "BWC Legislation, F". [https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/f/]. Accessed 17 November 2020.
[8] United Nations Office at Geneva. "Confidence building measures reports - Finland". [https://bwc-ecbm.unog.ch/state/finland]. Accessed 17 November 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 national policy requiring oversight of dual use research. According to the WHO's Joint External Evaluation (JEE) report for Finland, published in 2017: "Regulations exist on the import and exports of dual-use items, defence material and animal and plant pathogens. Import regulations for human pathogens have been recently introduced, but do not cover GMOs. [1] However no evidence of a policy requiring oversight of dual-use research was found in the relevant legislation or on the web sites of Responsible Research, Ministry of Social Affairs and Health, National Institute for Health and Welfare, Finnish Food Safety Authority websites or in the WHO's Joint External Evaluation (JEE) report for Finland, published in 2017, the VERTIC database or in the United Nations Office at Geneva Confidence building measure reports for Finland. [1,2,3,4,5,6,7,8,9]

[1] World Health Organization. March 2017. "Joint External Evaluation of IHR Core Capacities of the Republic of Finland". [http://apps.who.int/iris/bitstream/handle/10665/255690/WHO-WHE-CPI-2017.24-Report-eng.pdf?sequence=1]. Accessed 9 October 2020.
[2] Ministry of Agriculture and Forestry in Finland. "Ministry of Agriculture and Forestry of Finland website". [https://mmm.fi/etusivu]. Accessed 9 October 2020.
[3] Ministry of Social Affairs and Health in Finland. "Ministry of Social Affairs and Health in Finland website". [https://stm.fi/etusivu]. Accessed 9 October 2020.
[4] National Institute for Health and Welfare (THL). "THL website". [https://thl.fi/fi/]. Accessed 9 October 2020.
[5] Finnish Food Authority. "Finnish Food Authority website". [https://www.ruokavirasto.fi/]. Accessed 9 October 2020.
[6] Responsible Research. 23.5.2018. "The ethics and risks of dual use research". [https://www.vastuullinentiede.fi/en/planning/ethics-and-risks-dual-use-research]. Accessed 9 October 2020.
[7] Ministry of Justice in Finland. "Finlex". [https://www.finlex.fi/fi]. Accessed 9 October 2020.
[8] VERTIC. 2018. "BWC Legislation, F". [https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/f/]. Accessed 17 November 2020.
[9] United Nations Office at Geneva. "Confidence building measures reports - Finland". [https://bwc-ecbm.unog.ch/state/finland]. Accessed 17 November 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 agency responsible for oversight of research with especially dangerous pathogens, pathogens with pandemic potential, and/or other dual use research. It is implied in the WHO Joint External Evaluation of IHR Core Capacities of Finland, that there is no such oversight or agency in charge of it, as it recommends the following: "Review, establish, or update biosafety and biosecurity legislation to create a comprehensive integrated whole-of-government biosafety and biosecurity system to include an oversight mechanism and monitoring of dangerous pathogens as well as establishing requirements for biosafety and biosecurity laboratory licensing and/or accreditation." [1] No evidence was found to confirm the existence of an agency responsible for oversight of such research in the legislation or on web sites of the Ministry of Agriculture and Forestry, Ministry of Social Affairs and Health, National Institute for Health and Welfare, Finnish Food Safety Authority, Responsible Research or Ministry of Defence, VERTIC database, or in the United Nations Office at Geneva Confidence building measure reports for Finland. [2,3,4,5,6,7,8,9,10]

[1] World Health Organization. March 2017. "Joint External Evaluation of IHR Core Capacities of the Republic of Finland". [http://apps.who.int/iris/bitstream/handle/10665/255690/WHO-WHE-CPI-2017.24-Report-eng.pdf?sequence=1]. Accessed 9 October 2020.
[2] Ministry of Agriculture and Forestry in Finland. "Ministry of Agriculture and Forestry of Finland website". [https://mmm.fi/etusivu]. Accessed 9 October 2020.
[3] Ministry of Social Affairs and Health in Finland. "Ministry of Social Affairs and Health in Finland website". [https://stm.fi/etusivu]. Accessed 9 October 2020.
[4] National Institute for Health and Welfare (THL). "THL website". [https://thl.fi/fi/]. Accessed 9 October 2020.
[5] Finnish Food Authority. "Finnish Food Authority website". [https://www.ruokavirasto.fi/]. Accessed 9 October 2020.
[6] Responsible Research. 23.5.2018. "The ethics and risks of dual use research". [https://www.vastuullinentiede.fi/en/planning/ethics-and-risks-dual-use-research]. Accessed 9 October 2020.
[7] Ministry of Justice in Finland. "Finlex". [https://www.finlex.fi/fi]. Accessed 9 October 2020.
[8] Ministry of Defence in Finland. "Ministry of Defence website". [https://www.defmin.fi/]. Accessed 9 October 2020.
[9] VERTIC. 2018. "BWC Legislation, F". [https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/f/]. Accessed 17 November 2020.
[10] United Nations Office at Geneva. "Confidence building measures reports - Finland". [https://bwc-ecbm.unog.ch/state/finland]. Accessed 17 November 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 regulation requiring the screening of synthesized DNA before it is sold. According to the WHO's Joint External Evaluation (JEE) report for Finland, published in 2017: "Import regulations for human pathogens have been recently introduced, but do not cover GMOs." There is a significant amount of national and EU legislation in relation to genetic technology and GMOs presented on the Board for Gene Technology web site, however these pieces of legislation do not seem to include requirements for screening of synthesizes DNA before it is sold. [2,3,4,5,6] No public evidence was found on the websites of the Ministry of Social Affairs and Health, National Institute for Health and Welfare, Finnish Food Safety Authority, Ministry of Defence or Ministry of Agriculture and Forestry, VERTIC database or in the United Nations Office at

Geneva Confidence building measure reports for Finland. [7,8,9,10,11,12,13].

[1] Ministry of Transport and Communications in Finland. "Ministry of Transport and Communications website". [https://www.lvm.fi/etusivu]. Accessed 9 October 2020.
[2] Board for Gene Technology. "Legislation". [https://geenitekniikanlautakunta.fi/en/legislation]. Accessed 9 October 2020.
[3] Board for Gene Technology. "Import and export of GMOs". [https://geenitekniikanlautakunta.fi/en/import-export1]. Accessed 9 October 2020.
[4] Republic of Finland. 377/1995. "Gene Technology Act". [https://www.finlex.fi/en/laki/kaannokset/1995/en19950377_20100955.pdf]. Accessed 9 October 2020.
[5] Republic of Finland. 928/2004. "Government Decree on Gene Technology". [https://www.finlex.fi/en/laki/kaannokset/2004/en20040928.pdf]. Accessed 9 October 2020.
[6] Republic of Finland. 1105/2019. "Ministry of Social Affairs and Health Decree on the deliberate release of genetically modified organisms (Sosiaali- ja terveysministeriön asetus muuntogeenisten organismien tarkoituksellisesta levittämisestä". [https://www.finlex.fi/fi/laki/alkup/2019/20191105]. Accessed 9 October 2020.
[7] National Institute for Health and Welfare (THL). "THL website". [https://thl.fi/fi/]. Accessed 9 October 2020.
[8] Finnish Food Authority. "Finnish Food Authority website". [https://www.ruokavirasto.fi/]. Accessed 9 October 2020.
[9] Ministry of Defence in Finland. "Ministry of Defence website". [https://www.defmin.fi/]. Accessed 9 October 2020.
[10] Ministry of Agriculture and Forestry in Finland. "Ministry of Agriculture and Forestry of Finland website". [https://mmm.fi/etusivu]. Accessed 9 October 2020.
[11] Ministry of Social Affairs and Health in Finland. "Ministry of Social Affairs and Health in Finland website". [https://stm.fi/etusivu]. Accessed 9 October 2020.
[12] VERTIC. 2018. "BWC Legislation, F". [https://www.vertic.org/programmes/biological-weapons-and-materials/bwc-legislation-database/f/]. Accessed 17 November 2020.
[13] United Nations Office at Geneva. "Confidence building measures reports - Finland". [https://bwc-ecbm.unog.ch/state/finland]. Accessed 17 November 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: 1

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: 2

The Finnish national laboratory system has the capacity to conduct diagnostic tests for at least 5 of the 10 WHO-defined core tests. According to the WHO Joint External Evaluation (JEE) of IHR Core Capacities, published in 2017, Finland received the highest score on the indicator regarding D.1.1 Laboratory testing for detection of priority diseases, which according to the WHO JEE Tool translates into Finland being capable of conducting five or more of the ten core tests. [1,2]. For example, HUSLAB, the largest laboratory in Finland, has 5 of the WHO commonly defined core tests, which are 1) polymerase chain reaction (PCR) testing for Influenza virus (flu), 2) virus culture for poliovirus (polio), 3) serology for HIV, 4) microscopy for mycobacterium tuberculosis (tuberculosis/TB) and 5) bacterial culture for Salmonella enteritidis serotype Typhi (typhoid) in its laboratory handbook, which means they are able to provide the service [2]. No evidence was found on whether Finland has defined its four country-specific tests in the WHO Joint External Evaluation (JEE) of IHR Core Capacities report for Finland, published in 2017, nor the Ministry of Social Affairs and Health and the National Institute for Health and Welfare websites. [1,4,5]

[1] World Health Organization. March 2017. "Joint External Evaluation of IHR Core Capacities of the Republic of Finland". [http://apps.who.int/iris/bitstream/handle/10665/255690/WHO-WHE-CPI-2017.24-Report-eng.pdf?sequence=1]. Accessed 9 October 2020.
[2] World Health Organization. 2016. WHO Joint External Evaluation Tool: International Health Regulations (2005). [http://apps.who.int/iris/bitstream/handle/10665/204368/9789241510172_eng.pdf?sequence=1]. Accessed 9 October 2020.
[3] HUSLAB. 9 October 2020. "Laboratory handbook (Laboratoriokäsikirja)". [https://huslab.fi/ohjekirja/]. Accessed 9 October 2020.
[4] Ministry of Social Affairs and Health in Finland. "Ministry of Social Affairs and Health in Finland website". [https://stm.fi/etusivu]. Accessed 9 October 2020.
[5] National Institute for Health and Welfare (THL). "THL website". [https://thl.fi/fi/]. Accessed 9 October 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

There is a national strategy for conducting testing during a public health emergency, which includes considerations for testing for scaling capacity and defining goals for testing. The National COVID-19 testing strategy covers scaling capacity for testing and defines clear testing goals. However, the strategy only covers COVID-19 and therefore does not include novel pathogens.[1] In addition, there is a National preparedness plan for pandemic influenza, which was designed also with biothreats beyond influenza in mind, however the testing plan seems to cover mainly viral threats and does not clearly define goals for testing nor describe in sufficient detail capacity scaling. [2]. No evidence of other national plans or strategies for testing were found on Ministry of Agriculture and Forestry, Ministry of Social Affairs and Health or the National Institute for Health and Welfare websites. [3,4,5]

[1] Ministry of Social Affairs and Health. 9 April 2020. "National COVID-19 testing strategy". [https://stm.fi/koronaviruksen-testausstrategia]. Accessed 9 October 2020.
[2] Ministry of Social Affairs and Health in Finland. 30 May 2012. "National preparedness plan for pandemic influenza (Kansallinen varautumissuunnitelma influenssapandemiaa varten)". [http://julkaisut.valtioneuvosto.fi/bitstream/handle/10024/72870/Julk201209.pdf?sequence=1&isAllowed=y].Accessed 9 October 2020.
[3] Ministry of Agriculture and Forestry in Finland. "Ministry of Agriculture and Forestry of Finland website". [https://mmm.fi/etusivu]. Accessed 9 October 2020.
[4] Ministry of Social Affairs and Health in Finland. "Ministry of Social Affairs and Health in Finland website". [https://stm.fi/etusivu]. Accessed 9 October 2020.
[5] National Institute for Health and Welfare (THL). "THL website". [https://thl.fi/fi/]. Accessed 9 October 2020.

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

The reference laboratories are accredited in Finland. The National Institute for Health and Welfare (THL) and The Finnish Food Authority laboratories have the ISO 17025 accreditation given by the Finnish Accreditation Service. [1]

[1] Finnish Accreditation Service (FINAS). 2016. "Accredited operators". [https://www.finas.fi/sites/en/operators/Pages/default.aspx]. Accessed 9 October 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

The reference laboratories are subject to external quality assurance reviews, as do all laboratories in Finland. According to the WHO Joint External Evaluation of IHR Core Capacities: "Finland's laboratories conduct a wide range of tests. They have internal quality control (ICQ) procedures in place and are subject to external quality assessments (EQA) in accordance with ISO and WHO standards." [1] According to National Institute for Health and Welfare (THL) guidance on the prerequisites for the activity of clinical microbiology laboratories: "Laboratories must participate to quality review rounds conducted by external and independent parties at least 4 times a year and for all laboratory methods that have quality assessment samples available." [2]

[1] World Health Organization. 2017. "Joint External Evaluation of IHR Core Capacities of the Republic of Finland". [http://apps.who.int/iris/bitstream/handle/10665/255690/WHO-WHE-CPI-2017.24-Report-eng.pdf?sequence=1]. Accessed 9 October 2020.
[2] National Institute for Health and Welfare (THL). 2017. "Guidance on the prerequisites for the activity of clinical microbiology laboratories (Edellytykset kliinisen mikrobiologian alan laboratorioiden ja valvottavien toimintayksiköiden toiminnalle).
[https://thl.fi/documents/533963/3370250/Ohjeistus+3.0_290517+%28valmis%29+%28lis%C3%A4ys+HPV+esim+suppeaan+toimintaan+090118_SK%29.pdf/76ba4a4f-31ca-40fc-917c-b65a6dc35855]. Accessed 9 October 2020.

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: 1

There is a nationwide specimen transport system in Finland. According to the WHO Joint External Evaluation (JEE) of IHR Core Capacities in Finland, published in 2017, both public and private courier systems are used: "Specimen transport is organized via the national postal service and the Matkahuolto bus service. Different categories of microbes are shipped with appropriate labelling and with guidance for specimen transportation and packaging." [1]. Finland received the highest score in its WHO JEE on the indicator regarding D.1.2 Specimen referral and transport system, which according to the WHO JEE Tool translates into a system being in place to transport specimens to national laboratories from at least 80% of intermediate level/districts within the country for advanced diagnostics and to transport specimens to/from other labs in the region and that specimen transport is funded from host country budget. [2] These include specimen transport from the site of collection to a laboratory, as exemplified by guidance by the National Institute for Health and Welfare regarding Giardia or Cryptosporidium samples. [3]

[1] World Health Organization. March 2017. "Joint External Evaluation of IHR Core Capacities of the Republic of Finland". [http://apps.who.int/iris/bitstream/handle/10665/255690/WHO-WHE-CPI-2017.24-Report-eng.pdf?sequence=1]. Accessed 9 October 2020.
[2] World Health Organization. 2016. WHO Joint External Evaluation Tool: International Health Regulations (2005). [http://apps.who.int/iris/bitstream/handle/10665/204368/9789241510172_eng.pdf?sequence=1]. Accessed 9 October 2020.

[3] National Institute for Health and Welfare. 24 October 2017. "Sample guidance on giardia and cryptosporidium analytics (Giardia ja Cryptosporidium-analytiikan näytteenotto-ohje)". [https://thl.fi/fi/web/ymparistoterveys/vesi/vesimikrobiologinen-analytiikka/naytteenotto-ja-lomakkeet/vesiepidemianaytteenotto/giardia-ja-cryptosporidium-analytiikan-naytteenotto-ohje]. Accessed 9 October 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 no evidence of 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. The National COVID-19 testing strategy does not mention rapid authorization or licensing procedures for laboratories to scale-up testing during an outbreaks. [1] However, the Regional State Administrative Authority, which decides on laboratory licenses, states on their website that laboratories already holding a license for microbiological laboratory activities may expand their services for COVID-19 testing by notification (as opposed to a new license application). [2] There is also guidance available on this rapid authorisation of license expansion process; this guidance has been developed by the National Institute for Health and Welfare, the Finnish Medicines Agency, Regional State Administrative Agency and National Supervisory Authority for Welfare and Health. [3] In addition, a national coordination group for corona testing preparedness has started their work in August 2020. [4] Furthermore, there is no evidence in the public domain suggesting the existence of a national plan on the websites of the Ministry of Social Affairs and Health, National Institute for Health and Welfare or Ministry of Forestry and Agriculture. [1,2,3,4,5,6,7]

[1] Ministry of Social Affairs and Health. 9 April 2020. "National COVID-19 testing strategy". [https://stm.fi/koronaviruksen-testausstrategia]. Accessed 9 October 2020.
[2] Regional State Administrative Agency. 15 September 2020. "Questions regarding the coronavirus". [http://www.avi.fi/web/avi/koronavirukseen-liittyvia-kysymyksia]. Accessed 9 October 2020.
[3] Regional State Administrative Agency. 24 June 2020. Review of regulations and requirements for COVID-19 testing activities (Katsaus covid-19-testaustoiminnan sääntelyyn ja vaatimuksiin)" [https://www.avi.fi/documents/10191/19298/covid19-testaus-ohjekirje24062020.pdf/8e2ca2f6-a5ce-43ac-ae69-77b9142dd645]. Accessed 9 October 2020.
[4] Ministry of Social Affairs and Health in Finland. 25 August 2020. "The national coordination group for corona testing preparedness has started their work (Koronatestausvalmiuden kansallinen koordinaatioryhmä aloittaa työnsä)". [https://stm.fi/-/koronatestausvalmiuden-kansallinen-koordinaatioryhma-aloittaa-tyonsa]. Accessed 9 October 2020.
[5] Ministry of Social Affairs and Health in Finland. "Ministry of Social Affairs and Health in Finland website". [https://stm.fi/etusivu]. Accessed 8 October 2020.
[6] National Institute for Health and Welfare (THL). "THL website". [https://thl.fi/fi/]. Accessed 8 October 2020.
[7] Ministry of Agriculture and Forestry in Finland. "Ministry of Agriculture and Forestry of Finland website". [https://mmm.fi/etusivu]. Accessed 8 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: 1

There is evidence that the country is conducting ongoing event-based surveillance and analysis for infectious disease, but it is not clear if this is analysed on a daily basis. According to the WHO's Joint External Evaluation (JEE) report for Finland, published in 2017: "[...] By monitoring media and trends in public concerns, communications departments and agencies can address information gaps. [...] Analysed data are reported on a systematic basis and syndromic surveillance systems are in place allowing for systematic reporting [to THL] from primary public health care centres. [...] The virtual emergency operations centre (EOC) identifies and responds to emergencies and covers all levels of the public health system, including national, regional and municipal bodies.". [1] The National Institute for Welfare and Health (THL) is part of the virtual EOC, according to the WHO JEE report. [1] In addition to this, Finland scored 4 on both indicators D.2.3 Analysis of surveillance data and D.2.4 Syndromic surveillance systems which, according to the WHO JEE Tool translates into Finland having at least: "Annual or monthly reporting, attributed functions to experts for analysing, assessing and reporting data [...and] syndromic surveillance systems in place to detect three or more core syndromes indicative of public health emergencies" [2]. There is no further evidence of the data being analyzed on a daily basis on the websites of Ministry of Social Affairs and Health, Institute for Health and Welfare and Ministry of Agriculture and Forestry. [3,4,5]

[1] World Health Organization. March 2017. "Joint External Evaluation of IHR Core Capacities of the Republic of Finland". [http://apps.who.int/iris/bitstream/handle/10665/255690/WHO-WHE-CPI-2017.24-Report-eng.pdf?sequence=1]. Accessed 9 October 2020.
[2] World Health Organization. 2016. WHO Joint External Evaluation Tool: International Health Regulations (2005). [http://apps.who.int/iris/bitstream/handle/10665/204368/9789241510172_eng.pdf?sequence=1]. Accessed 9 October 2020.
[3] Ministry of Social Affairs and Health in Finland. "Ministry of Social Affairs and Health in Finland website". [https://stm.fi/etusivu]. Accessed 8 October 2020.
[4] National Institute for Health and Welfare (THL). "THL website". [https://thl.fi/fi/]. Accessed 8 October 2020.
[5] Ministry of Agriculture and Forestry in Finland. "Ministry of Agriculture and Forestry of Finland website". [https://mmm.fi/etusivu]. Accessed 8 October 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: 1

There is evidence that the country reported a potential public health emergency of international concern (PHEIC) to the WHO within the last two years. Finland reported openly on its first COVID-19 case on 29 January 2020 [1,2]. The WHO's Novel

Coronavirus (2019-nCoV) Situation Report 10 that is based on data received by 30 January 2020, states that Finland had reported its first case of the novel coronavirus [3]. The Foreign Ministry website confirms that Finland is working closely with the WHO and the European Center for Disease Control [3]. No further evidence was found on Finland having reported a potential PHEIC to WHO within the last two years on the websites of WHO Disease Outbreak News, WHO EURO Finland news, the Ministry of Social Affairs and Health or the National Institute for Health and Welfare. [4,5,6,7]

[1] YLE news. 29 January 2020. "Finland's first case of coronavirus has been confirmed (Suomen ensimmäinen koronavirustartunta varmistui)". [https://yle.fi/uutiset/3-11181717]. Accessed on 9 October 2020.
[2] Reuters. 29 January 2020. “Finland confirms its first coronavirus case”. [https://www.reuters.com/article/us-china-health-finland-idUSKBN1ZS27O]. Accessed on 25 April 2021.
[3] World Health Organization. 30 January 2020. “Novel coronavirus (2019-nCoV) Situation report 10 – Data as reported by 30 January”. [https://www.who.int/docs/default-source/coronaviruse/situation-reports/20200130-sitrep-10-ncov.pdf?sfvrsn=d0b2e480_2]. Accessed 25 April 2021.
[4] Ministry for Foreign Affairs. 5 March 2020. "Effects of coronavirus on traveling (Koronaviruksen vaikutukset matkustamiseen)". [https://um.fi/ajankohtaista/-/asset_publisher/gc654PySnjTX/content/ulkoministeri-c3-b6-seuraa-koronavirustilannetta]. Accessed 9 October 2020.
[5] World Health Organization Disease Outbreak News. "Finland". [https://www.who.int/csr/don/archive/country/fin/en/]. Accessed 25 April 2021.
[6] World Health Organization Regional Office for Europe. "Finland - News". [https://www.euro.who.int/en/countries/finland/news/news/news?root_node_selection=73351]. Accessed 9 October 2020.
[7] Ministry of Social Affairs and Health in Finland. "Ministry of Social Affairs and Health in Finland website". [https://stm.fi/etusivu]. Accessed 18 November 2020.
[8] National Institute for Health and Welfare (THL). "THL website". [https://thl.fi/fi/]. Accessed 18 November 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: 1

Finland operates an electronic reporting surveillance system at both the national and sub-national level. According to the WHO Joint External Evaluation of IHR Core Capacities for Finland, published in 2017: "Finland has a strong and well-functioning public health surveillance system that uses interconnected real-time systems and incorporates several aspects of the One Health approach. Reporting is primarily electronic and employs unique personal identifiers to allow linkages with additional data sources. Analysed data are reported on a systematic basis and syndromic surveillance systems are in place allowing for systematic reporting from primary public health care centres. Reporting of animal surveillance data is manual at the central level and there is a need for electronic systems for more efficient handling of animal health data, and to allow for reliable sharing of information between the public and animal health sectors." The WHO JEE report further states that: "Several electronic real-time surveillance systems are in place." [1] For example, the National Institute for Health and Welfare (THL) and the Finnish Food Safety Authority (Evira) host several electronic portals, where doctors, vets, laboratories or municipal or hospital district infectious disease teams can report about infectious diseases, via the National Infectious Disease Register or suspicions of epidemics via the electronic RYMY-system. [2,3,4]

[1] World Health Organization. March 2017. "Joint External Evaluation of IHR Core Capacities of the Republic of Finland". [http://apps.who.int/iris/bitstream/handle/10665/255690/WHO-WHE-CPI-2017.24-Report-eng.pdf?sequence=1]. Accessed

13 October 2020.
[2] National Institute for Health and Welfare. 16 June 2020. "Monitoring and epidemics (Seuranta ja epidemiat)". [https://thl.fi/fi/web/infektiotaudit/seuranta-ja-epidemiat]. Accessed 13 October 2020.
[3] National Institute for Health and Welfare. 19 December 2019. "National Infectious Disease Register (Tartuntatautirekisteri)". [https://thl.fi/fi/web/infektiotaudit/seuranta-ja-epidemiat/tartuntatautirekisteri]. Accessed 13 October 2020.
[4] National Institute for Health and Welfare. 31 August 2020. "Reporting on an epidemic (Epidemian ilmoittaminen)". [https://thl.fi/fi/web/infektiotaudit/seuranta-ja-epidemiat/elintarvike-ja-vesivalitteiset-epidemiat/epidemian-ilmoittaminen]. Accessed 13 October 2020.

2.3.2b

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

Yes = 1 , No = 0

Current Year Score: 1

The electronic reporting surveillance system collects ongoing and real-time laboratory data. According to the WHO Joint External Evaluation of IHR Core Capacities for Finland, published in 2017: "Several electronic real-time surveillance systems are in place. Three sources provide information: clinical laboratories, physicians and reference laboratories." [1] For example, the National Institute for Health and Welfare (THL) hosts several electronic portals, including the National Infectious Disease Register (NIDR) [2,3]. According to a presentation by a THL expert, about 95% of the laboratories have their laboratory systems feed directly into the NIDR. [4]

[1] World Health Organization. March 2017. "Joint External Evaluation of IHR Core Capacities of the Republic of Finland". [http://apps.who.int/iris/bitstream/handle/10665/255690/WHO-WHE-CPI-2017.24-Report-eng.pdf?sequence=1]. Accessed 13 October 2020.
[2] National Institute for Health and Welfare. 16 June 2020. "Monitoring and epidemics (Seuranta ja epidemiat)". [https://thl.fi/fi/web/infektiotaudit/seuranta-ja-epidemiat]. Accessed 13 October 2020.
[3] National Institute for Health and Welfare. 19 December 2019. "National Infectious Disease Register (Tartuntatautirekisteri)". [https://thl.fi/fi/web/infektiotaudit/seuranta-ja-epidemiat/tartuntatautirekisteri]. Accessed 13 October 2020.
[4] Jaakola S. 2 February 2016. "Remote use of the NIDR in the monitoring and control of infectious diseases (Tartuntatautirekisterin etäkäyttö tartuntatautien seurannassa ja torjunnassa)". [https://www.tays.fi/download/noname/%7BC173096A-9843-42D5-A38E-B515DF0EF1CD%7D/51489]. Accessed 13 October 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 are commonly in use in Finland. Under the Act on the Electronic Processing of Client Data in Social and Health Care Services 159/2007, public healthcare organisations are obliged to enter patient records in an electronic nationally centralised archive. Deployment of the centralised archive is mandatory for private healthcare organisations, if they have an electronic system for long-term storage of patient records. [1] In addition, the 2015 WHO Atlas of eHealth country profiles notes that over 75% of primary, secondary and tertiary care facilities use EHR. [2]

[1] Republic of Finland. 2007. "Act on the Electronic Processing of Client Data in Social and Health Care Services (Laki sosiaali- ja terveydenhuollon asiakastietojen sähköisestä käsittelystä)". [https://www.finlex.fi/fi/laki/ajantasa/2007/20070159]. Accessed 13 October 2020.
[2] World Health Organization. 2016. "Atlas of eHealth country profiles". [http://apps.who.int/iris/bitstream/handle/10665/204523/9789241565219_eng.pdf?sequence=1]. Accessed 13 October 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 public health system has access to the electronic health records. Under the Act on the Electronic Processing of Client Data in Social and Health Care Services 159/2007, public healthcare organisations are obliged to enter patient records in a nationally centralised archive. Deployment of the centralised archive is mandatory for private healthcare organisations, if they have an electronic system for long-term storage of patient records [1]. According to this same Act, the public health system has access to these records in general, but only if it is for the organisation and execution of a health care service. In addition, patients may opt out from allowing health records to be visible from a certain provider or from a certain visit. [1]

[1] Republic of Finland. 159/2007. "Act on the Electronic Processing of Client Data in Social and Health Care Services (Laki sosiaali- ja terveydenhuollon asiakastietojen sähköisestä käsittelystä)". [https://www.finlex.fi/fi/laki/ajantasa/2007/20070159]. Accessed 13 October 2020.

2.4.1c

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

Yes = 1 , No = 0

Current Year Score: 1

There are standards in place to ensure data is comparable. Under the Act on the Electronic Processing of Client Data in Social and Health Care Services 159/2007, public healthcare organisations are obliged to enter patient records in a nationally centralised archive. [1] The Act on the Electronic Processing of Client Data in Social and Health Care Services 159/2007 and the Act on common support services of electronic transactions in administration 571/2016 touch upon compatibility. In an e-health report by the National Institute for Health and Welfare published in 2015, in section 2.6 it is stated that: "Finnish registries use international classification systems such as ICD-10 and ICPC-2. The EPR Minimum Data Set will also be coded on the basis of these classification systems. In terms of communication and security, Finland has chosen to adopt international standards, such as Health Level 7 (HL7) and Digital Imaging and Communications in Medicine (DICOM), and the ISO 17799 standard for Information Security Management (based on the BS7799)." [3]

[1] Republic of Finland. 159/2007. "Act on the Electronic Processing of Client Data in Social and Health Care Services (Laki sosiaali- ja terveydenhuollon asiakastietojen sähköisestä käsittelystä)". [https://www.finlex.fi/fi/laki/ajantasa/2007/20070159]. Accessed 13 October 2020.
[2] Republic of Finland. 571/2016. "Act on common support services of electronic transactions in administration (Laki hallinnon yhteisistä sähköisen asioinnin tukipalveluista)". [https://www.finlex.fi/fi/laki/ajantasa/2016/20160571]. Accessed 13 October 2020.
[3] Hyppönen H, Hämäläinen P, Reponen J (eds.). E-health and e-welfare of Finland - Check point 2015. National Institute for Health and Welfare Report 18/2015. [https://www.julkari.fi/bitstream/handle/10024/129709/URN_ISBN_978-952-302-563-9.pdf]. Accessed 13 October 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 insufficient evidence of established mechanisms at the relevant ministries responsible for animal, human and wildlife surveillance to share data. According to the WHO Joint External Evaluation of IHR Core Capacities for Finland, published in 2017, notes that there exists a "weekly meeting at THL [the National Institute for Health and Welfare] that also includes experts from Evira [now called Finnish Food Authority]. The focus is on ongoing outbreak investigations and human infectious disease signal monitoring and communication." [1] However, there is no evidence that there is data sharing outside of human infectious disease surveillance data (ie animal health data) in the Zoonosis strategy or on the websites of the Zoonosis Centre, Ministry for Social Affairs and Health, Ministry of Forestry and Agriculture, Ministry of Environment, Finnish Food Authority or the National Institute for Health and Welfare. [2,3,4,5,6,7,8]

[1] World Health Organization. March 2017. "Joint External Evaluation of IHR Core Capacities of the Republic of Finland". [http://apps.who.int/iris/bitstream/handle/10665/255690/WHO-WHE-CPI-2017.24-Report-eng.pdf?sequence=1]. Accessed 13 October 2020.
[2] Finnish Food Authority. "Zoonosis centre (Zoonosikeskus)". [https://www.ruokavirasto.fi/en/themes/zoonosis-centre/]. Accessed 18 November 2020.
[3] Ministry of Agriculture and Forestry in Finland & Ministry of Social Affairs and Health in Finland. 2013. The Finnish Zoonosis Strategy 2013-2017 (Suomen zoonoosistrategia 2013-2017). [https://mmm.fi/documents/1410837/1723887/MMM-TRM-2013-1/b3419885-4c38-4275-8a43-a6d0ce7662a8/MMM-TRM-2013-1.pdf]. Accessed 13 October 2020.
[4] Ministry of Social Affairs and Health in Finland. "Ministry of Social Affairs and Health in Finland website". [https://stm.fi/etusivu]. Accessed 18 November 2020.
[5] Ministry of Agriculture and Forestry in Finland. "Ministry of Agriculture and Forestry of Finland website". [https://mmm.fi/etusivu]. Accessed 18 November 2020.
[6] Ministry of the Environment in Finland. "Ministry of the Environment website". [http://www.ym.fi/fi-FI]. Accessed 18 November 2020.
[7] Finnish Food Authority. "The Finnish Food Authority". [https://www.ruokavirasto.fi]. Accessed 18 November 2020.
[8] National Institute for Health and Welfare (THL). "THL website". [https://thl.fi/fi/]. Accessed 18 November 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: 1

Finland makes de-identified health surveillance data on disease outbreaks publicly available on the National Institute for Health and Welfare (THL) web site. The infectious diseases section of the THL web site hosts a range of information on surveillance. THL publishes minimum once a week a newsletter "Infection news", that sometimes contains surveillance data, and for example in July 2020 communicated about an increase in listeria cases and about rare salmonellosis cases in humans and pets. [1,2,3] The national infectious disease registry information is available per disease per hospital district per year, including the running year. [4] There is a weekly update of influenza cases per hospital district, and depending on the year also on RSV or other epidemic viruses [5]. In addition, THL publishes an annual report "Infectious Diseases in Finland report" that includes surveillance data and other information on outbreaks and epidemics [6].

[1] National Institute for Health and Welfare (THL). "Infection News (Infektiouutiset)". [https://thl.fi/fi/web/infektiotaudit/ajankohtaista/infektiouutiset]. Accessed 13 October 2020.
[2] National Institute for Health and Welfare (THL). 6 July 2020. "Listeriosis on the move (Listerioosia liikkeellä)". [https://thl.fi/fi/-/listerioosia-liikkeella-tartuntalahdetta-selvitetaan?redirect=%2Ffi%2Fweb%2Finfektiotaudit-ja-rokotukset%2Fajankohtaista%2Finfektio-ja-rokotusuutiset%3Fp_p_id%3Dcom_liferay_asset_publisher_web_portlet_AssetPublisherPortlet_INSTANCE_L2Jk5CCjrKPN%26p_p_lifecycle%3D0%26p_p_state%3Dnormal%26p_p_mode%3Dview%26_com_liferay_asset_publisher_web_portlet_AssetPublisherPortlet_INSTANCE_L2Jk5CCjrKPN_delta%3D10%26p_r_p_resetCur%3Dfalse%26_com_liferay_asset_publisher_web_portlet_AssetPublisherPortlet_INSTANCE_L2Jk5CCjrKPN_cur%3D8]. Accessed 13 October 2020.
[3] National Institute for Health and Welfare (THL). 17 June 2020. "Salmonella infections typical for small birds have been found in humans and pets (Pikkulinnuille tyypillisiä salmonellatartuntoja on todettu myös ihmisillä ja lemmikeillä)". [https://thl.fi/fi/-/pikkulinnuille-tyypillisia-salmonellatartuntoja-on-todettu-myos-ihmisilla-ja-lemmikeilla-?redirect=%2Ffi%2Fweb%2Finfektiotaudit-ja-rokotukset%2Fajankohtaista%2Finfektio-ja-rokotusuutiset%3Fp_p_id%3Dcom_liferay_asset_publisher_web_portlet_AssetPublisherPortlet_INSTANCE_L2Jk5CCjrKPN%26p_p_lifecycle%3D0%26p_p_state%3Dnormal%26p_p_mode%3Dview%26_com_liferay_asset_publisher_web_portlet_AssetPublisherPortlet_INSTANCE_L2Jk5CCjrKPN_delta%3D10%26p_r_p_resetCur%3Dfalse%26_com_liferay_asset_publisher_web_portlet_AssetPublisherPortlet_INSTANCE_L2Jk5CCjrKPN_cur%3D9]. Accessed 13 October 2020.
[4] National Institute for Health and Welfare (THL). 13 October 2020. "National Infectious Disease Register statistical database (Tartuntatautirekisterin tilastotietokanta)". [https://www.thl.fi/ttr/gen/rpt/tilastot.html]. Accessed 13 October 2020.
[5] National Institute for Health and Welfare (THL). 18 June 2020. "Influenza reporting (Ajantasainen influenssakatsaus)". [https://thl.fi/fi/web/infektiotaudit/taudit-ja-mikrobit/virustaudit/influenssa/ajantasainen-influenssakatsaus]. Accessed 13 October 2020.
[6] National Institute for Health and Welfare (THL). 17 June 2020. "Annual Infectious Diseases in Finland reports (Tartuntataudit Suomessa vuosiraportit)." [https://thl.fi/fi/web/infektiotaudit-ja-rokotukset/seurantajarjestelmat-ja-rekisterit/tartuntatautirekisteri/tartuntatautien-esiintyvyystilastot/tartuntatautien-esiintyvyys-suomessa-raportit]. Accessed 13 October 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

The country makes de-identified COVID-19 surveillance available via daily reports on the website of the National Institute for Health and Welfare (THL). [1,2,3] This daily situation update is available in Finnish [1], Swedish [2] and English [3]. They include eg. daily cases of COVID-19, number of people tested so far, number of people who have died so far, number of people currently hospitalised, number of people currently in intensive care, daily testing capacity etc. It also includes further epidemiological summary information for example for the past 14 days, for the whole duration of the epidemic, and other indicators related to COVID-19, as well as links to hospital district level information. [1,2,3]

[1] National Institute for Health and Welfare. "Coronavirus COVID-19 - Latest updates". [https://thl.fi/fi/web/infektiotaudit-ja-rokotukset/ajankohtaista/ajankohtaista-koronaviruksesta-covid-19/tilannekatsaus-koronaviruksesta]. Accessed 14 October 2020.
[2] National Institute for Health and Welfare. "Coronavirus COVID-19 - Latest updates". [https://thl.fi/sv/web/infektionssjukdomar-och-vaccinationer/aktuellt/aktuellt-om-coronaviruset-covid-19/lagesoversikt-om-coronaviruset]. Accessed 14 October 2020.
[3] National Institute for Health and Welfare. "Coronavirus COVID-19 - Latest updates". [https://thl.fi/en/web/infectious-diseases-and-vaccinations/what-s-new/coronavirus-covid-19-latest-updates]. Accessed 14 October 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

There are laws in place that safeguard the confidentiality of identifiable health information. Health surveillance is done amongst others through the National Infectious Disease Register. [1,2] The Communicable Diseases Act (1227/2016), section 38, states: "Identifiers may only be stored in the National Infectious Diseases Register [and other relevant health registers], for as long as it is considered essential. The information on the name of the person for the use of appropriate authorities, must be erased by the end of the year following the last unification of separate notifications of the infectious disease case in question, and within this same time period, personal identifiers must be reformatted so that persons can't be identified by them. The time period for the unification for the National Infectious Diseases Register is generally 12 months. However, it is: 1) three months, if disease progress is short; 2) three years, if disease progress is particularly slow, 3) 50 years, if the most infected people remain carriers for life." [3] In addition, the confidentiality of identifiable health information for individuals is safeguarded by the EU's General Data Protection Regulation, which came into force in May 2018. [4]

[1] National Institute for Health and Welfare. 16 June 2020. "Monitoring and epidemics (Seuranta ja epidemiat)". [https://thl.fi/fi/web/infektiotaudit/seuranta-ja-epidemiat]. Accessed 13 October 2020.
[2] National Institute for Health and Welfare. 19 December 2019. "National Infectious Disease Register (Tartuntatautirekisteri)". [https://thl.fi/fi/web/infektiotaudit/seuranta-ja-epidemiat/tartuntatautirekisteri]. Accessed 13 October 2020.

[3] Republic of Finland. 2016. "Communicable Diseases Act (Tartuntatautilaki)". [https://www.finlex.fi/fi/laki/alkup/2016/20161227]. Accessed 13 October 2020.
[4] Official Journal of the European Union. 27 April 2016. "REGULATION (EU) 2016/679 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation)". [https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32016R0679&from=EN]. Accessed 13 October 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: 1

There is public evidence that the laws, regulations, or guidelines safeguarding the confidentiality of identifiable health information for individuals, such as that generated through health surveillance activities, include mention of protections from cyber attacks. The confidentiality of identifiable health information for individuals is safeguarded by the EU's General Data Protection Regulation (GDPR), which came into force in 2018. GDPR contains stipulations around network and information security, including a requirement that data held by state authorities must be overseen by a dedicated data protection officer who is proficient in dealing with cyber attacks and a requirement to inform all affected individuals within 72 hours of discovering a data breach. [1] Other national legislation safeguarding confidentiality of identifiable health information does not explicitly mention protection from cyber attacks. The Communicable Diseases Act (1227/2016) that outlines safeguarding confidentiality or identifiable health information does not explicitly mention cyber attacks. [2] The Ministry for Social Affairs and Health has published a guide for social and health care actors on cybersecurity that mentions protections from cyber attacks. [3] In addition, Finland's Security Committee Implementation plan of the Finnish Cybersecurity Strategy 2017-2020 includes action points relating to better planning of safeguard of health information in the light of the coming health system reform.[4] The Act on the secondary use of social and health care information states in its section 1: "The objective of this law is to facilitate the efficient and cyber-safe use of social and health care information stored as a result of social and health care activities, for the purpose of guidance, surveillance, research and statistics. [...] Another objective of this law is to safeguard confidentiality and rights and freedoms in the processing of personal information." [5]

[1] Official Journal of the European Union. 27 April 2016. "REGULATION (EU) 2016/679 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation)". [https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32016R0679&from=EN]. Accessed 19 November 2020.
[2] Republic of Finland. 1227/2016. "Communicable Diseases Act (Tartuntatautilaki)". [https://www.finlex.fi/fi/laki/alkup/2016/20161227]. Accessed 19 October 2020.
[3] Ministry for Social Affairs and Health. 2019. "Cybersecurity - a guide for social and health care actors (Kyberturvallisuus - ohje sosiaali- ja terveydenhuollon toimijoille) [https://julkaisut.valtioneuvosto.fi/bitstream/handle/10024/161683/J14_Kyberturvallisuus_WEB.pdf?sequence=1]. Accessed 19 October 2020.
[4] The Security Committee in Finland. "Implementation plan of the Finnish Cybersecurity Strategy 2017-2020 (Suomen kyberturvallisuusstrategian toimeenpano-ohjelma 2017-2020)". [https://turvallisuuskomitea.fi/wp-content/uploads/2018/02/Toimeenpano-ohjelma-2017-2020-final.pdf]. Accessed 19 October 2020.
[5] Republic of Finland. 552/2019. "Act on the secondary use of social and health care information (Laki sosiaali- ja

terveystietojen toissijaisesta käytöstä)". [https://www.finlex.fi/fi/laki/alkup/2019/20190552]. Accessed 19 October 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, Yes, commitments have been made to share data only for one disease = 1, No = 0

Current Year Score: 2

Finland is committed to sharing surveillance data within the region for more than one disease. According to the Communicable Disease Act 1227/2016 (Article 23): "The National Institute for Health and Welfare [THL] investigates epidemics as in charge of any epidemic investigations or contact tracing requiring international collaboration." [1] In Article 7 of the same Act, it is stated that: "THL acts as the designated and responsible authority for the epidemiologic monitoring and infectious disease notification towards the European Union." It also further stipulates in section 84: "The National Institute for Health and Welfare [THL] presents the World Health Organization, European Centre for Disease Prevention and Control and affiliated authorized networks with data [in relation to International Health Regulations or European Union agreements or regulations on communicable disease data] without being hindered by confidentiality or other data sharing restrictions." [1] In addition, according to the WHO Joint External Evaluation of IHR Core Capacities for Finland, published in 2017: "THL reports [amongst others] to the EU Early Warning and Response system (EWRS), in consultation with the Ministry of Social Affairs and Health...Suspected food safety issues are reported through RYMY [the food and waterborne epidemic reporting system], which is co-managed by THL and Evira [Finnish Food Authority]. The Ministry of Agriculture and Forestry and Finnish Foor Authority (formerly Evira) reports to the Rapid Alert System on Food and Feed, EU Com, Animal Disease Notification System (ADNS) and Zoonotic Disease and Animal Disease Notifications System [World Organisation for Animal Health] (OIE)." [2] As a member of the European Union, Finland shares surveillance data during a public health emergency with other countries in the region. All EU and EEA countries are part of the European Centre for Disease Prevention and Control's 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." [3] Article 9 of Chapter IV of the European Union (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 crossborder 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." [4]

[1] Republic of Finland. 1227/2016. "Communicable Diseases Act (Tartuntatautilaki)". [https://www.finlex.fi/fi/laki/alkup/2016/20161227]. Accessed 13 October 2020.
[2] World Health Organization. March 2017. "Joint External Evaluation of IHR Core Capacities of the Republic of Finland". [http://apps.who.int/iris/bitstream/handle/10665/255690/WHO-WHE-CPI-2017.24-Report-eng.pdf?sequence=1]. Accessed 13 October 2020.
[3] 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 13 October 2020.
[4] 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 13 October 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: 2

There is a national system in place to provide support at the sub-national level to conduct contact tracing in the event of an active or future public health emergency. Section 23 of the Communicable Diseases Act states: "The physician in charge of communicable diseases in a joint municipal authority for hospital district supervises the investigation on outbreaks and epidemics and the trace-back of infections within the hospital district's area, and carries out investigations in collaboration with municipalities on widespread outbreaks and epidemics. In the event that the outbreak or epidemic has spread to the area of several joint municipal authorities for hospital districts, the disease is particularly severe, or investigating the epidemic is otherwise of national importance, the National Institute for Health and Welfare shall supervise and support the trace-back of the infection and investigating the outbreaks and epidemics in municipalities and areas of the joint municipal authorities for hospital districts, and carries out outbreak investigations."[1] Furthermore, the National Preparedness Plan for Pandemic Influenza states that: "[National Institute for Health and Welfare] and the federations of municipalities in the hospital dsitricts organize training in communicable disease, which strengthens contact tracing required by e.g. influenza and other infectious diseases [...]". [2] Finally, in 2020, the Ministry of Social Affairs and Health and the National Institute for Health and Welfare published the Implementing the COVID-19 epidemic management hybrid strategy that includes a plan of strengthening contact tracing capacity at municipal and hospital district levels via amongst others training, volunteering platforms for individuals and organisations, support in identifying and tracing mass exposures. [3]

[1] Republic of Finland. 1227/2016. "Communicable Diseases Act - translation in English". [https://www.finlex.fi/en/laki/kaannokset/2016/en20161227.pdf]. Accessed 20 November 2020.
[2] Ministry of Social Affairs and Health in Finland. 30 May 2012. "National preparedness plan for pandemic influenza (Kansallinen varautumissuunnitelma influenssapandemiaa varten)". [http://julkaisut.valtioneuvosto.fi/bitstream/handle/10024/72870/Julk201209.pdf?sequence=1&isAllowed=y]. Accessed 20 November 2020.
[3] Ministry for Social Affairs and Health & National Institute for Health and Welfare. 8 July 2020. "Implementing the COVID-19 epidemic management hybrid strategy - Preparing for a potential second wave (COVID 19 -epidemian hallinnan hybridistrategian toteuttaminen - Mahdolliseen toiseen aaltoon varautuminen)". [https://stm.fi/documents/1271139/21475529/COVID+19+-epidemian+hallinnan+hybridistrategian+toteuttaminen+-+Mahdolliseen+toiseen+aaltoon+varautuminen.pdf/3c667955-2927-5067-8ca8-e51d79796d8e/COVID+19+-epidemian+hallinnan+hybridistrategian+toteuttaminen+-+Mahdolliseen+toiseen+aaltoon+varautuminen.pdf?t=1598343908408]. Accessed 18 October 2020.

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: 2

The country provides wraparound services to enable infected people and their contacts to self-isolate or quarantine as recommended, particularly economic support and medical attention. According to the Communicable Diseases Act, people quarantined due to a communicable disease (or parents who are required to stay at home to look after under 16-year old quarantined patients) are eligible for a communicable disease per diem for the duration of the quarantine. [1] On the Social Insurance Institution of Finland website, it is further stated that in addition to Finnish residents insured under Finnish social insurance, nationals of EU, EEA, Switzerland and the UK, may be eligible for the per diem as well. [2] According to the National Institute for Health and Welfare website on information on quarantine due to COVID-19, those who decide to do voluntary self-isolation, aka self-isolation that has not been ordered by a municipal or hospital district infectious disease doctor, are not eligible for the per diem. [3] Furthermore, people in quarantine or voluntary self-isolation due to COVID-19 all have access to medical attention through municipal health services. [4] In general, according to section 9 of the Act, some of the responsibilities of the municipalities, who are in charge of infectious disease control in their area, include diagnosis, treatment and rehabilitation of people who have a communicable disease. [1] Medical treatment for a dangerous communicable disease, and the medicines needed for treatment of a notifiable communicable disease are free at the point of service, according to the Act on Client Charges in Healthcare and Social Welfare. Furthermore, if the person who has received diagnostics or treatment for a confirmed or suspected case of a dangerous communicable disease is not a resident in Finland, the government will cover the costs of treatment if the payment has not been otherwise covered. [5]

[1] Republic of Finland. 1227/2016. "Communicable Diseases Act (Tartuntatautilaki)". [https://www.finlex.fi/fi/laki/alkup/2016/20161227]. Accessed 17 October 2020.
[2] Social Insurance Institution of Finland. 6 October 2020. "Infectious disease". [https://www.kela.fi/tartuntatauti]. Accessed 18 October 2020.
[3] National Institute for Health and Welfare. 15 October 2020. "Quarantine isolation and quarantine-like situtations (Karanteenieristys ja karanteenia vastaavat olosuhteet". [https://thl.fi/fi/web/infektiotaudit-ja-rokotukset/ajankohtaista/ajankohtaista-koronaviruksesta-covid-19/tarttuminen-ja-suojautuminen-koronavirus/karanteeni-eristys-ja-karanteenia-vastaavat-olosuhteet]. Accessed 18 October 2020.
[4] National Institute for Health and Welfare. 18 October 2020. "Coronavirus treatment and guidance for the sick". [https://thl.fi/fi/web/infektiotaudit-ja-rokotukset/ajankohtaista/ajankohtaista-koronaviruksesta-covid-19/oireet-ja-hoito-koronavirus/koronaviruksen-hoito-ja-ohjeet-sairastuneelle]. Accessed 18 October 2020.
[5] Republic of Finland. 734/1992. "Act on Client Charges in Healthcare and Social Welfare (Laki sosiaali- ja terveydenhuollon asiakasmaksuista)". [https://www.finlex.fi/fi/laki/alkup/1992/19920734]. Accessed 18 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

The country makes de-identified data on contact tracing efforts for COVID-19 available on government websites, however this reporting happens on a weekly basis. The weekly reports include information such as completion of contact tracing for the current week (out of 100%, per hospital district), percentage of exposures being traced to a foreign country, percentage of cases where the source was identified (per hospital district), percentage of infections from household exposure/workplace exposure/restaurant exposure. [1]

[1] National Institute for Health and Welfare. 8 Oct 2020. "Monitoring of the coronavirus". [https://thl.fi/fi/web/infektiotaudit-ja-rokotukset/ajankohtaista/ajankohtaista-koronaviruksesta-covid-19/tilannekatsaus-koronaviruksesta/koronaviruksen-seuranta]. Accessed 14 October 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: 0

There is insufficient evidence of a joint plan or cooperative agreements 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 an active or for a future public health emergency. According to the Communicable Diseases Act chapter 2, the authorities involved in the control of infectious diseases include amongst others the National Institute for Health and Welfare (THL), the State Regional Administrative Agency, municipalities and the joint municipal authorities for specialised health care, and the Finnish Border Guard. Section 10 of the act states that: "[the Finnish Border Guard] must cooperate with the municipalities and joint municipal authorities for specialised health care, and prepare for exceptional epidemics considering Ministry of Social Affairs and Health (MSAH) lead preparedness plans." [1] The WHO Joint External Evaluation (JEE) of IHR Core Capacities for Finland, published in 2017, lists as strengths (under section on Point of Entry) the following: "Helsinki-Vantaa airport and Helsinki port have developed plans and SOPs in cooperation with responsible health authorities and other actors. This has led to mutual understanding, sharing of information and cooperation. Standard operating procedures are in place to deal with passengers arriving by air or sea who are suspected of having an infectious disease. [...] Three international airports have SOPs on how to handle and transport people suspected of having a serious infectious disease from an arriving aircraft to a designated hospital. Implementation of control measures in cooperation with the emergency medical services and border authorities, including handling of passengers' contacts."[2] In July 2020, MSAH has also set up a cooperative committee in charge of health security at border crossings, and it includes representatives from border control authorities as well as the public health system. [3] There is no further evidence of cooperative agreements on the websites of the Ministry of Social Affairs and Health, National Institute for Health and Welfare or the Finnish Border Guard. [4,5,6]

[1] Republic of Finland. 1227/2016. "Communicable Diseases Act (Tartuntatautilaki)". [https://www.finlex.fi/fi/laki/alkup/2016/20161227]. Accessed 17 October 2020.
[2] World Health Organization. March 2017. "Joint External Evaluation of IHR Core Capacities of the Republic of Finland". [http://apps.who.int/iris/bitstream/handle/10665/255690/WHO-WHE-CPI-2017.24-Report-eng.pdf?sequence=1]. Accessed 20 November 2020.
[3] Ministry of Social Affairs and Health. 14 July 2020. "Cooperative committee for health security at border crossings (Rajanylityspaikkojen terveysturvallisuuden yhteistyöryhmä)". [https://stm.fi/hanke?tunnus=STM100:00/2020]. Accessed 17

October 2020.
[4] Ministry of Social Affairs and Health in Finland. "Ministry of Social Affairs and Health in Finland website". [https://stm.fi/etusivu]. Accessed 30 November 2020.
[5] National Institute for Health and Welfare (THL). "THL website". [https://thl.fi/fi/]. Accessed 30 November 2020.
[6] Finnish Border Guard. "Finnish Border Guard website". [https://www.raja.fi]. Accessed 30 November 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

Resources are provided by the government to send citizens to another country to participate in applied epidemiology training programs, but there is no evidence of a field epidemiology training programme available in country. According to the National Institute for Health and Welfare (THL) website, Finland is a participant to European Centre for Disease Prevention and Control (ECDC) EPIET field epidemiology programme, which means that it can send Finnish nationals for EPIET training to participant country's institutions and THL also serves as a training place for other EU nationals. [1] No other evidence of applied epidemiology training programmes available in the country was found on Ministry of Social Affairs and Health, National Institute for Health and Welfare or the TEPHINET network websites. [2,3,4]

[1] National Institute for Health and Welfare (THL). 12 June 2020. "Training services". [https://thl.fi/en/web/infectious-diseases-and-vaccinations/services-and-contact-information/training-services]. Accessed 13 October 2020.
[2] Ministry of Social Affairs and Health in Finland. "Ministry of Social Affairs and Health in Finland website". [https://stm.fi/etusivu]. Accessed 13 October 2020.
[3] National Institute for Health and Welfare (THL). "THL website". [https://thl.fi/fi/]. Accessed 13 October 2020.
[4] Training Programs in Epidemiology and Public Health Interventions Network (TEPHINET). 2020. "Training Programs". [https://www.tephinet.org/training-programs] Accessed 13 October 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

There are available field epidemiology training programmes explicitly inclusive of animal health professionals. According to the National Institute for Health and Welfare (THL) web site, Finland is a participant to European Centre for Disease Control

(ECDC) EPIET field epidemiology programme. Animal health professionals are eligible to apply for this programme as well. [1]

[1] National Institute for Health and Welfare (THL). 13 December 2019. "EPIET programme (EPIET-ohjelma)". [https://thl.fi/fi/web/infektiotaudit/koulutus/epiet]. Accessed 13 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

Finland has an overarching national public health emergency response plan in place which addresses planning for multiple communicable diseases with epidemic or pandemic potential, and this plan is publicly available. According to the WHO Joint External Evaluation of IHR Core Capacities: “Finland has detailed national, regional and municipal preparedness plans for pandemics, environmental health risks and radiation incidents.” [1] Finland has a National preparedness plan for pandemic influenza that is considered as the overarching pandemic preparedness plan. [2] It covers action points that are intended to address any communicable disease with pandemic potential, as exemplified by a statement in its summary: “Being prepared for a flu pandemic simultaneously significantly reinforces Finland’s preparedness to repel any other global epidemic. The structures for repelling infectious diseases reinforced by preparedness support important areas of continuous protection against infectious diseases, and thus promote health of the population. Preparedness supports safeguarding of vital functions of society.” It further states in section 4.1 on the purpose of the pandemic preparedness plan that: “In reality an influenza pandemic or any other bio threat (for which this plan gives a foundation) is unlikely to manifest itself in the way laid out in

this plan."[2] In addition, in 2017 Finland updated the Finnish Security Strategy, which includes in part 2, section 22, details covering biological threats, including micro-organisms and communicable diseases and a paragraph regarding pandemic preparedness. [3] It also describes the main actors and the ways they should collaborate to tackle biological threats. Both the plan and the strategy are publicly available. The Government also set up a cross-sectoral steering committee for strengthening health security work at the national level in 2018. [4]

[1] World Health Organization. March 2017. "Joint External Evaluation of IHR Core Capacities of the Republic of Finland". [http://apps.who.int/iris/bitstream/handle/10665/255690/WHO-WHE-CPI-2017.24-Report-eng.pdf?sequence=1]. Accessed 14 October 2020.
[2] Ministry of Social Affairs and Health in Finland. 30 May 2012. "National preparedness plan for pandemic influenza (Kansallinen varautumissuunnitelma influenssapandemiaa varten)". [http://julkaisut.valtioneuvosto.fi/bitstream/handle/10024/72870/Julk201209.pdf?sequence=1&isAllowed=y]. Accessed 14 October 2020.
[3] The Security Committee in Finland. 2 November 2017. "Finnish Security Strategy (Yhteiskunnan turvallisuusstrategia)". [https://turvallisuuskomitea.fi/wp-content/uploads/2018/02/YTS_2017_suomi.pdf]. Accessed 14 October 2020.
[4] Ministry of Social Affairs and Health. 30.8.2018. "A new cross-sectoral steering committee to strengthen Finnish health security work (Uusi poikkihallinnollinen ohjausryhmä vahvistaa Suomen terveysturvallisuustyötä)". [https://stm.fi/-/uusi-poikkihallinnollinen-ohjausryhma-vahvistaa-suomen-terveysturvallisuustyota]. Accessed 14 October 2020.

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: 0

The overarching plan has not been updated in the last 3 years, although it is currently being updated. The National preparedness plan for pandemic influenza is considered as the overarching pandemic preparedness plan and is currently being updated.[1,2] A website maintained by the National Emergency Supply Agency (NESA) and targeted at the general population has an article from March 2020 on How is Finland prepared for pandemics, which states: "National preparedness for pandemics is steered by the recently updated Communicable Diseases Act and WHO guidelines. The National preparedness plan dates back to 2012 and it is currently being updated."[2] The Ministry of Social Affairs and Health website confirms the use of the plan for other communicable diseases of pandemic potential on a page on coronavirus preparedness: "The Ministry of Social Affairs and Health is responsible for the general planning, guidance and monitoring of the prevention of infectious diseases. It began preparing for the coronavirus disease as soon as it started spreading. Finland's preparedness measures are based on a national preparedness plan for an influenza pandemic." [3]

[1] Ministry of Social Affairs and Health in Finland. 30 May 2012. "National preparedness plan for pandemic influenza (Kansallinen varautumissuunnitelma influenssapandemiaa varten)". [http://julkaisut.valtioneuvosto.fi/bitstream/handle/10024/72870/Julk201209.pdf?sequence=1&isAllowed=y]. Accessed 14 October 2020.
[2] National Emergency Supply Agency. 12 March 2020. "Just in case - How is Finland prepared for pandemics? (Miten Suomi on varautunut pandemioihin)". [https://www.varmuudenvuoksi.fi/aihe/terveydenhuolto/435/miten_suomi_on_varautunut_pandemioihin]. Accessed 18 November 2020. |3] Ministry of Social Affairs and Health in Finland. 14 October 2020. "Coronavirus preparedness". [https://stm.fi/en/coronavirus-preparedness]. Accessed 18 November 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: 1

The overarching plan includes considerations for paediatric and other vulnerable populations. Finland has a National preparedness plan for pandemic influenza that is considered as the overarching pandemic preparedness plan and it includes considerations for paediatric, elderly and disabled populations. It covers action points that are intended to address any communicable disease with pandemic potential.[1] The Ministry of Social Affairs and Health website confirms the use of the plan for other communicable diseases of pandemic potential on a page on coronavirus preparedness: "The Ministry of Social Affairs and Health is responsible for the general planning, guidance and monitoring of the prevention of infectious diseases. It began preparing for the coronavirus disease as soon as it started spreading. Finland's preparedness measures are based on a national preparedness plan for an influenza pandemic." [2] The plan touches upon differences of disease development and treatment in children and the elderly, the preparedness regarding increased demand for social care services for the elderly and the disabled and ensuring day care services for children, vaccination "order" depending on the scale or potential scale of the pandemic that places paediatric populations and the elderly in priority categories and specific actions to decrease social contacts for children and young people during a pandemic.[1] The other existing plan, the Finnish Security Strategy has much less detail and only considers the population as a whole. [3]

[1] Ministry of Social Affairs and Health in Finland. 30 May 2012. "National preparedness plan for pandemic influenza (Kansallinen varautumissuunnitelma influenssapandemiaa varten)". [http://julkaisut.valtioneuvosto.fi/bitstream/handle/10024/72870/Julk201209.pdf?sequence=1&isAllowed=y]. Accessed 14 October 2020.
[2] Ministry of Social Affairs and Health in Finland. 14 October 2020. "Coronavirus preparedness". [https://stm.fi/en/coronavirus-preparedness]. Accessed 18 November 2020.
[3] The Security Committee in Finland. 2 November 2017. "Finnish Security Strategy (Yhteiskunnan turvallisuusstrategia)". [https://turvallisuuskomitea.fi/wp-content/uploads/2018/02/YTS_2017_suomi.pdf]. Accessed 18 November 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: 1

There is some evidence that Finland has mechanisms for engaging with the private sector to assist with outbreak emergency preparedness and response. The National Emergency Supply Agency is responsible for ensuring the supply of critical emergency items in key sectors, including healthcare. The healthcare section is responsible for the storage of supplies and medicines for pandemic preparedness. [2] As part of this planning, it is clearly stated that the Emergency Supply Agency works with the private sector to provide funds for compulsory storage of medicines. [3] In addition, it is also stated that Finland includes private sector representatives in supply planning. The National Emergency Supply Council for Finland includes both representatives from the public and the private sectors. [4,5]

[1] National Emergency Supply Agency. "About security of supply." [https://www.huoltovarmuuskeskus.fi/tietoa-huoltovarmuudesta]. Accessed 13 October 2020.
[2] National Emergency Supply Agency. "Industry Sectors." [https://www.huoltovarmuuskeskus.fi/toimialat]. Accessed 13 October 2020.
[3] National Emergency Supply Agency. "Preparedness Arrangements." [https://www.huoltovarmuuskeskus.fi/toimialat/terveydenhuolto/varautumisjarjestelyt]. Accessed 13 October 2020.
[4] National Emergency Supply Agency. "The National Emergency Supply Council." [https://www.huoltovarmuuskeskus.fi/organisaatio/huoltovarmuusneuvosto]. Accessed 13 October 2020.
[5] National Emergency Supply Agency. "Supply Council Members 1.7.2018-30.6.2021." [https://cdn.huoltovarmuuskeskus.fi/app/uploads/2019/04/15075913/HVN_18-21_v3.pdf]. Accessed 13 October 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: 2

The country has a plan and guidelines in place to implement non-pharmaceutical interventions (NPIs), during an epidemic or pandemic for more than one disease. Finland has a National preparedness plan for pandemic influenza that is considered as the overarching pandemic preparedness plan and that outlines non-pharmaceutical interventions that may reduce contagion, spread of virus, contact between people and protection from infected people.[1] It covers action points that are intended to address any communicable disease with pandemic potential. The Ministry of Social Affairs and Health website confirms the use of the plan for other communicable diseases of pandemic potential on a page on coronavirus preparedness: "The Ministry of Social Affairs and Health is responsible for the general planning, guidance and monitoring of the prevention of infectious diseases. It began preparing for the coronavirus disease as soon as it started spreading. Finland's preparedness measures are based on a national preparedness plan for an influenza pandemic." [2] The non-pharmaceutical interventions in the plan include recommendations for remote work, cancellation of larger scale public events, school closures, promotion of good cough and hand hygiene, international and national travel restrictions etc. Each intervention includes criteria for when the intervention should be implemented using WHO numbered phases of the pandemic. [1] The plan dates back to 2012, however it is currently being updated, according to an article on the National Emergency Supply Agency website: "National preparedness for pandemics is steered by the recently updated Communicable Diseases Act and WHO guidelines. The National preparedness plan dates back to 2012 and it is currently being updated." [3] The National Institute for Health and Welfare (THL) is the agency responsible for health guidance during epidemics and pandemics.[1] Their website includes a

variety of guidelines in relation to the COVID-19 epidemic, including preventive actions such as social distancing, cough and hand hygiene and mask use [4].

[1] Ministry of Social Affairs and Health in Finland. 30 May 2012. "National preparedness plan for pandemic influenza (Kansallinen varautumissuunnitelma influenssapandemiaa varten)". [http://julkaisut.valtioneuvosto.fi/bitstream/handle/10024/72870/Julk201209.pdf?sequence=1&isAllowed=y]. Accessed 15 October 2020.
[2] Ministry of Social Affairs and Health in Finland. 14 October 2020. "Coronavirus preparedness". [https://stm.fi/en/coronavirus-preparedness]. Accessed 18 November 2020.
[3] National Emergency Supply Agency. 12 March 2020. "Just in case - How is Finland prepared for pandemics? (Miten Suomi on varautunut pandemioihin)". [https://www.varmuudenvuoksi.fi/aihe/terveydenhuolto/435/miten_suomi_on_varautunut_pandemioihin]. Accessed 18 November 2020.
[4] National Institute for Health and Welfare. 13 October 2020. Contagion and protection - coronavirus (Tarttuminen ja suojautuminen - koronavirus). [https://thl.fi/fi/web/infektiotaudit-ja-rokotukset/ajankohtaista/ajankohtaista-koronaviruksesta-covid-19/tarttuminen-ja-suojautuminen-koronavirus].Accessed 15 October 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

Finland meets both the criteria of having activated their national emergency response plan for an infectious disease outbreak in the past year and of having completed a national-level biological threat-focused exercise in the past year. On the Ministry for Social Affairs and Health website on coronavirus preparedness it is stated that: "The Ministry of Social Affairs and Health is responsible for the general planning, guidance and monitoring of the prevention of infectious diseases. It began preparing for the coronavirus disease as soon as it started spreading. Finland's preparedness measures are based on a national preparedness plan for an influenza pandemic." [1,2] There is also evidence of the country having conducted a biological threat-focused exercise in the past year. [3] This exercise is not described in much detail, however the different actors involved were the Finnish Border Guard, Police, Customs, National Institute for Health and Welfare, Ministry for Social Affairs and Health, Hospital district of Helsinki and Uusimaa, City of Vantaa, Finavia (Finnish airport operator) and Traficom (Finnish Transport and Communication Agency). [3] In a video posted on the Customs Twitter account on the 11 December 2019 (day of the exercise), it is stated that the exercise involved practising preparedness, especially cooperation between authorities in the case of suspecting a communicable disease outbreak. [4] There is no further information on simulation exercises available on the WHO extranet site on simulation exercises. [5].

[1] Ministry of Social Affairs and Health in Finland. 14 October 2020. "Coronavirus preparedness". [https://stm.fi/en/coronavirus-preparedness]. Accessed 18 November 2020.
[2] Ministry of Social Affairs and Health in Finland. 30 May 2012. "National preparedness plan for pandemic influenza (Kansallinen varautumissuunnitelma influenssapandemiaa varten)". [http://julkaisut.valtioneuvosto.fi/bitstream/handle/10024/72870/Julk201209.pdf?sequence=1&isAllowed=y]. Accessed 17 October 2020.
[3] Lentoposti (Avian news). 10 December 2019. "Authorities practice responding to a biothreat at the Helsinki-Vantaa airport on Wednesday 11 December (Viranomaiset harjoittelevat biouhan torjuntaa Helsinki-Vantaalla keskiviikkona 11. joulukuuta). [http://www.lentoposti.fi/uutiset/viranomaiset_harjoittelevat_biouhan_torjuntaa_helsinki_vantaalla_keskiviikkona_11_joulukuuta]. Accessed 18 November 2020.
[4] Customs. 11 December 2019. "Customs twitter account". [https://twitter.com/SuomenTulli/status/1204656409352245254]. Accessed 18 November 2020.
[5] World Health Organization. "Extranet site - Simulation exercises". [https://extranet.who.int/sph/simulation-exercise]. Accessed 18 November 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: 0

There is insufficient evidence of the country having identified gaps and best practices in response to an infectious disease response and developed a plan to improve response capabilities, and that the plan having been published. Although the Ministry of Social Affairs and Health website on corona preparedness includes a plan called Implementing the COVID-19 epidemic management hybrid strategy - Preparing for a potential second wave, and this plan implies the identification of gaps and best practices and explicitly outlines a plan to improve response capabilities, it has not been framed as an After Action Review and does not feature on the WHO After Action Review website. [1,2] No evidence of further reports or plans was found on the websites of the WHO Regional Office for Europe, Ministry of Social Affairs and Health, Ministry of Forestry and Agriculture or Institute of Health and Welfare. [3,4,5,6]

[1] Ministry for Social Affairs and Health & National Institute for Health and Welfare. 8 July 2020. "Implementing the COVID-19 epidemic management hybrid strategy - Preparing for a potential second wave (COVID 19 -epidemian hallinnan hybridistrategian toteuttaminen - Mahdolliseen toiseen aaltoon varautuminen)". [https://stm.fi/documents/1271139/21475529/COVID+19+-epidemian+hallinnan+hybridistrategian+toteuttaminen+-+Mahdolliseen+toiseen+aaltoon+varautuminen.pdf/3c667955-2927-5067-8ca8-e51d79796d8e/COVID+19+-epidemian+hallinnan+hybridistrategian+toteuttaminen+-+Mahdolliseen+toiseen+aaltoon+varautuminen.pdf?t=1598343908408]. Accessed 17 October 2020.
[2] World Health Organization. "Extranet - After Action Review". [https://extranet.who.int/sph/after-action-review]. Accessed 18 November 2020.
[3] WHO Regional Office for Europe. "Finland". [https://www.euro.who.int/en/countries/finland]. Accessed 18 November 2020.
[4] Ministry of Social Affairs and Health in Finland. "Ministry of Social Affairs and Health in Finland website". [https://stm.fi/etusivu]. Accessed 18 November 2020.
[5] Ministry of Agriculture and Forestry in Finland. "Ministry of Agriculture and Forestry of Finland website".

[https://mmm.fi/etusivu]. Accessed 18 November 2020.
[6] National Institute for Health and Welfare (THL). "THL website". [https://thl.fi/fi/]. Accessed 18 November 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: 1

There is evidence that the country in the past year has undergone a national-level biological threat-focused exercise that has included private sector representatives. The relevant authorities carried out a biological threat-focused exercise in December 2019. This exercise included a private sector representative Finavia, which is an airport company. [1] The exercise is not described in much detail, however the different actors involved were the Finnish Border Guard, Police, Customs, National Institute for Health and Welfare, Ministry for Social Affairs and Health, Hospital district of Helsinki and Uusimaa, City of Vantaa, Finavia (Finnish airport operator) and Traficom (Finnish Transport and Communication Agency). [2] In a video posted on the Customs Twitter account on the 11 December 2019 (day of the exercise), it is stated that the exercise involved practising preparedness, especially cooperation between different actors in the case of suspecting a communicable disease outbreak. [3] There is no further information on simulation exercises available on the WHO extranet site on simulation exercises. [4].

[1] Lentoposti (Avian news). 10 December 2019. "Authorities practice responding to a biothreat at the Helsinki-Vantaa airport on Wednesday 11 December (Viranomaiset harjoittelevat biouhan torjuntaa Helsinki-Vantaalla keskiviikkona 11. joulukuuta). [http://www.lentoposti.fi/uutiset/viranomaiset_harjoittelevat_biouhan_torjuntaa_helsinki_vantaalla_keskiviikkona_11_joulukuuta]. Accessed 17 October 2020.
[2] Lentoposti (Avian news). 10 December 2019. "Authorities practice responding to a biothreat at the Helsinki-Vantaa airport on Wednesday 11 December (Viranomaiset harjoittelevat biouhan torjuntaa Helsinki-Vantaalla keskiviikkona 11. joulukuuta). [http://www.lentoposti.fi/uutiset/viranomaiset_harjoittelevat_biouhan_torjuntaa_helsinki_vantaalla_keskiviikkona_11_joulukuuta]. Accessed 18 November 2020.
[3] Customs. 11 December 2019. "Customs twitter account". [https://twitter.com/SuomenTulli/status/1204656409352245254]. Accessed 18 November 2020.
[4] World Health Organization. "Extranet site - Simulation exercises". [https://extranet.who.int/sph/simulation-exercise]. Accessed 18 November 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

Finland has an Emergency Operations Centre. According to the WHO Joint External Evaluation of IHR Core Capacities: "Finland has well-established emergency response operations, with a network of public health emergency operation centres

forming a virtual centre. This virtual centre is responsible for recognizing and responding to public health emergencies at the national level. In the event of a major emergency, several physical operation centres are also available. Depending on the type of threat, responsible authorities coordinate and collaborate with relevant national authorities." [1] The Emergency Response Centre Agency in Finland describes, in its strategy 2016-2020, as its objective to create a networked, virtual system in which the emergency response centres, operating in several offices, can operate as a single entity. [2,3]

[1] World Health Organization. March 2017. "Joint External Evaluation of IHR Core Capacities of the Republic of Finland". [http://apps.who.int/iris/bitstream/handle/10665/255690/WHO-WHE-CPI-2017.24-Report-eng.pdf?sequence=1]. Accessed 13 October 2020.
[2] Emergency Response Centre Agency Finland. "Emergency Response Centre Agency Finland". [https://112.fi/en/frontpage]. Accessed 13 October 2020.
[3] Emergency Response Centre Agency Finland. "Emergency Response Centre Agency Finland strategy 2016-2020". [https://112.fi/virasto]. Accessed 13 October 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 evidence to suggest that the EOC would be required to conduct a drill at least once per year, nor that it has conducted annual drills. According to the WHO Joint External Evaluation of IHR Core Capacities: "Regular multisectoral exercises have tested Finland's capacity to activate emergency operations." [1] However, the frequency of "regular" is not defined in the report. The Rescue Act 379/2011 mentions drills and the need for them several times in the text, including in section 105 'Conditional fine and notice of action': "Anyone who [...] 8) neglects to organize exercises to ensure the workability of the [external emergency] plan", however there is no requirement regarding their frequency [2]. The Interior Ministry Decree on External Rescue Plans states that 'external rescue drills' need to be carried out at least every 3 years. [3] The Emergency Powers Act 1552/2011 states in chapter 3 'Preparedness', section 12, that: "The Government, the state administrative authorities, state businesses and other state authorities as well as municipalities shall ensure, by means of emergency plans, prior preparation of emergency operations and other measures, that their duties will be performed with the least amount of disruption also in emergency conditions." [4] Furthermore, the Finnish Security Strategy mentions drills as an important part of preparedness, however it does not comment on the regularity of these drills. [5] The annual report 2019 of the Ministry of Social Affairs and Health (MSAH) mentions that "Ministry officials participated in several preparedness drills during the year", however it is not clear whether these drills for public health emergency scenarios and who participated in the drills. [6] The contract between MSAH and the National Institute for Health and Welfare (THL) mentions that "THL is required to execute two preparedness exercises with an infection-scenario in 2019", however whether this is a regular requirement remains unclear. [7] No further evidence as to the frequency of drills for a public health emergency scenario was found on the MSAH or Emergency Response Centre Agency website. [8,9]

[1] World Health Organisation. 2017. "Joint External Evaluation of IHR Core Capacities of the Republic of Finland". [http://apps.who.int/iris/bitstream/handle/10665/255690/WHO-WHE-CPI-2017.24-Report-eng.pdf?sequence=1]. Accessed 13 October 2020.
[2] Republic of Finland. 2011. "The Rescue Act (Pelastuslaki)". [https://www.finlex.fi/en/laki/kaannokset/2011/en20110379]. Accessed 13 October 2020.
[3] Republic of Finland. 1286/2019. Ministry of Interior Decree on External Rescue Plans (Sisäministeriön asetus ulkoisista pelastussuunnitelmista). [https://www.finlex.fi/fi/laki/alkup/2019/20191286]. Accessed 13 October 2020.

[4] Republic of Finland. 2011. "Emergency Powers Act (Valmiuslaki)".
[https://www.finlex.fi/fi/laki/ajantasa/2011/20111552#L12]. Accessed 13 October 2020.
[5] The Security Committee in Finland. 2017. "Finnish Security Strategy (Yhteiskunnan turvallisuusstrategia)".
[https://turvallisuuskomitea.fi/wp-content/uploads/2018/02/YTS_2017_suomi.pdf]. Accessed 13 October 2020.
[6] Ministry of Social Affairs and Health in Finland. "Ministry of Social Affairs and Health in Finland annual financial and action report 2019 (Sosiaali- ja terveysministeriön tilinpäätös ja toimintakertomus vuodelta 2019)".
[https://julkaisut.valtioneuvosto.fi/bitstream/handle/10024/162108/STM_2020_8_rap.pdf?sequence=1&isAllowed=y]. Accessed 13 October 2020.
[7] Ministry of Social Affairs and Health in Finland. "MSAH and THL contractual agreement 2016-2019; objectives for 2019 (Sosiaali-ja terveysministeri&#xfffd;nja Terveyden ja hyvinvoinnin laitoksen tulossopimus vuosille 2016-2019; tulostavoitteet 2019)". [https://stm.fi/documents/1271139/12206332/Terveyden+ja+hyvinvoinnin+laitos.pdf/f14c28e3-2bb8-4a57-d47b-44ea71c661e1/Terveyden+ja+hyvinvoinnin+laitos.pdf?version=1.0&t=1550042183000]. Accessed 13 October 2020.
[8] Ministry of Social Affairs and Health in Finland. [https://stm.fi/etusivu]. Accessed 13 October 2020.
[9] Emergency Response Centre Agency Finland. [https://www.112.fi/en/erca]. Accessed 13 October 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 evidence to show that the EOC can conduct a coordinated emergency response or emergency response exercise activated within 120 minutes of the identification of the public health emergency/scenario, however there is no evidence to confirm that such an exercise has been conducted in the past year. According to the WHO Joint External Evaluation Tool, scoring at least 4/5 on the indicator R.2.3 Emergency Operations Programme, would mean that the country has demonstrated capacity that: "EOC activated a coordinated emergency response or exercise within 120 minutes of the identification of a public health emergency; response utilized operations, logistic and planning functions" [1]. According to Finland's WHO Joint Evaluation of IHR Core Capacities, Finland scored 5/5 on this indicator. However, the mission was conducted in March 2017 [2]. There have been mutual catastrophe exercises in Finland, most recently in February 2020 with the Emergency Response Centre with amongst other the Finnish Defence Forces, Finnish Police and some hospital districts, however the details of such exercises have usually not been made public. [3]

[1] World Health Organization. 2016. WHO Joint External Evaluation Tool: International Health Regulations (2005).
[http://apps.who.int/iris/bitstream/handle/10665/204368/9789241510172_eng.pdf?sequence=1]. Accessed 13 October 2020.
[2] World Health Organization. March 2017. "Joint External Evaluation of IHR Core Capacities of the Republic of Finland".
[http://apps.who.int/iris/bitstream/handle/10665/255690/WHO-WHE-CPI-2017.24-Report-eng.pdf?sequence=1]. Accessed 13 October 2020.
[3] Kaupunkimedia Aamuset. 6 February 2020. "Catastrophe exercises for authorities are used to simulate storms, floods and fires".
[https://aamuset.fi/artikkeli/4853082/Viranomaisten+suuronnettomuusharjoituksessa+simuloidaan+hatatilanteita+esimerkiksi+myrskyja+tulvia+ja+tulipaloja]. Accessed 13 October 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: 1

There is evidence that Finland has agreements between public health and security authorities to respond to a potential deliberate biological event and evidence to demonstrate that it has conducted a response exercise. [1] Since 2005, there has existed a mutual venture between the National Institute for Health and Welfare (THL) and the Finnish Defence Forces called the Knowledge Centre on Biological Threats (Biologisten uhkien osaamiskeskus). According to the Centre's webpage, its mission objective is to support the fight against potential biological threats and preparedness to them as well as raise awareness and foster cooperation at the national level in relation to these threats. [1] Additionally, according to the WHO's Joint External Evaluation (JEE) report for Finland, published in 2017, Finland scored 5/5 on the indicator R.3.1 Public Health and Security Authorities, (e.g. Law Enforcement, Border Control, Customs) are linked during a suspect or confirmed biological event, which according to the WHO JEE tool translates into: " Public health and security authorities exchange reports and information on events of joint concern at national, intermediate and local levels using the formal MOU or other agreement (i.e., protocol) and public health and security authorities engage in a joint training program to orient, exercise, and institutionalize knowledge of MOU or other agreements". [2,3] Although there is evidence of agreements and protocols in place, there is limited evidence to demonstrate that Finland has conducted a response exercise. According to the Lentoposti news website, authorities including Border Control, Police, National Institute for Health and Welfare, Ministry for Social Affairs and Health, Helsinki and Uusimaa hospital district, City of Vantaa, Finavia and Trafi, conducted a training exercise on responding to a biothreat at the Helsinki Vantaa Airport on 11 December 2019. [4]

[1] National Institute for Health and Welfare (THL). 1 November 2019. "Knowledge Centre on Biological Threats (Biologisten uhkien osaamiskeskus)." [https://thl.fi/fi/web/infektiotaudit/laboratoriotoiminta/biologisten-uhkien-osaamiskeskus]. Accessed 15 October 2020.
[2] World Health Organization. March 2017. "Joint External Evaluation of IHR Core Capacities of the Republic of Finland". [http://apps.who.int/iris/bitstream/handle/10665/255690/WHO-WHE-CPI-2017.24-Report-eng.pdf?sequence=1]. Accessed 15 October 2020.
[3] World Health Organization. 2016. WHO Joint External Evaluation Tool: International Health Regulations (2005). [http://apps.who.int/iris/bitstream/handle/10665/204368/9789241510172_eng.pdf?sequence=1].Accessed 15 October 2020.
[4] Lentoposti (Avian news). 10 December 2019. "Authorities practice responding to a biothreat at the Helsinki-Vantaa airport on Wednesday 11 December (Viranomaiset harjoittelevat biouhan torjuntaa Helsinki-Vantaalla keskiviikkona 11. joulukuuta). [http://www.lentoposti.fi/uutiset/viranomaiset_harjoittelevat_biouhan_torjuntaa_helsinki_vantaalla_keskiviikkona_11_joulukuuta]. Accessed 15 October 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: 1

The risk communication plan included in the National Preparedness Plan for Pandemic Influenza outlines how messages will reach populations and sectors with different communications needs. The National Preparedness Plan for Pandemic Influenza, which was designed also with biothreats beyond influenza in mind, includes a large section on communications which touches upon different populations with different communication needs and how these may be addressed. The plan mentions that different groups of people have different communication needs: for example, communication should be available in the country's languages Finnish, Swedish and Saame as well as partly in Russian and Somali and depending on the local needs, in other languages as well. It is also stated that many different communication channels must be used in order to reach the whole population, such as traditional media, internet, social media, telephone, teletext, email, traditional post, paid ads etc, and that this is because not everyone knows how to operate with one common form of communication. For example, by using social media it will be possible to 'address the population within their social environment and to better understand the different communication needs'. Furthermore, it is stated that municipalities and their health centres are in charge of local communication in order to ensure geographical reach. [1] The Finnish Security Strategy does not really touch upon communications in such detail and also not in relation to biological threats or ensuring the continuity of health care in the system in case of emergency. [2]

[1] Ministry of Social Affairs and Health in Finland. 30 May 2012. "National preparedness plan for pandemic influenza (Kansallinen varautumissuunnitelma influenssapandemiaa varten)". [http://julkaisut.valtioneuvosto.fi/bitstream/handle/10024/72870/Julk201209.pdf?sequence=1&isAllowed=y]. Accessed 13 October 2020.
[2] The Security Committee in Finland. 2 November 2017. "Finnish Security Strategy (Yhteiskunnan turvallisuusstrategia)". [https://turvallisuuskomitea.fi/wp-content/uploads/2018/02/YTS_2017_suomi.pdf]. Accessed 13 October 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

There is evidence that Finland has risk communications plans in place. A detailed risk communication plan is included in a national public health emergency response plan. The National preparedness plan for pandemic influenza, which was designed also with biothreats beyond influenza in mind, includes a large section on communications detailing a risk communications plan during pandemics and public health crises [1]. According to the WHO Joint External Evaluation of IHR

Core Capacities of Finland, published in 2017, the strengths in Finland in relation to risk communication are that: "Each national authority has their own crisis communication guidelines, which are complementary to central governmental communications guidelines. [...] Communication regarding the control of communicable diseases is implemented at all administrative levels: local, regional and national. " [2] The Finnish Security Strategy does not touch upon risk communications during public health emergencies. [3]

[1] Ministry of Social Affairs and Health in Finland. 30 May 2012. "National preparedness plan for pandemic influenza (Kansallinen varautumissuunnitelma influenssapandemiaa varten)". [http://julkaisut.valtioneuvosto.fi/bitstream/handle/10024/72870/Julk201209.pdf?sequence=1&isAllowed=y]. Accessed 13 October 2020.
[2] World Health Organization. March 2017. "Joint External Evaluation of IHR Core Capacities of the Republic of Finland". [http://apps.who.int/iris/bitstream/handle/10665/255690/WHO-WHE-CPI-2017.24-Report-eng.pdf?sequence=1]. Accessed 13 October 2020.
[3] The Security Committee in Finland. 2 November 2017. "Finnish Security Strategy (Yhteiskunnan turvallisuusstrategia)". [https://turvallisuuskomitea.fi/wp-content/uploads/2018/02/YTS_2017_suomi.pdf]. Accessed 13 October 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: 0

The risk communication plan does not designate a specific position within the government to serve as the primary spokesperson to the public during a public health emergency. The National preparedness plan for pandemic influenza, which was designed also with biothreats beyond influenza in mind, includes a large section on communications detailing a risk communications plan during pandemics and public health crises. [1] Although it mentions that each ministry will be responsible for the communication regarding their respective fields, and that the Ministry for Social Affairs and Health and the National Institute for Health and Welfare (THL) are responsible for risk communication regarding health generally, there is no clear position or person identified. [1] There are no further details to this effect in the other relevant document, the Finnish Security Strategy, either. [2]

[1] Ministry of Social Affairs and Health in Finland. 30 May 2012. "National preparedness plan for pandemic influenza (Kansallinen varautumissuunnitelma influenssapandemiaa varten)". [http://julkaisut.valtioneuvosto.fi/bitstream/handle/10024/72870/Julk201209.pdf?sequence=1&isAllowed=y]. Accessed 15 October 2020.
[2] The Security Committee in Finland. 2 November 2017. "Finnish Security Strategy (Yhteiskunnan turvallisuusstrategia)". [https://turvallisuuskomitea.fi/wp-content/uploads/2018/02/YTS_2017_suomi.pdf]. Accessed 15 October 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 public health system has actively shared messages via online media platforms to inform the public about ongoing public health concerns and/or dispel rumors, misinformation or disinformation. The National Institute for Health and Welfare (THL) publishes minimum once a week a newsletter called "Infection news" [1], which as well as being sent to health facilities and health professionals or anyone else interested, appears on the THL web site. These news include for example information about epidemics or cases with potential to escalate into epidemics combined with guidance to health professionals and the general public: most recently THL informed the public of the reduction of the COVID-19 quarantine from 14 to 10 days and on the discovery that similar salmonella strains have been found in hedgehogs and humans in Finland. [2,3] THL also keeps the public informed via their general website news and their Twitter account, for example regarding influenza epidemic and vaccines, and most recently on COVID-19 also in English. [4,5,6,7] The Ministry of Social Affairs and Health also has active twitter and YouTube accounts for publishing health related news. [8,9]

[1] National Institute for Health and Welfare (THL, web site). "Infection News (Infektiouutiset)". [https://thl.fi/fi/web/infektiotaudit/ajankohtaista/infektiouutiset]. Accessed 18 October 2020.
[2] National Institute for Health and Welfare (THL). 8 October 2020. "COVID-19 related quarantine to reduce to 10 days (Koronaan liittyvätn karanteenin pituus lyhenee 10 päivään 12.10 alkaen)". [https://thl.fi/fi/-/koronaan-liittyvan-karanteenin-pituus-lyhenee-10-paivaan-12.10.-alkaen]. Accessed 18 October 2020.
[3] National Institute for Health and Welfare (THL). 23 September 2020. "Similar salmonella strains found in hedgehogs and humans in Finland (Samanlaista salmonellakantaa todettu siilillä ja ihmisillä Suomessa)". [https://thl.fi/fi/web/infektiotaudit-ja-rokotukset/-/samanlaista-salmonellakantaa-todettu-siililla-ja-ihmisilla-suomessa]. Accessed 18 October 2020.
[4] National Institute for Health and Welfare (THL). "THL Twitter Account (THL Twitter-tili)". [https://twitter.com/THLorg]. Accessed 18 October 2020.
[5] National Institute for Health and Welfare. 20 February 2020. "Influenza peak yet ahead - it is still worth to get vaccinated (Influenssaepidemian huippu on vasta edessä - vielä kannattaa ottaa rokote)". [https://thl.fi/fi/-/influenssaepidemian-huippu-on-vasta-edessa-viela-kannattaa-ottaa-rokote]. Accessed 18 October 2020.
[6] National Institute for Health and Welfare. 20 February 2020. "Influenza epidemic has started off slowly this year". [https://twitter.com/thlorg/status/1230345280949800960]. Accessed 18 October 2020.
[7] National Institute for Health and Welfare. 16 October 2020. "Situation update on coronavirus". [https://twitter.com/THLorg/status/1317092443079102465]. Accessed 18 October 2020.
[8] Ministry of Social Affairs and Health in Finland. "Ministry of Social Affairs and Health in Finland Youtube Account (Sosiaali- ja terveysministeriön Youtube-tili)". https://www.youtube.com/user/STMFinlandOfficial/videos]. Accessed 18 October 2020.
[9] Ministry of Social Affairs and Health in Finland. "Ministry of Social Affairs and Health in Finland Twitter Account (Sosiaali- ja terveysministeriön Twitter-tili)". [https://twitter.com/STM_Uutiset]. Accessed 18 October 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 that senior leaders (president or ministers) have shared misinformation or disinformation on infectious diseases in the past two years. There is no evidence of senior leaders sharing misinformation or disinformation on infectious

diseases on their social media accounts, Ministry for Social Affairs and Health or National Institute for Health and Welfare websites, nor elsewhere in the media. [1,2,3,4,5,6, 7]

[1] Sauli Niinistö (President 2012-). "Sauli Niinistö twitter account". [https://twitter.com/niinisto]. Accessed 18 October 2020.
[2] Sanna Marin (Prime Minister 2019-). "Sanna Marin twitter account". [https://twitter.com/MarinSanna]. Accessed 18 October 2020.
[3] Krista Kiuru (Minister of Family Affairs and Social Services 2019-). "Krista Kiuru twitter account". [https://twitter.com/KristaKiuru]. Accessed 18 October 2020.
[4] Finnish News Agency STT. "Finnish News Agency website". [https://stt.fi]. Accessed 18 October 2020.
[5] Ministry for Social Affairs and Health. "Ministry for Social Affairs and Health website". [https://stm.fi/etusivu]. Accessed 18 October 2020.
[6] National Institute for Health and Welfare (THL). "THL website". [https://thl.fi/fi/]. Accessed 18 October 2020.
[7] Aino-Kaisa Pekonen (Minister of Social Affairs and Health 2019-). "Aino-Kaisa Pekonen twitter account". [https://twitter.com/akpekonen]. Accessed 18 October 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: 89.61

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: 129.24

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: 1.0

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: 0

There is evidence that Finland, in the pas year, has 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. On 14 March 2020, in light of the pandemic, the European Union (EU), of which Finland is a member, adopted Regulation 2020/402, under which special authorization was required to export personal protective equipment (masks, gloves, goggles, face shields and overalls) out of the EU. [1] On 23 April 2020 this was superseded by a new regulation, numbered 2020/568, under which authorization was required to export personal protective equipment out of the EU, except to Albania, Andorra, Bosnia, the Faroe Islands, Gibraltar, Iceland, Kosovo, Liechtenstein, Montenegro, Norway, North Macedonia, San Marino, Serbia and Switzerland. [2]

[1] Helsingin Sanomat. 6 March 2020. "Lack of PPE and export restrictions are a concern in the EU - minister Kiuru says that Finland's preparedness is above average (Suojavarustepula ja vientikiellot huolettavat EU-maissa - ministeri Kiuru: Suomen varautumistilanne keskimääräistä parempi)". [https://www.hs.fi/politiikka/art-2000006430950.html]. Accessed 18 October 2020.
[2] Government of Finland. "Government of Finland website". [https://valtioneuvosto.fi/en/frontpage]. Accessed 18 October 2020.
[3] Ministry for Foreign Affairs. "Ministry for Foreign Affairs website". [https://um.fi/frontpage]. Accessed 18 October 2020.
[4] Ministry of Social Affairs and Health in Finland. "Ministry of Social Affairs and Health in Finland website". [https://stm.fi/etusivu]. Accessed 18 October 2020.
[5] National Institute for Health and Welfare (THL). "THL website". [https://thl.fi/fi/]. Accessed 18 October 2020.

[6] Finnish News Agency STT. "Finnish News Agency website". [https://stt.fi]. Accessed 18 October 2020.
[7] Ministry of Economic Affairs and Employment. "Ministry of Economic Affairs and Employment". [https://tem.fi/en/frontpage]. Accessed 18 October 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

In the past year, the country has not issued restrictions, without international/bilateral support, on the export/import of non-medical goods due to an infectious disease outbreak. No evidence to this effect was found on Government, Ministry of Economic Affairs and Employment, Ministry for Foreign Affairs, Ministry for Social Affairs and Health, National Institute for Health and Welfare, the Finnish News Agency STT, Finnish Customs or Finnish Food Authority websites. [1,2,3,4,5,6,7,8]

[1] Government of Finland. "Government of Finland website". [https://valtioneuvosto.fi/en/frontpage]. Accessed 18 October 2020.
[2] Ministry for Foreign Affairs. "Ministry for Foreign Affairs website". [https://um.fi/frontpage]. Accessed 18 October 2020.
[3] Ministry of Social Affairs and Health in Finland. "Ministry of Social Affairs and Health in Finland website". [https://stm.fi/etusivu]. Accessed 18 October 2020.
[4] National Institute for Health and Welfare (THL). "THL website". [https://thl.fi/fi/]. Accessed 18 October 2020.
[5] Finnish News Agency STT. "Finnish News Agency website". [https://stt.fi]. Accessed 18 October 2020.
[6] Ministry of Economic Affairs and Employment. "Ministry of Economic Affairs and Employment". [https://tem.fi/en/frontpage]. Accessed 18 October 2020.
[7] Finnish Customs. "Finnish Customs website". [https://tulli.fi/en/frontpage]. Accessed 18 October 2020.
[8] Finnish Food Authority. "Finnish Food Authority website". [https://www.ruokavirasto.fi]. Accessed 18 October 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

The country has implemented a ban on travelers arriving from a specific country or countries due to the COVID-19 outbreak. Throughout 2020 and the COVID-19 pandemic, the Government has unilaterally restricted travel from a variety of countries hit by the COVID-19 pandemic. [1,2,3] There is no evidence of international or bilateral support for this ban on the websites of relevant media outlets or the Finnish Border Guard, Traficom (Finnish Transport and Communication Agency), Ministry for Foreign Affairs, Ministry of Social Affairs and Health, National Institute for Health and Welfare or the Finnish News Agency, or the WHO Disease outbreak news. [4,5,6,7,8,9,10]

[1] Government of Finland. 11 September 2020. "Government adopts resolution on implementing the hybrid strategy for border traffic and travel". [https://valtioneuvosto.fi/en/-/10616/government-adopts-resolution-on-implementing-the-hybrid-strategy-for-border-traffic-and-travel]. Accessed 18 October 2020.

[2] Government of Finland. 19 August 2020. "Government tightens travel restrictions at internal and external borders". [https://valtioneuvosto.fi/en/-/10616/government-tightens-travel-restrictions-at-internal-and-external-borders]. Accessed 18 October 2020.
[3] Government of Finland. 7 April 2020. "Government decided on tightening restrictions on border traffic along the border with Sweden and Norway and on steps to secure medical care in Åland". [https://valtioneuvosto.fi/en/-/10616/hallitus-linjasi-rajaliikenteen-tiukennuksista-ruotsin-ja-norjan-vastaisella-rajalla-ahvenanmaan-sairaanhoito-turvataan]. Accessed 18 October 2020.
[4] Finnish Border Guard. "Finnish Border Guard website". [https://www.raja.fi]. Accessed 18 November 2020.
[5] Finnish Transport and Communication Agency. Finnish Transport and Communication Agency website [https://www.traficom.fi/en]. Accessed 18 November 2020.
[6] Ministry for Foreign Affairs. "Ministry for Foreign Affairs website". [https://um.fi/frontpage]. Accessed 18 November 2020.
[7] Ministry of Social Affairs and Health in Finland. "Ministry of Social Affairs and Health in Finland website". [https://stm.fi/etusivu]. Accessed 18 November 2020.
[8] National Institute for Health and Welfare (THL). "THL website". [https://thl.fi/fi/]. Accessed 18 November 2020.
[9] Finnish News Agency STT. "Finnish News Agency website". [https://stt.fi]. Accessed 18 November 2020.
[10] World Health Organization. "Disease outbreak news". [http://www.who.int/csr/don/en/]. Accessed 18 November 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: 381.18

2016

WHO; national sources

4.1.1b

Nurses and midwives per 100,000 people

Input number

Current Year Score: 1473.74

2016

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 a public workforce strategy in place in Finland. According to the WHO Joint External Evaluation of IHR Core Capacities for Finland, published in 2017: "Education needs are informed by forecasts, extending to 2030, on the number of graduates required from different educational levels and sectors. [...] Despite the lack of a written national public health workforce strategy, Finland has implemented measures to balance workforce supply and demand." [1] Furthermore, there is a "National Programme for Training Medical and Dental Specialists 2017-2019" (made in 2016) that identifies future specialist workforce needs by using forecasts projected up to 2030, and different strategies to address these needs including standardisation of specialist training curricula, reform of the trainee selection procedures etc. [2]

[1] World Health Organization. March 2017. "Joint External Evaluation of IHR Core Capacities of the Republic of Finland". [http://apps.who.int/iris/bitstream/handle/10665/255690/WHO-WHE-CPI-2017.24-Report-eng.pdf?sequence=1]. Accessed 13 October 2020.
[2] Ministry of Social Affairs and Health in Finland. 30 November 2011. "National Programme for Training Medical and Dental Specialists 2017-2019 (Erikoislääkäri- ja erikoishammaslääkärikoulutuksen valtakunnallinen toimenpideohjelma vuosille 2017-2019". [http://julkaisut.valtioneuvosto.fi/bitstream/handle/10024/78991/STM_raportti_ERL.pdf?sequence=1&isAllowed=y]. Accessed 13 October 2020.

4.1.2 Facilities capacity

4.1.2a

Hospital beds per 100,000 people

Input number

Current Year Score: 361

2018

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: 0

There is insufficient evidence that Finland has the capacity to isolate patients with highly communicable disease in an isolation facility or biocontainment patient care unit within the country.

The National Institute for Health and Welfare Guidelines on actions to be taken when suspecting measles implies the existence of isolation rooms for highly communicable diseases and the Southwest Finland Health Hospital district's Ebola guideline for specialised care explicitly mentions the existence of an airborne isolation room suitable for the isolation of highly communicable diseases [1,2]. Ward 2B Infectious Diseases of the Meilahti Triangle Hospital states that the ward is designed to treat "severe, acute infectious diseases" and that the ward "has plans in place and the staff have been trained to handle new notifiable diseases and their threats, such as haemorrhagic fevers and threats caused by biological weapons." [3] No further evidence available via the Ministry of Social Affairs and Health, National Institute for Health and Welfare and Ministry of Defence websites nor relevant legislation regarding this capacity [4,5,6,7]

[1] National Institute for Health and Welfare. 26 February 2020. "Guidelines on actions to be taken when suspecting measles (Toimenpideohje tuhkarokkotapauksiin)". [https://thl.fi/fi/web/infektiotaudit-ja-rokotukset/taudit-ja-torjunta/taudit-ja-taudinaiheuttajat-a-o/tuhkarokko/toimenpideohje-tuhkarokkotapauksiin]. Accessed 14 October 2020.
[2] Southwest Finland Health Hospital district. 19 May 2020. "Ebola guideline for specialised care (Ebola-ohje erikoissairaanhoitoon". [https://hoito-ohjeet.fi/OhjepankkiVSSHP/Ebola-ohje%20erikoissairaanhoitoon.pdf]. Accessed 14 October 2020.
[3] Helsinki University Hospital. "Ward 2B Infectious Diseases." [https://www.hus.fi/osasto-k2b-infektiosairaudet]. Accessed 14 October 2020.
[4] Ministry of Social Affairs and Health in Finland. "Ministry of Social Affairs and Health in Finland website". [https://stm.fi/etusivu]. Accessed 14 October 2020.
[5] National Institute for Health and Welfare (THL). "THL website". [https://thl.fi/fi/]. Accessed 14 October 2020.
[6] Ministry of Defence in Finland. "Ministry of Defence website". [https://www.defmin.fi/]. Accessed 14 October 2020.
[7] Ministry of Justice. "Finlex". [http://finlex.fi/fi/]. Accessed 14 October 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: 1

There is evidence that the country has a plan to expand isolation capacity and has demonstrated capacity to expand isolation capacity in response to an infectious disease outbreak in the past two years, however there is insufficient evidence of updating or testing the plan in the past two years. The National Preparedness Plan for Pandemic Influenza includes a section describing a plan on how to select and convert spaces for isolating patients in hospitals where there is no designated isolation space. [1] This plan dates back to 2012, and is currently being updated by a pandemic section at the Ministry of Social Affairs and Health set up in December. [2] In the early days of the COVID-19 pandemic, hospital districts and hospitals were mapping and preparing to expand isolation capacity, for example in Kanta-Häme Central Hospital and the Helsinki and Uusimaa Hospital District. [3,4] Furthermore, the city of Helsinki repurposed two health centres to serve as COVID-19-only health centres, thus isolating patients with suspected and confirmed cases of COVID-19 into health facilities. [5] No further evidence regarding updates or testing plans to increase isolation capacity were found in the WHO Joint External Evaluation of IHR Core Capacities report for Finland or on the websites of the Ministry for Social Affairs and Health or the National

Emergency Supply Agency. [6,7,8]

[1] Ministry of Social Affairs and Health. 30 May 2012. “National preparedness plan for pandemic influenza (Kansallinen varautumissuunnitelma influenssapandemiaa varten)”. [https://www.julkari.fi/bitstream/handle/10024/90763/Pandemian%20varautumissuunnitelma%202012.pdf?sequence=1&isAllowed=y]. Accessed 2 May 2021.
[2] Aamulehti. 6 March 2021. “Coronavirus is making Finland update its pandemic preparedness plan (Koronavirus pistää uusiksi Suomen pandemiasuunnitelman)”. [https://www.aamulehti.fi/uutiset/art-2000007839491.html]. Accessed 2 May 2021.
[3] YLE News. 25 February 2020. “Kanta-Häme Central Hospital is prepared for coronavirus: there is capacity to isolate individual patients (Koronavirukseen varauduttu Kanta-Hämeen keskussairaalassa: yksittäisiä potilaita voidaan eristä)”. [https://yle.fi/uutiset/3-11226994]. Accessed 2 May 2021.
[4] YLE News. 27 February 2020. “Helsinki and Uusimaa hospital district is mapping out its spaces for coronavirus patients – there is isolation capacity in every single hospital building (HUS kartoittaa hoitopaikkoja koronaviruspotilaille – eristystiloja löytyy jokaisesta sairaalarakennuksesta)”. [https://yle.fi/uutiset/3-11228220].
[5] YLE News. 17 March 2020. “Helsinki opens another corona only health centre in Malmi (Helsinki avaa toisen koronaterveysaseman Malmille)”. [https://yle.fi/uutiset/3-11262069]. Accessed 2 May 2021.
[6] World Health Organization. March 2017. "Joint External Evaluation of IHR Core Capacities of the Republic of Finland". [http://apps.who.int/iris/bitstream/handle/10665/255690/WHO-WHE-CPI-2017.24-Report-eng.pdf?sequence=1]. Accessed 30 April 2021.
[7] National Emergency Supply Agency. "National Emergency Supply Agency website” [https://www.huoltovarmuuskeskus.fi/]. Accessed 30 April 2021.
[8] Ministry of Social Affairs and Health in Finland. "Ministry of Social Affairs and Health in Finland website". [https://stm.fi/etusivu]. Accessed 30 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: 0

There is a national procurement protocol in place which can be utilized by the Ministry of Social Affairs and Health and Ministry of Agriculture and Forestry for the acquisition of laboratory supplies in Finland for routine needs, but there is insufficient evidence for medical supplies. The WHO Joint External Evaluation (JEE) of IHR Core Capacities for Finland, published in 2017, states that: "Media and reagents for core laboratory tests are produced or procured in-country." [1] Furthermore, the Ministry of Social Affairs and Health is responsible for procurement in the sector it represent (health and social care). The Ministry of Finance website states that: " The Ministry of Finance is responsible for generally guiding and directing central government finances and for the development of the financial administration. The Ministry of Finance guides and directs procurement in central government, for instance through the Government Procurement Strategy, by deciding on centralised joint purchases, developing procurement procedures and maintaining responsibility for the general

terms and conditions of procurement. Each ministry is responsible for procurement within its respective administrative sector." [2] However, no further detail on procurement protocols for medical supplies for routine needs was found in the WHO JEE Report or on the Ministry of Social Affairs and Health, National Institute for Health and Welfare, the Finnish Food Authority or Ministry of Agriculture and Forestry websites. [1,2,3,4,5,6]

[1] World Health Organization. March 2017. "Joint External Evaluation of IHR Core Capacities of the Republic of Finland". [http://apps.who.int/iris/bitstream/handle/10665/255690/WHO-WHE-CPI-2017.24-Report-eng.pdf?sequence=1]. Accessed 20 October 2020.
[2] Ministry of Finance. "Government procurement". [https://vm.fi/en/governance-policy/corporate-services-for-government/government-procurement]. Accessed 20 October 2020.
[3] Ministry of Social Affairs and Health in Finland. "Ministry of Social Affairs and Health in Finland website". [https://stm.fi/etusivu]. Accessed 8 October 2020.
[4] National Institute for Health and Welfare (THL). "THL website". [https://thl.fi/fi/]. Accessed 8 October 2020.
[5] Finnish Food Authority. [https://www.ruokavirasto.fi]. Accessed 8 October 2020.
[6] Ministry of Agriculture and Forestry. "Ministry of Agriculture and Forestry of Finland website". [https://mmm.fi/etusivu]. Accessed 19 October 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

Finland maintains a stockpile of medical supplies (e.g. MCMs, medicines, vaccines, medical equipment, PPE) for national use during a public health emergency and there are details available on what is included. According to the WHO Joint External Evaluation of IHR Core Capacities of Finland, published in 2017, "medicines are stockpiled at the national, regional and local levels, with resources, stocks and needs monitored by the National Emergency Supply Agency (NESA)" and "the Finnish Red Cross has trained personnel and field hospitals with stockpiles that can be deployed within 24 hours abroad and within a few hours domestically." [1] In addition, the National Emergency Supply Agency states on its website that it is responsible for stockpiling vital medical supplies and "crisis-specific medical countermeasure stockpiles", as per stockpiling legislation. [2,3,4,5] The Act 979/2008 and Government Decree on the compulsory stockpiling of Medicines 111/2008 detail the medical countermeasures that need to be stockpiled: these include a number of antibiotics, antiviral and antifungal medicines, vaccines and immunoglobulins. [4,5] Furthermore, according to the National Preparedness Plan for Pandemic Influenza, health facilities need to stockpile 3-6 months (normal usage) worth of medical supplies such as PPE and other equipment. [6]

[1] World Health Organization. March 2017. "Joint External Evaluation of IHR Core Capacities of the Republic of Finland". [http://apps.who.int/iris/bitstream/handle/10665/255690/WHO-WHE-CPI-2017.24-Report-eng.pdf?sequence=1]. Accessed 14 October 2020.
[2] National Emergency Supply Agency. "Preparedness activities (Varautumisjärjestelyt). [https://www.huoltovarmuuskeskus.fi/toimialat/terveydenhuolto/varautumisjarjestelyt/]. Accessed 14 October 2020.
[3] Republic of Finland. 1390/1992. "Law on securing emergency supplies (Laki huoltovarmuuden turvaamisesta). [https://www.finlex.fi/fi/laki/ajantasa/1992/19921390]. Accessed 14 October 2020.
[4] Republic of Finland. 979/2008. "Compulsory stockpiling of Medicines Act (Laki lääkkeiden velvoitevarastoinnista)". [https://www.finlex.fi/fi/laki/alkup/2008/20080979]. Accessed 14 October 2020.

[5] Republic of Finland. 1114/2008. "Government Decree on the compulsory stockpiling of Medicines (Valtioneuvoston asetus lääkkeiden velvoitevarastoinnista)". [https://www.finlex.fi/fi/laki/alkup/2008/20081114]. Accessed 14 October 2020.
[6] Ministry of Social Affairs and Health in Finland. 30 May 2012. "National preparedness plan for pandemic influenza (Kansallinen varautumissuunnitelma influenssapandemiaa varten)". [http://julkaisut.valtioneuvosto.fi/bitstream/handle/10024/72870/Julk201209.pdf?sequence=1&isAllowed=y]. Accessed 14 October 2020.

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: 0

There is insufficient evidence of Finland having a stockpile of laboratory supplies for national use during a public health emergency. A Ministry for Social Affairs and Health guide on Preparedness planning for health care, it is mentioned that health facilities need to have at least 6 months (normal use) worth of "reagents and other essential supplies for conducting vital laboratory tests".[1] According to the WHO Joint External Evaluation of IHR Core Capacities of Finland, published in 2017, "medicines are stockpiled at the national, regional and local levels, with resources, stocks and needs monitored by the National Emergency Supply Agency (NESA)" and "the Finnish Red Cross has trained personnel and field hospitals with stockpiles that can be deployed within 24 hours abroad and within a few hours domestically." [1] In addition, the National Emergency Supply Agency states on its website that it is responsible, amongst other, for stockpiling supplies used in health care, as per stockpiling legislation. [2,3,4] This may include laboratory supplies, but the exact details of what supplies are stockpiled is classified information. No further evidence of a national stockpile of laboratory supplies was found on the websites of the Ministry of Social Affairs and Health, Ministry of Defence, National Institute for Health and Welfare, Finnish Food Authority, or the National Emergency Supply Agency. [6,7,8,9,10]

[1] Ministry of Social Affairs and Health in Finland. 2002. "Guide on preparedness planning for health care (Terveydenhuollon valmiussuunnitteluopas)". [https://julkaisut.valtioneuvosto.fi/bitstream/handle/10024/70059/stmopas2002-15.pdf?sequence=1&isAllowed=y]. Accessed 14 October 2020.
[2] World Health Organization. March 2017. "Joint External Evaluation of IHR Core Capacities of the Republic of Finland". [http://apps.who.int/iris/bitstream/handle/10665/255690/WHO-WHE-CPI-2017.24-Report-eng.pdf?sequence=1]. Accessed 14 October 2020.
[3] National Emergency Supply Agency. "Preparedness activities (Varautumisjärjestelyt). [https://www.huoltovarmuuskeskus.fi/toimialat/terveydenhuolto/varautumisjarjestelyt/]. Accessed 14 October 2020.
[4] Republic of Finland. 1390/1992. "Law on securing emergency supplies (Laki huoltovarmuuden turvaamisesta). [https://www.finlex.fi/fi/laki/ajantasa/1992/19921390]. Accessed 14 October 2020.
[5] Republic of Finland. 979/2008. "Compulsory stockpiling of Medicines Act (Laki lääkkeiden velvoitevarastoinnista)". [https://www.finlex.fi/fi/laki/alkup/2008/20080979]. Accessed 14 October 2020.
[6] Ministry of Social Affairs and Health in Finland. "Ministry of Social Affairs and Health in Finland website". [https://stm.fi/etusivu]. Accessed 18 November 2020.
[7] Ministry of Defence in Finland. "Ministry of Defence website". [https://www.defmin.fi/]. Accessed 8 October 2020.
[8] National Institute for Health and Welfare (THL). "THL website". [https://thl.fi/fi/]. Accessed 18 November 2020.
[9] Finnish Food Authority. "The Finnish Food Authority". [https://www.ruokavirasto.fi]. Accessed 18 November 2020.
[10] National Emergency Supply Agency. "National Emergency Supply Agency (Huoltovarmuuskeskus)". [https://www.huoltovarmuuskeskus.fi]. Accessed 20 November 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: 1

There is 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. On the website of the Finnish Medicines Agency (Fimea) it is stated that: “Fimea annually confirms the preparations to be included in the mandatory reserve supplies item by item.” [1] Furthermore, according to section 4 para 14 of the Compulsory stockpiling of Medicines Act, each institution mandated by law to maintain a pharmaceutical stockpile (pharmaceutical factories, importers of pharmaceuticals, health facilities and the National Institute for Health and Welfare), need to submit an annual report consisting of the kind and number of the products they are stockpiling. [2] In the WHO Joint External Evaluation of IHR Core Capacities for Finland it is stated in the section on Preparedness: “A national risk assessment was completed in 2015 and resource mapping is carried out at the national, regional and local levels.” [3]. No further evidence of annual reviewing of other stockpiles was found on in the relevant legislation, or on the websites of the National Emergency Supply Agency, Ministry of Social Affairs and Health, Finnish Medicines Agency or Ministry of Defence. [1,3,4,5,6,7,8,9,10]

[1] Finnish Medicines Agency. “Obligatory storing of medicines”. [https://www.fimea.fi/web/en/for_public/how-are-medicines-supplied-to-users-in-finland-/obligatory-storing-of-medicines]. Accessed 30 April 2021.
[2] Republic of Finland. 979/2008. "Compulsory stockpiling of Medicines Act (Laki lääkkeiden velvoitevarastoinnista)". [https://www.finlex.fi/fi/laki/alkup/2008/20080979]. Accessed 30 April 2021.
[3] World Health Organization. March 2017. "Joint External Evaluation of IHR Core Capacities of the Republic of Finland". [http://apps.who.int/iris/bitstream/handle/10665/255690/WHO-WHE-CPI-2017.24-Report-eng.pdf?sequence=1]. Accessed 30 April 2021.
[4] Republic of Finland. 1114/2008. "Government Decree on the compulsory stockpiling of Medicines (Valtioneuvoston asetus lääkkeiden velvoitevarastoinnista)". [https://www.finlex.fi/fi/laki/alkup/2008/20081114]. Accessed 30 April 2021.
[5] Republic of Finland. 455/2008. “Government Decree on the National Emergency Supply Agency (Valtioneuvoston asetus Huoltovarmuuskeskuksesta)”. [https://www.finlex.fi/fi/laki/smur/2008/20080455]. Accessed 30 April 2021.
[6] National Emergency Supply Agency. "National Emergency Supply Agency website” [https://www.huoltovarmuuskeskus.fi/]. Accessed 30 April 2021.
[7] Ministry of Social Affairs and Health in Finland. "Ministry of Social Affairs and Health in Finland website". [https://stm.fi/etusivu]. Accessed 30 April 2021.
[8] Finnish Medicines Agency (Fimea). "Fimea website". [https://www.fimea.fi/web/en/frontpage]. Accessed 30 April 2021.
[9] Ministry of Defence in Finland. "Ministry of Defence website". [https://www.defmin.fi/]. Accessed 30 April 2021.
[10] National Institute for Health and Welfare (THL). "THL website". [https://thl.fi/fi/]. Accessed 30 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 plan/mechanism to procure medical supplies (e.g. MCMs, medicines, vaccines, equipment, PPE) for national use during a public health emergency, and of a plan/agreement to leverage domestic manufacturing capacity to produce medical supplies for national use during a public health emergency. According to the WHO Joint External Evaluation of IHR Core Capacities of Finland: "Through the Health Care Act, Finland has the ability to provide state funding for contingency measures in order to maintain preparedness for emergency health care and major accidents, should the situation require it. [...] Stockpiling agreements for the health care sector are in place, through the National Emergency Supply Agency." [1] On the website of the National Emergency Supply Agency (NESA) it is stated that preparedness activities include: "[...] stockpiling of vital health care supplies and self-imposed stockpiling of health care supplies in hospitals and health centres". [2] The information on the exact contents of the stockpiles is classified. However, during the COVID-19 epidemic, the Ministry for Social Affairs and Health made 5 procurement proposals on medical supplies (such as PPEs) for the National Emergency Supply Agency in April 2020, bringing to light the fact that medical supplies were a part of NESA products available for national use.[3] As for domestic manufacturing capacity, according to an interview with the Prime Minister in April 2020, Finland was yet to scale up domestic production of test kits and personal protective equipment.[4] A situation report in May 2020 by the Minister of Economic Affairs outlines a plan to kickstart domestic production of different types of masks, isolation gowns, face shields and swab sticks. [5] As for medical countermeasures, Finland has signed the EU Joint Procurement Agreement to procure medical countermeasures. [6] Furthermore, the WHO Joint External Evaluation of IHR Core Capacities of Finland states also: “Finland has partnerships and agreements in place for sending and receiving medical countermeasures during a public health emergency. These are supported by frequent exercises involving countries from the Nordic region.” [1]

[1] World Health Organization. March 2017. "Joint External Evaluation of IHR Core Capacities of the Republic of Finland". [http://apps.who.int/iris/bitstream/handle/10665/255690/WHO-WHE-CPI-2017.24-Report-eng.pdf?sequence=1]. Accessed 20 October 2020.
[2] National Emergency Supply Agency. "Preparedness activities (Varautumisjärjestelyt). [https://www.huoltovarmuuskeskus.fi/toimialat/terveydenhuolto/varautumisjarjestelyt/]. Accessed 14 October 2020.
[3] Ministry for Social Affairs and Health (MSAH). "MSAH has made 5 procurement proposals to the National Emergency Supply Agency (STM tehnyt huoltovarmuuskeskukselle yhteensä viisi hankintaesitystä"). [https://stm.fi/-/stm-tehnyt-huoltovarmuuskeskukselle-hvk-yhteensa-viisi-hankintaesitysta]. Accessed 20 October 2020.
[4] Ilta-Sanomat. "Prime Minister Marin in YLE news: we need to kickstart domestic production of test kits and personal protective equipment (Pääministeri Marin Ylellä: Testausvälineiden ja suojavarusteiden kotimainen tuotanto saatava käyntiin)".[https://www.is.fi/politiikka/art-2000006487648.html]. Accessed 20 October 2020.
[5] Mika Lintilä (Minister for Economic Affairs). 26 May 2020. "Kickstarting domestic production of protective equipment (Kotimaisen suojaintuotannon käynnistäminen)." [https://tem.fi/documents/1410877/16402203/Kotimaisen+suojaintuotannon+käynnistäminen.pdf/38103722-7998-cf73-60ae-9f5517157853/Kotimaisen+suojaintuotannon+käynnistäminen.pdf?t=1590568660000]. Accessed 20 October 2020.
[6] European Commission. "Joint Procurement Agreement - List of EU countries". [https://ec.europa.eu/health/preparedness_response/joint_procurement/jpa_signature_en]. Accessed 20 October 2020.
[7] Ministry of Social Affairs and Health in Finland. "Ministry of Social Affairs and Health in Finland website". [https://stm.fi/etusivu]. Accessed 20 October 2020.
[8] National Institute for Health and Welfare (THL). "THL website". [https://thl.fi/fi/]. Accessed 20 October 2020.
[9] Ministry of Economic Affairs and Employment. "Ministry of Economic Affairs and Employment". [https://tem.fi/en/frontpage]. Accessed 20 October 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

No evidence of a plan/agreement to leverage domestic manufacturing capacity of medical countermeasures was found on Ministry for Social Affairs and Health, National Institute for Health and Welfare or Ministry for Economic Affairs and Employment websites. [7,8,9]

[1] World Health Organization. March 2017. "Joint External Evaluation of IHR Core Capacities of the Republic of Finland". [http://apps.who.int/iris/bitstream/handle/10665/255690/WHO-WHE-CPI-2017.24-Report-eng.pdf?sequence=1]. Accessed 20 October 2020.
[2] National Emergency Supply Agency. "Preparedness activities (Varautumisjärjestelyt)". [https://www.huoltovarmuuskeskus.fi/toimialat/terveydenhuolto/varautumisjarjestelyt/]. Accessed 14 October 2020.
[3] Ilta-Sanomat. "Prime Minister Marin in YLE news: we need to kickstart domestic production of test kits and personal protective equipment (Pääministeri Marin Ylellä: Testausvälineiden ja suojavarusteiden kotimainen tuotanto saatava käyntiin)".[https://www.is.fi/politiikka/art-2000006487648.html]. Accessed 20 October 2020.
[4] Mika Lintilä (Minister for Economic Affairs). 26 May 2020. "Kickstarting domestic production of protective equipment (Kotimaisen suojaintuotannon käynnistäminen)." [https://tem.fi/documents/1410877/16402203/Kotimaisen+suojaintuotannon+käynnistäminen.pdf/38103722-7998-cf73-60ae-9f5517157853/Kotimaisen+suojaintuotannon+käynnistäminen.pdf?t=1590568660000]. Accessed 20 October 2020.
[5] Uusi Suomi (newspaper). "Worrying rumour: there may be lack of supplies for corona testing - Expert: 'Increasing capacity may soon reach a ceiling, so far so good' ". [https://www.uusisuomi.fi/uutiset/huolestuttava-huhu-koronatestauksen-tarvikkeista-saattaa-tulla-pulaa-asiantuntija-lisaamisessa-voivat-kohta-tulla-rajat-vastaan-toistaiseksi-viela-parjataan/823944ee-5aae-4d36-aa9c-7d58d34d27e0]. Accessed 20 October 2020.
[6] Ministry of Social Affairs and Health in Finland. "Ministry of Social Affairs and Health in Finland website". [https://stm.fi/etusivu]. Accessed 20 October 2020.
[7] National Institute for Health and Welfare (THL). "THL website". [https://thl.fi/fi/]. Accessed 20 October 2020.
[8] Finnish Food Authority. [https://www.ruokavirasto.fi]. Accessed 8 October 2020.
[9] Ministry of Economic Affairs and Employment. "Ministry of Economic Affairs and Employment". [https://tem.fi/en/frontpage]. Accessed 20 October 2020.
[10] National Emergency Supply Agency. "National Emergency Supply Agency website". [https://www.nesa.fi]. Accessed 22 November 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: 1

There is evidence of publicly available plans for dispensing medical countermeasures for national use during a public health emergency. Finland has a National preparedness plan for pandemic influenza that is considered as the overarching pandemic preparedness plan. It covers action points that are intended to address any communicable disease with pandemic potential.[1] The Ministry of Social Affairs and Health website confirms the use of the plan for other communicable diseases of pandemic potential on a page on coronavirus preparedness: "The Ministry of Social Affairs and Health is responsible for the general planning, guidance and monitoring of the prevention of infectious diseases. It began preparing for the coronavirus disease as soon as it started spreading. Finland's preparedness measures are based on a national preparedness plan for an influenza pandemic." [3] The plan states that: [...] removing the need for a doctor's prescription for antiviral medicines may be an action considered in a pandemic situation, thus decreasing the procedural burden from health facilities during a pandemic.[1] Furthermore, there exists a Pandemic preparedness plan for logistics of medicines, prepared by the Finnish Medicines Agency (Fimea) for dispensing medicines stockpiled by the National Emergency Supply Agency, and the plan includes sections on how to dispense antiviral medicines to people, taking into account human resource challenges during a pandemic. Although this logistics' plan seems to be specific to an influenza pandemic, it does outline dispensing procedures. The plan notes that vaccines will be distributed to municipal vaccination points through drug centers and hospital pharmacies. Furthermore, the plan describes a need to be mindful of cold storage and transportation needs. The plan also notes a need to take into account retail distribution. [2] According to the WHO Joint External Evaluation of IHR Core Capacities report for Finland, published in 2017: "The Finnish Red Cross has trained personnel and field hospitals with stockpiles that can be deployed within 24 hours abroad and within a few hours domestically." [3] However the Finnish Red Cross website does not contain evidence or further details of this. [4] No further evidence on the dispensing of medicines during a public health emergency was found on Ministry for Social Affairs, National Institute for Health and Welfare, Finnish Medicines Agency or Ministry of Defence websites. [5,6,7,8]

[1] Ministry of Social Affairs and Health in Finland. 30 May 2012. "National preparedness plan for pandemic influenza (Kansallinen varautumissuunnitelma influenssapandemiaa varten)". [http://julkaisut.valtioneuvosto.fi/bitstream/handle/10024/72870/Julk201209.pdf?sequence=1&isAllowed=y]. Accessed 15 October 2020.
[2] Finnish Medicines Agency. 2007. "Pandemic preparedness plan for logistics of medicines (Lääkelogistiikan varautumissuunnitelma influenssapandemiaa varten)". [https://www.fimea.fi/documents/160140/765540/17705_Ajankohtaista_Pandemia_varautuminen_Pandemiavarautumisraportti_20070912_luonnos.pdf]. Accessed 15 October 2020.
[3] World Health Organization. March 2017. "Joint External Evaluation of IHR Core Capacities of the Republic of Finland". [http://apps.who.int/iris/bitstream/handle/10665/255690/WHO-WHE-CPI-2017.24-Report-eng.pdf?sequence=1]. Accessed 15 October 2020.
[4] Finnish Red Cross. "Finnish Red Cross website". [https://www.punainenristi.fi/]. Accessed 15 October 2020.
[5] Ministry of Social Affairs and Health in Finland. "Ministry of Social Affairs and Health in Finland website". [https://stm.fi/etusivu]. Accessed 22 November 2020.
[6] National Institute for Health and Welfare (THL). "THL website". [https://thl.fi/fi/]. Accessed 22 November 2020.
[7] Finnish Medicines Agency (Fimea). "Fimea website". [https://www.fimea.fi/web/en/frontpage]. Accessed 22 November 2020.
[8] Ministry of Defence in Finland. "Ministry of Defence website". [https://www.defmin.fi/]. Accessed 22 November 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

Although there are agreements to send and receive health personnel during public health emergency, there is no public evidence of a plan on how to facilitate their arrival and movement throughout the country as of yet. According to the WHO Joint External Evaluation of IHR Core Capacities of Finland, published in 2017: "Strong collaboration between Nordic states on emergency healthcare matters, including daily cross-border assistance and cooperation. The ability to send medical personnel based on an agreement between the government and the Finnish Red Cross, and through the EU Civil Protection Mechanism. [...] Valvira [National Supervisory Authority for Welfare and Health] is working on legislation that will allow health personnel coming from abroad to be rapidly certified." [1] There is no evidence of this latter legislation being proposed yet. [2,3] There is an Act on the Decision making related to receiving or giving international assistance 418/2017, which stipulates that the Ministry most involved in the type of assistance received may, once the government has decided on asking for assistance, act on any preparedness activities related to the assistance being received. [4] The Finnish Security Strategy further states that: "In the giving or reception of international assistance, cooperation between Ministries and other central actors such as the Finnish Red Cross is essential". [5] However, no evidence was found to confirm the existence of a public plan in place to receive health personnel on Ministry of Social Affairs and Health, National Institute for Health and Welfare, Valvira, Ministry of Defence or Emergency Response Centre Agency websites. [2,6,7,8,9]

[1] World Health Organization. March 2017. "Joint External Evaluation of IHR Core Capacities of the Republic of Finland". [http://apps.who.int/iris/bitstream/handle/10665/255690/WHO-WHE-CPI-2017.24-Report-eng.pdf?sequence=1]. Accessed 15 October 2020.
[2] National Supervisory Authority for Health and Welfare (Valvira). Valvira website. [https://www.valvira.fi/web/en/front-page]. Accessed 15 October 2020.
[3] Ministry of Justice. "Finlex". [https://www.finlex.fi/fi/]. Accessed 15 October 2020.
[4] Republic of Finland. 418/2017. "Act on the Decision making related to receiving or giving international assistance (Laki kansainvälisen avun antamista tai pyytämistä koskevasta päätöksenteosta)". [https://www.finlex.fi/fi/laki/ajantasa/2017/20170418]. Accessed 15 October 2020.
[5] The Security Committee in Finland. 2 November 2017. "Finnish Security Strategy (Yhteiskunnan turvallisuusstrategia)". [https://turvallisuuskomitea.fi/wp-content/uploads/2018/02/YTS_2017_suomi.pdf]. Accessed 15 October 2020.
[6] Ministry of Social Affairs and Health in Finland. "Ministry of Social Affairs and Health in Finland website". [https://stm.fi/etusivu]. Accessed 15 October 2020.
[7] National Institute for Health and Welfare (THL). "THL website". [https://thl.fi/fi/]. Accessed 15 October 2020.
[8] Ministry of Defence in Finland. "Ministry of Defence website". [https://www.defmin.fi/]. Accessed 15 October 2020.
[9] Emergency Response Centre Agency Finland. "Emergency Response Centre Agency Finland". [https://112.fi/en/frontpage]. Accessed 15 October 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: 3

2020

World Policy Analysis Center

4.4.1b

Access to skilled birth attendants (% of population)

Input number

Current Year Score: 99.9

2015

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: 860.72

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 insufficient public evidence to demonstrate that health care workers who become sick as a result of responding to a public health emergency are provided prioritized health care services. However, according to the National Preparedness Plan for Pandemic Influenza, health care workers treating infectious disease patients are prioritised for prophylactic treatments. It also states that: "For ensuring a functional society, it is not justified to prioritise vital groups in longterm prophylactic treatment of vaccinations. [..] In terms of vaccines, health care workers at the frontline are an exception. Need for long term prophylactic treatment [of this group] shall be evaluated considering the seriousness of the pandemic." The document further states that: "Once the pandemic has started the emphasis will be on treating the sick and in protecting the exposed health care staff." [1] However there is no clear via the Finnish Security Strategy or the Ministry of Social Affairs and Health on whether those have fallen ill will receive prioritized health care services. [2,3] There is also information on the website of the Finnish Medical Association for doctors seeking information on where to get help and advice on prevention and treatment of corona as well as mental health support. [4]

[1] Ministry of Social Affairs and Health in Finland. 30 May 2012. "National preparedness plan for pandemic influenza (Kansallinen varautumissuunnitelma influenssapandemiaa varten)". [http://julkaisut.valtioneuvosto.fi/bitstream/handle/10024/72870/Julk201209.pdf?sequence=1&isAllowed=y]. Accessed 14 October 2020.
[2] The Security Committee in Finland. 2 November 2017. "Finnish Security Strategy (Yhteiskunnan turvallisuusstrategia)". [https://turvallisuuskomitea.fi/wp-content/uploads/2018/02/YTS_2017_suomi.pdf]. Accessed 14 October 2020.
[3] Ministry of Social Affairs and Health in Finland. "Ministry of Social Affairs and Health in Finland website". [https://stm.fi/etusivu]. Accessed 14 October 2020.
[4] Finnish Medical Association. "Occupational health security and well-being. [https://www.laakariliitto.fi/palvelut/edunvalvonta/koronatilanne/tyoturvallisuus-ja-tyohyvinvointi/]. Accessed 14 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

There is a system in place for public health officials and healthcare workers to communicate during a public health emergency. The WHO Joint External Evaluation of IHR Core Capacities for Finland, published in 2017, states: "Authorities have established practices with which to communicate with target groups nationally, regionally and locally. THL [National Institute for Health and Welfare] has strong outbreak communication capabilities." [1] The National preparedness plan for pandemic influenza, which was designed also with biothreats beyond influenza in mind, identifies health care workers as one of the communication target groups. In point 13.3 it stipulates that THL is responsible for communication with health care workers and for example its website has a specific part for health care professionals. The figure on communication during pandemics, on page 85, also shows that THL communicates to hospital districts who in turn communicate to municipalities who communicate to their health care staff. Communication to the private sector health care staff goes through the Regional

State Administrative Agencies. [2] In addition, THL provides a telephone service for any health care professionals during office hours, regarding communicable diseases. [3] The Finnish Security Strategy does not touch upon communication during public health emergencies. [4]

[1] World Health Organization. March 2017. "Joint External Evaluation of IHR Core Capacities of the Republic of Finland". [http://apps.who.int/iris/bitstream/handle/10665/255690/WHO-WHE-CPI-2017.24-Report-eng.pdf?sequence=1]. Accessed 15 October 2020.
[2] Ministry of Social Affairs and Health in Finland. 30 May 2012. "National preparedness plan for pandemic influenza (Kansallinen varautumissuunnitelma influenssapandemiaa varten)". [http://julkaisut.valtioneuvosto.fi/bitstream/handle/10024/72870/Julk201209.pdf?sequence=1&isAllowed=y]. Accessed 15 October 2020.
[3] National Institute for Health and Welfare. 9 July 2020. "Guidance services for health care professionals (Neuvontapalvelut terveydenhuollon ammattilaisille". [https://thl.fi/fi/web/infektiotaudit/yhteystiedot/neuvontapalvelut-terveydenhuollon-ammattilaisille]. Accessed 15 October 2020.
[4] The Security Committee in Finland. 2 November 2017. "Finnish Security Strategy (Yhteiskunnan turvallisuusstrategia)". [https://turvallisuuskomitea.fi/wp-content/uploads/2018/02/YTS_2017_suomi.pdf]. Accessed 15 October 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: 1

There is a system for public health officials and healthcare workers to communicate during an emergency that encompasses healthcare workers in both the public and private sector. The WHO Joint External Evaluation of IHR Core Capacities for Finland, published in 2017, states: "Authorities have established practices with which to communicate with target groups nationally, regionally and locally. THL [National Institute for Health and Welfare] has strong outbreak communication capabilities." [1] The National preparedness plan for pandemic influenza, which was designed also with biothreats beyond influenza in mind, identifies health care workers as one of the communication target groups. In point 13.3 it stipulates that THL is responsible for communication with health care workers and for example its website has a specific part for health care professionals. The figure on communication during pandemics, on page 85, shows that communication to the private sector health care staff goes through the Regional State Administrative Agencies. [2] Furthermore, it is stated on the web site of the Regional State Administrative Agencies (AVI) that, as part of preparedness, under health and social care: "AVI participates the development and update of a regional situational analysis and plays a significant role in the two-way communication between the central government, municipal and private sector actors". [3] In addition, THL provides a telephone service for any health care professionals, including private sector, during office hours regarding communicable diseases. [4]

[1] World Health Organization. March 2017. "Joint External Evaluation of IHR Core Capacities of the Republic of Finland". [http://apps.who.int/iris/bitstream/handle/10665/255690/WHO-WHE-CPI-2017.24-Report-eng.pdf?sequence=1]. Accessed 15 October 2020.
[2] Ministry of Social Affairs and Health in Finland. 30 May 2012. "National preparedness plan for pandemic influenza (Kansallinen varautumissuunnitelma influenssapandemiaa varten)". [http://julkaisut.valtioneuvosto.fi/bitstream/handle/10024/72870/Julk201209.pdf?sequence=1&isAllowed=y]. Accessed 15 October 2020.
[3] Regional State Administrative Agencies in Finland. 20 March 2020. "Planning for preparedness (Valmiussuunnittelu)". [https://www.avi.fi/web/avi/valmiussuunnittelu]. Accessed 15 October 2020.

[4] National Institute for Health and Welfare. 9 July 2020. "Guidance services for health care professionals (Neuvontapalvelut terveydenhuollon ammattilaisille". [https://thl.fi/fi/web/infektiotaudit/yhteystiedot/neuvontapalvelut-terveydenhuollon-ammattilaisille]. Accessed 15 October 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

Finland monitors and tracks the number of health care associated infections that take place in healthcare facilities. Health care associated infections have been monitored nation-wide within the National Institute for Health and Welfare's (THL) hospital infection programme (SIRO) since 1999; [1]. Currently all Finnish university hospitals and a part of the other hospitals participate in the programme. The programme monitors health care associated infections that are significant for public health. According to the WHO's Joint External Evaluation (JEE) report for Finland, published in 2017, states that: "Finland does not yet have a national plan for healthcare acquired infections (HCAI), but hospitals participate in a voluntary national surveillance network and HCAI will be incorporated in the forthcoming National Action Plan on AMR." [2] The National Action Plan on Antimicrobial Resistance published in 2017 has specific action points on HCAI: to prepare national recommendations on HCAI, create a web portal to facilitate access to guidance regarding prevention and control of HCAI and to further develop the surveillance system for health care associated infections. [3]

[1] National Institute for Health and Welfare (THL). 13 December 2019. "Monitoring of health care associated infections (Hoitoon liittyvien infektioiden seuranta)." [https://thl.fi/fi/web/infektiotaudit/seuranta-ja-epidemiat/hoitoon_liittyvien_infektioiden_seuranta]. Accessed 15 October 2020.
[2] World Health Organization. March 2017. "Joint External Evaluation of IHR Core Capacities of the Republic of Finland". [http://apps.who.int/iris/bitstream/handle/10665/255690/WHO-WHE-CPI-2017.24-Report-eng.pdf?sequence=1]. Accessed 15 October 2020.
[3] Ministry of Social Affairs and Health in Finland. 12 May 2017. "The National Action Plan on Antimicrobial Resistance 2017-2021."
[https://stm.fi/documents/1271139/1359637/12_17_National_Action_Plan_on_Antimicrobial_Resistance_2017_2021_V1+%28002%29.pdf/9ff43364-6cc2-4e39-b0cf-5664460a3d9e/12_17_National_Action_Plan_on_Antimicrobial_Resistance_2017_2021_V1+%28002%29.pdf.pdf]. Accessed 15 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 a national requirement for ethical review before beginning a clinical trial. The Medical Research Act 488/1999, section 10 c, states that: "A clinical trial on medicinal products may be started only after the ethics committee has delivered an opinion in favour of it, and on the condition that the Finnish Medicines Agency has granted it the license required in the Medicines Act or it has not informed of any obstacle to starting the research as laid down in the Medicines Act." [1] And under section 16, it states that: "Each hospital district with a university providing medical education in its region shall have at least one ethics committee (regional ethics committee). The regional ethics committee shall monitor, guide and evaluate the handling of matters pertaining to research ethics in its region. The regional ethics committee is set up by the board of the hospital district." [1]

[1] Republic of Finland. 1999. "Medical Research Act (Laki lääketieteellisestä tutkimuksesta)". [https://www.finlex.fi/en/laki/kaannokset/1999/en19990488_20100794.pdf]. Accessed 15 October 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 insufficient evidence of an expedited process for approving clinical trials for unregistered medical countermeasures to treat ongoing pandemics. The Medical Research Act 488/1999, section 10 c, states that: "A clinical trial on medicinal products may be started only after the ethics committee has delivered an opinion in favour of it, and on the condition that the Finnish Medicines Agency has granted it the license required in the Medicines Act or it has not informed of any obstacle to starting the research as laid down in the Medicines Act. " And under section 16, it states that: "Each hospital district with a university providing medical education in its region shall have at least one ethics committee (regional ethics committee). The regional ethics committee shall monitor, guide and evaluate the handling of matters pertaining to research ethics in its region. The regional ethics committee is set up by the board of the hospital district." [1] However, the National Preparedness plan for pandemic influenza from 2012 does not discuss approval of clinical trials for unregistered medical countermeasures and there is no evidence of the existence of an expedited process, for other than COVID-19 related clinical trials, on the Ministry of Social Affairs and Health, National Institute for Health and Welfare or Finnish Medicines Agency websites. [2,3,4,5] For COVID-19, in a news article in the Finnish Medical Journal, it is mentioned that the EU member countries' medicines agencies are committed to expedited medicines and vaccines trial approval processes during the COVID-19 epidemic. [6] The Frequently Asked Questions on COVID-19 section of the Finnish Medicines Agency (Fimea) website states that Fimea is committed to prioritising COVID-19-related medicines and vaccines related clinical trial approval processes. [7]

Furthermore, another part of Fimea's website states that change requests to COVID-19 trial study protocols will only be charged a one-time fee, after which all further changes will be processed for free. [8]

[1] Republic of Finland. 488/1999. "Medical Research Act (Laki lääketieteellisestä tutkimuksesta)". [https://www.finlex.fi/en/laki/kaannokset/1999/en19990488_20100794.pdf]. Accessed 15 October 2020.
[2] Ministry of Social Affairs and Health in Finland. 30 May 2012. "National preparedness plan for pandemic influenza (Kansallinen varautumissuunnitelma influenssapandemiaa varten)". [http://julkaisut.valtioneuvosto.fi/bitstream/handle/10024/72870/Julk201209.pdf?sequence=1&isAllowed=y]. Accessed 18 November 2020.
[3] Ministry of Social Affairs and Health in Finland. "Ministry of Social Affairs and Health in Finland website". [https://stm.fi/etusivu]. Accessed 18 November 2020.
[4] National Institute for Health and Welfare (THL). "THL website". [https://thl.fi/fi/]. Accessed 18 November 2020.
[5] Finnish Medicines Agency (Fimea). "Fimea website". [https://www.fimea.fi/]. Accessed 18 November 2020.
[6] Finnish Medical Journal. 3 April 2020. "Corona accelerated drug research (Korona kiihdytti lääketutkimusta)" [https://www.laakarilehti.fi/ajassa/ajankohtaista/korona-kiihdytti-laaketutkimusta/]. Accessed 15 October 2020.
[7] Finnish Medicines Agency (Fimea). 10 September 2020. "Frequently asked questions (Usein kysytyt kysymykset). [https://www.fimea.fi/tietoa_fimeasta/ajankohtaista/koronavirus-covid-19-/usein-kysytyt-kysymykset]. Accessed 15 October 2020.
[8] Finnish Medicines Agency (Fimea). 13 March 2020. "Clinical trials during the COVID-19 epidemic (Kliiniset lääketutkimukset koronavirusepidemian aikana)". [https://www.fimea.fi/-/kliiniset-laaketutkimukset-koronavirusepidemian-covid-19-aikana]. Accessed 15 October 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

There is a government agency responsible for approving new medical countermeasures for humans. The Finnish Medicines Agency (Fimea) is responsible for approving medicines for use in Finland per the Medicines Decree 693/1987 and information from the agency website. [1,2] According to the National Pandemic Preparedness Plan for Influenza, in the face of or during a pandemic, the European Medicines Agency (EMA) is responsible for approving new medical countermeasures such as vaccines for humans. [2] In addition, it is stated in the plan that: "The Ministry of Social Affairs and Health can, in the face of or during a pandemic, deviate from the legislation (Medicines Act 395/1987) and decide that a medical product can be used for the prevention and control of the infectious disease or its complications without appropriate approvals or license from Fimea or EMA." [3,4]

[1] Finnish Medicines Agency (Fimea). "Organisation (Organisaatio)". [https://www.fimea.fi/tietoa_fimeasta/organisaatio]. Accessed 15 October 2020.
[2] Republic of Finland. 693/1987. "Medicines Decree (Lääkeasetus)". [https://www.finlex.fi/fi/laki/ajantasa/1987/19870693]. Accessed 15 October 2020.
[3] Ministry of Social Affairs and Health in Finland. 30 May 2012. "National preparedness plan for pandemic influenza (Kansallinen varautumissuunnitelma influenssapandemiaa varten)". [http://julkaisut.valtioneuvosto.fi/bitstream/handle/10024/72870/Julk201209.pdf?sequence=1&isAllowed=y]. Accessed 15 October 2020.

[4] Republic of Finland. 395/1987. "Medicines Act (Lääkelaki)". [https://www.finlex.fi/fi/laki/ajantasa/1987/19870395]. Accessed 15 October 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: 1

There is evidence of an expedited process for approving medical countermeasures. The Finnish Medicines Agency (Fimea) is responsible for approving medicines for use in Finland per the Medicines Decree 693/1987 and information from the agency website [1,2]. An article in the Finnish Medical Journal states that Fimea may process special licenses, thus using an expedited process to approve medical counter measures during public health emergencies. [3] According to the National Pandemic Preparedness Plan for Influenza, in the face of or during a pandemic, the European Medicines Agency (EMA) is responsible for approving new medical countermeasures such as vaccines for humans. [4] In addition, it is stated in the plan that: "The Ministry of Social Affairs and Health [MSAH] can, in the face of or during a pandemic, deviate from the legislation (Medicines Act 395/1987) and decide that a medical product can be used for the prevention and control of the infectious disease or its complications without appropriate approvals or license from Fimea or EMA." [4,5]

[1] Finnish Medicines Agency (Fimea). "Organisation (Organisaatio)". [https://www.fimea.fi/tietoa_fimeasta/organisaatio]. Accessed 15 October 2020.
[2] Republic of Finland. 693/1987. "Medicines Decree (Lääkeasetus)". [https://www.finlex.fi/fi/laki/ajantasa/1987/19870693]. Accessed 15 October 2020.
[3] Finnish Medical Journal. 3 April 2020. "Corona accelerated drug research (Korona kiihdytti lääketutkimusta)" [https://www.laakarilehti.fi/ajassa/ajankohtaista/korona-kiihdytti-laaketutkimusta/]. Accessed 15 October 2020.
[4] Ministry of Social Affairs and Health in Finland. 30 May 2012. "National preparedness plan for pandemic influenza (Kansallinen varautumissuunnitelma influenssapandemiaa varten)". [http://julkaisut.valtioneuvosto.fi/bitstream/handle/10024/72870/Julk201209.pdf?sequence=1&isAllowed=y]. Accessed 15 October 2020.
[5] Republic of Finland. 395/1987. "Medicines Act (Lääkelaki)". [https://www.finlex.fi/fi/laki/ajantasa/1987/19870395]. Accessed 15 October 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: 1

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: 1

Pandemics are integrated into a national risk reduction strategy and the pandemic preparedness plan also includes actions to reduce risks. The Ministry of Interior has a National Platform for Disaster Risk Reduction document from 2012 that considers infectious disease epidemics as parts of biological disasters. The document notes Finland's commitment to the International Health Regulations as well as nuclear, biological and chemical disaster preparedness. For example, it includes an action point on the development and maintenance of emergency supply storage for health care and need to alert for example the European Centre for Disease Prevention and Control disease monitoring and laboratory networks of any disruptions. [1]

[1] Ministry of Interior in Finland. 2012. "National platform for disaster risk reduction 2012". [http://julkaisut.valtioneuvosto.fi/bitstream/handle/10024/79425/sm_142012.pdf]. Accessed 15 October 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

Finland has cross-border agreements, protocols and MOUs with neighbouring countries with regards to public health emergencies. According to the WHO Joint External Evaluation of IHR Core Capacities: "Finland has a significant number of cross-border agreements, protocols and memoranda of understanding (MOUs) with neighbouring countries with regard to public health emergencies." Among the agreements listed within the JEE report are bilateral agreements with Norway and Sweden on security of supply and a Nordic framework agreement on healthcare, which concerns the cooperation of authorities on preparedness and assistance during crises or catastrophes." [1] The Nordic framework includes a Nordic public health preparedness agreement, that sets out cooperation elements of preparation of contingency measures and assistance on occasions when one of the contracting states suffers an emergency or disaster. [2] Despite a glitch to Nordic harmony in summer 2020, when COVID-19 travel restrictions for Sweden were not lifted between the Nordic countries [3], there is no evidence of gaps in implementation of the memoranda of understanding. [4]

[1] World Health Organization. March 2017. "Joint External Evaluation of IHR Core Capacities of the Republic of Finland". [http://apps.who.int/iris/bitstream/handle/10665/255690/WHO-WHE-CPI-2017.24-Report-eng.pdf?sequence=1]. Accessed 7 December 2018.
[2] NORDHELS - det nordiska hälsoberedskapssamarbetet (NORDHELS - the Nordic Health Preparedness Cooperation). 14 June 2002. "Nordic public health preparedness agreement". [http://www.nordhels.org/siteassets/nordhels/avtal/nordiskt-halsoberedskapsavtal---engelska.pdf]. Accessed 9 December 2018.
[3] CNBC News. June 17 2020. "Shunned by its Nordic neighbors for its coronavirus strategy, Sweden says there are 'wounds that will take time to heal' ". [https://www.cnbc.com/2020/06/17/swedens-exclusion-from-nordic-travel-area-swedens-foreign-minister.html]. Accessed 19 October 2020.
[4] Norden (Nordic co-operation). "Information on the Corona pandemic in the Nordic region". [https://www.norden.org/en/info-norden/information-corona-pandemic-nordic-region-5]. Accessed 19 October 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: 2

Finland has an MOU with neighbouring countries, with regards to animal health emergencies. According to the WHO Joint External Evaluation of IHR Core Capacities for Finland, published in 2017: "Finland has a significant number of cross-border agreements, protocols and memoranda of understanding (MOUs) with neighbouring countries with regard to public health emergencies. These include [...] an MOU among the Nordic-Baltic countries on an Animal Health Emergency Reserve." [1] According to the proceedings of a seminar on Animal Health Contingency Planning in the Nordic-Baltic Countries, 12-13

October 2016, in Lithuania: "In the event of an animal disease outbreak, the Participants [to the agreement] intend to provide, when requested in writing and within their resource capabilities, skilled and competent personnel to respond to the animal disease situation in the affected country." [2] No evidence of other animal health emergency agreements was found on the Ministry of Agriculture and Forestry or the Ministry of Social Affairs and Health, [3,4] and no evidence of gaps in implementation were found on the Nordic Cooperation (Norden) website. [5]

[1] World Health Organization. March 2017. "Joint External Evaluation of IHR Core Capacities of the Republic of Finland". [http://apps.who.int/iris/bitstream/handle/10665/255690/WHO-WHE-CPI-2017.24-Report-eng.pdf?sequence=1]. Accessed 19 October 2020.
[2] Nordic Council of Ministers. 2017. "Proceedings of a seminar on Animal Health Contingency Planning in the Nordic-Baltic Countries, 12-13 October 2016, in Lithuania". [https://www.diva-portal.org/smash/get/diva2:1135535/FULLTEXT01.pdf]. Accessed 19 October 2020.
[3] Ministry of Agriculture and Forestry in Finland. "Ministry of Agriculture and Forestry of Finland website". [https://mmm.fi/etusivu]. Accessed 19 October 2020.
[4] Ministry of Social Affairs and Health in Finland. "Ministry of Social Affairs and Health in Finland website". [https://stm.fi/etusivu]. Accessed 19 October 2020.
[5] Norden (Nordic co-operation). "Norden web site". [https://www.norden.org/en]. Accessed 19 October 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: 1

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: 4

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: 1

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: 1

There is evidence that the country has allocated national funds to improve capacity to address epidemic threats within the past three years. The Ministry for Social Affairs and Health (MSAH) has a special annual budget for supporting communicable disease control activities that follow the Communicable Disease Act. According to the MSAH website, funds from this budget can be awarded for projects and programmes aiming at communicable disease prevention and control activities. Funds from this budget have been awarded yearly at least since 2012, according to the website, and have included e.g. projects and programmes regarding TB prevention, contact tracing and treatment. [1] Other evidence on national funds to improve capacity to address epidemic threats in the past three years, apart from COVID-19 funding, was not found on the Ministry for Social Affairs and Health, National Institute for Health and Welfare, Ministry of Finance, Finnish Government and Ministry of Agriculture and Forestry websites. [2,3,4,5,6]

[1] Ministry for Social Affairs and Health. "Communicable disease control budget (Tartuntatautien valvonnan määrärahat)". [https://stm.fi/rahoitus-ja-avustukset/tartuntatautien-valvonnan-maararahat]. Accessed 19 October 2020.
[2] Ministry of Social Affairs and Health in Finland. "Ministry of Social Affairs and Health in Finland website". [https://stm.fi/etusivu]. Accessed 19 October 2020.
[3] National Institute for Health and Welfare (THL). "THL website". [https://thl.fi/fi/]. Accessed 19 October 2020.
[4] Ministry of Agriculture and Forestry in Finland. "Ministry of Agriculture and Forestry of Finland website". [https://mmm.fi/etusivu]. Accessed 19 October 2020.
[5] Government of Finland. "Government website". [https://valtioneuvosto.fi/etusivu]. Accessed 19 October 2020.
[6] Ministry of Finance in Finland. "Ministry of Finance website". [https://vm.fi/etusivu]. Accessed 19 October 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: 1

There are publicly identified special emergency public financing mechanism and funds which Finland can access in the face of a public health emergency. The National Emergency Supply Agency (NESA) manages an extra-budgetary National Emergency Supply Fund that covers costs associated with security of supply, which includes medical countermeasures. The Agency states on its website that: "The balance position of the National Emergency Supply Fund is 1.2 billion euros, with the majority of the amount tied up in the reserve stocks." [1] In the National Preparedness Plan for Pandemic Influenza it is also stated that: "In the 2012 Government budget, 5 million euros were budgeted within the Ministry of Finance for unexpected costs". [2] According to the Emergency Powers Act 1552/2011 chapter 12, section 89 the Government also has a possibility to propose a supplementary budget and start applying it before a Parliamentary decision is made. [3] As an example, in March 2020 during the COVID-19 epidemic, the Emergency Power Act was activated giving the Government emergency powers. However, section 89 was not deemed necessary to be included, and therefore the Government had to submit a proposal to the Parliament for using further funds [4]; had section 89 been included, the Government would have accessed further public funding to deal with the COVID-19 epidemic. No evidence of other emergency public funds was found on the Ministry of Social Affairs and Health and Ministry of Finance websites and Finland is not eligible for the World Bank pandemic financing facility. [5,6,7]

[1] National Emergency Supply Agency. 2018. "Funding and legislation". [https://www.nesa.fi/organisation/funding-and-legislation/]. Accessed 15 October 2020.
[2] Ministry of Social Affairs and Health in Finland. 30 May 2012. "National preparedness plan for pandemic influenza (Kansallinen varautumissuunnitelma influenssapandemiaa varten)". [http://julkaisut.valtioneuvosto.fi/bitstream/handle/10024/72870/Julk201209.pdf?sequence=1&isAllowed=y]. Accessed 15 October 2020.
[3] Republic of Finland. 1552/2011. "Emergency Powers Act (Valmiuslaki)". [https://www.finlex.fi/fi/laki/ajantasa/2011/20111552#L12]. Accessed 15 October 2020.
[4] Finnish Government. "Decree for the Parliament to activate the Emergency Powers Act (Valmiuslain käyttöönottoasetus eduskunnalle). [https://valtioneuvosto.fi/-/10616/valmiuslain-kayttoonottoasetus-eduskunnalle]. Accessed 15 October 2020.

[5] Ministry of Social Affairs and Health in Finland. "Ministry of Social Affairs and Health in Finland website". [https://stm.fi/etusivu]. Accessed 15 October 2020.
[6] Ministry of Finance in Finland. "Ministry of Finance website". [https://vm.fi/etusivu]. Accessed 15 October 2020.
[7] International Development Association. "Borrowing countries" [http://ida.worldbank.org/about/borrowing-countries]. Accessed 15 October 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: 1

There is evidence that senior leaders have a made a public commitment to support other countries to improve capacity to address epidemic threats by providing financing. There is also evidence of senior leaders having committed to improve the country's domestic capacity to address the COVID-19 epidemic by expanding financing. There is public evidence that the Finnish foreign minister has made a public commitment to support Tanzania to improve its capacity to address epidemic threats by providing support to the development of field laboratories. The project is being funded by the Finnish Government since 2014 and the second phase of the biosafety and biosecurity project was awarded further financing in 2018. [1] Finland's work in the health security sector has gained global recognition, according to a news article by the Ministry for Foreign Affairs, and Finland is committed to supporting global health security work. [2] The Global Health Security Agenda website also confirms Finland's contribution to the Biosecurity and Biosafety Action package. [3] The Finnish Foreign Minister Pekka Haavisto has showed commitment to global health security by actively discussing it with WHO Director General in the past year and committing to an increased Finnish financial contribution for the global fight against the COVID-19 epidemic. [4,5,6] Furthermore, the Finnish Government lead by Prime Minister Sanna Marin has pledged an additional 800 million euros for improving the country's domestic capacity to address epidemic threats in general, including COVID-19, by expanding the annual budget with several supplementary budgets in 2020. [7,8]

[1] Ministry for Foreign Affairs. 27 November 2018. "Second phase of biosafety and biosecurity project; prevention of spread of infectious diseases". [https://finlandabroad.fi/web/tza/funding-decisions/-/asset_publisher/TAKwM9X4KvQQ/ahaKytInterventionType/id/3150576]. Accessed 19 October 2020.
[2] Global Health Security Agenda. "Biosecurity and biosafety". [https://ghsagenda.org/biosecurity-biosafety/]. Accessed 19 October 2020.
[3] Ministry for Foreign Affairs. 22 May 2020. "Finland's work in health security sector gains global recognition". [https://um.fi/current-affairs/-/asset_publisher/gc654PySnjTX/content/suomen-ty-c3-b6-terveysturvallisuuden-hyv-c3-a4ksi-saa-kiitosta-kansainv-c3-a4lisesti]. Accessed 18 October 2020.
[4] Tedros Adhanom Ghebreyesus (WHO Director). 15 February 2020. Dr Tedros status update. [https://twitter.com/DrTedros/status/1228647574648840193]. Accessed 19 October 2020.
[5] Pekka Haavisto (Foreign Minister). 7 August 2020. Pekka Haavisto status update. [https://twitter.com/Haavisto/status/1291672684351442944]. Accessed 19 October 2020.
[6] YLE News. 15 April 2020. "Finland to increase WHO funding".

[https://yle.fi/uutiset/osasto/news/finland_to_increase_who_funding/11307238]. Accessed 19 October 2020.
[7] YLE News. 15 September 2020. "The largest debt drink in Finnish history - this is how 10 corona billions have been used (Suomen historian rajuin velkaryyppy - näin 10 koronamiljardia on käytetty)". [https://yle.fi/uutiset/3-11543606]. Accessed 19 October 2020.
[8] Ministry of Finance. "Suppplementary budgets 2020 (Lisätalousarviot 2020)". [https://tutkibudjettia.fi/lisatalousarvio/2020]. Accessed 19 October 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: 1

There is evidence that Finland invested finances and provided technical support to increase laboratory capacity in other countries, however no evidence on Finland having requested financing or technical support from donors to improve the country's domestic capacity. According to the Ministry of Social Affairs and Health web site section on the Global Health Security Agenda, it is stated that: "As part of its involvement in the GHSA programme, Finland has made a commitment to improve bio-security and increase the laboratory capacity in Tanzania. Finland will also assist in the training of local veterinary experts there. This project is funded by the Ministry for Foreign affairs, with the Centre for Military Medicine (SOTLK) and the Centre of Expertise for Biological Threats (BUOS) taking responsibility for project delivery." [1] Further funding was awarded for the project in 2018. [2] There is also evidence of this funding being dispersed in the past three years on the Global Health Security Tracking Dashboard. [3] There is no publicly available information on whether Finland has requested financing or technical support from donors to improve the country's domestic capacity on the Ministry of Social Affairs and Health, Ministry of Finance, Ministry for Foreign Affairs, WHO EURO Finland News and Finland's Permanent Mission to United Nations websites. [4,5,6,7,8]

[1] Ministry of Social Affairs and Health in Finland. "Global Health Security Agenda - GHSA: health is security." [https://stm.fi/en/ghsagenda?p_p_auth=u7hQXPK5&p_p_id=49&p_p_lifecycle=1&p_p_state=normal&p_p_mode=view&_49_struts_action=%2Fmy_sites%2Fview&_49_groupId=1271139&_49_privateLayout=false]. Accessed 19 October 2020.
[2] Ministry for Foreign Affairs. 27 November 2018. "Second phase of biosafety and biosecurity project; prevention of spread of infectious diseases". [https://finlandabroad.fi/web/tza/funding-decisions/-/asset_publisher/TAKwM9X4KvQQ/ahaKytInterventionType/id/3150576]. Accessed 19 October 2020.
[3] Global Health Security Tracking Dashboard. "Finland funder profile". [https://tracking.ghscosting.org/details/75/funder]. Accessed on 19 October 2020.
[4] Ministry of Finance in Finland. "Ministry of Finance website". [https://vm.fi/etusivu]. Accessed 19 October 2020.
[5] Ministry for Foreign Affairs of Finland. "Ministry for Foreign Affairs of Finland website". [https://um.fi/etusivu]. Accessed 19 October 2020.
[6] World Health Organization Regional Office for Europe. Finland: News. [http://www.euro.who.int/en/countries/finland/news/news/news?root_node_selection=73351]. Accessed 19 October 2020.
[7] Finland's Permanent Mission to the United Nations. Current Affairs. [http://www.finlandun.org/public/default.aspx?nodeid=35879&contentlan=2&culture=en-US]. Accessed 19 October 2020.
[8] Ministry of Social Affairs and Health in Finland. "Ministry of Social Affairs and Health in Finland website". [https://stm.fi/etusivu]. Accessed 19 October 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 evidence of 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. There is only evidence of epidemiological data sharing. The Communicable disease Act 1227/2016 stipulates in section 84: "The National Institute for Health and Welfare [THL] presents the World Health Organization, Europen Centre for Disease Prevention and Control [ECDC] and affiliated authorized networks with data [in relation to International Health Regulations or European Union agreements or regulations on communicable disease data] without being hindered by confidentiality or other data sharing restrictions." [1] This implies that communicable disease data sharing internationally within IHR and EU regulations is policy in Finland in all situations, including emergency and nonemergency. According to the ECDC web site, Finland shares epidemiological data with the ECDC within its disease and laboratory networks. [2,3] There is no further evidence of sharing genetic data, clinical specimens and/or isolated specimens along with the associated epidemiological data, beyond influenza, on the websites of the Ministry of Social Affairs and Health, Ministry of Forestry and Agriculture, Finnish Food Authority or the National Institute for Health and Welfare. [4,5,6,7]

[1] Republic of Finland. 1227/2016. "Communicable Diseases Act (Tartuntatautilaki)". [https://www.finlex.fi/fi/laki/alkup/2016/20161227]. Accessed 15 October 2020.
[2] European Centre for Disease Prevention and Control (ECDC). "Disease and laboratory networks". [https://ecdc.europa.eu/en/about-us/partnerships-and-networks/disease-and-laboratory-networks]. Accessed 15 October 2020.
[3] European Centre for Disease Control (ECDC). 13 July 2018. "Communicable disease threat report (Week 11, 8-14 March 2020)". [https://www.ecdc.europa.eu/sites/default/files/documents/Communicable-disease-threats-report-14-mar-2020.pdf]. Accessed 15 October 2020.
[4] Ministry of Social Affairs and Health in Finland. "Ministry of Social Affairs and Health in Finland website".

[https://stm.fi/etusivu]. Accessed 18 November 2020.
[5] Ministry of Agriculture and Forestry in Finland. "Ministry of Agriculture and Forestry of Finland website". [https://mmm.fi/etusivu]. Accessed 18 November 2020.
[6] Finnish Food Authority. "The Finnish Food Authority". [https://www.ruokavirasto.fi]. Accessed 18 November 2020.
[7] National Institute for Health and Welfare (THL). "THL website". [https://thl.fi/fi/]. Accessed 18 November 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 Finland has not shared samples in accordance with the Pandemic Influenza Preparedness (PIP) framework in the past two years. [1] The World Health Organisation (WHO) has not reported any non-compliance in the past two years by Finland. There is also no evidence of not sharing influenza samples on the major international or Finnish news outlets websites.

[1] World Health Organisation (WHO). 2018. "Influenza: Virus Sharing". [http://www.who.int/influenza/pip/virus_sharing/en/]. Accessed 15 October 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 Finland has not shared pandemic pathogen samples during an outbreak in the past two years. The World Health Organisation (WHO) has not reported withholding of samples in the past two years by Finland. There are no media reports, international or local, indicating that Finland did not share pandemic pathogen samples, including SARS-CoV-2 samples. [1, 2, 3]

[1] World Health Organisation (WHO). 2018. "Finland". [https://www.who.int/countries/fin/en/]. Accessed 15 October 2020.
[2] World Health Organisation (WHO). 2018. "Finland: Publications". [http://www.euro.who.int/en/countries/finland/publications]. Accessed 15 October 2020.
[3] World Health Organisation (WHO). 2018. "Finland: News". [http://www.euro.who.int/en/countries/finland/news/news/news?root_node_selection=73351]. Accessed 15 October 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: 4

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: 85

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: 3

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: 1

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: 4

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; incursional 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: 2

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: 0.95

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: 0.1

2017

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

Share of employment in the informal sector is around 1-3%. A presentation by an expert from Statistics Finland at the Meeting of the Group of Experts on Measuring Quality of Employment in 2019 states that the share of employment in the informal sector is around 1-3%. [1] An ILO report states that the share of employment in the informal sector in Finland in 2018 was 6.3%. [2]

[1] Statistics Finland. November 2019. "Informal work in Finland".
[https://www.unece.org/fileadmin/DAM/stats/documents/ece/ces/ge.12/2019/S6_Finland_ppt.pdf]
[2] International Labour Office. 2018. "Women and men in the informal economy: a statistical picture".
[https://wecglobal.org/uploads/2019/07/2018_ILO_Informal-economy-statistics.pdf]

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: 2

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: 0.27

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: 4

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: 85.45

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: 0.41

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: 4

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: 81.73

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: 334.3

2019

WHO

6.5.1c

Population ages 65 and above (% of total population)

Input number

Current Year Score: 22.14

2019

World Bank

6.5.1d

Prevalence of current tobacco use (% of adults)

Input number

Current Year Score: 19.7

2018

World Bank

6.5.1e

Prevalence of obesity among adults

Input number

Current Year Score: 22.2

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: 99

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: 3501.41

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