ASSESSMENT

Country report: ECDC Public Health Emergency Preparedness Assessment for Finland, 2024

Under Article 8 of the Regulation (EU) 2022/2371

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Abbreviations

AMC	Antimicrobial consumption
AMR	Antimicrobial resistance
AVI	Regional State Administrative Agency
BSL	Biosafety level
FINDATA	Finnish Social and Health Data Permit Authority
ECDC	European Centre for Disease Prevention and Control
ECHA	European Chemicals Agency
EEA	European Economic Area
EU	European Union
EU-JAMRAI	EU Joint Action on Antimicrobial Resistance and Healthcare-Associated Infections
Fimea	Finnish Medicines Agency
FFA	Finnish Food Authority
HAI	Healthcare-associated infection
HERA	Health Emergency Preparedness and Response
HPAI	Highly pathogenic avian influenza
HUS	Helsinki University Hospital
IHR	International Health Regulations
IPC	Infection prevention and control
KELA	Social Insurance Institution
LUKE	National Resources Institute Finland
MDRO	Multidrug-resistant organism
MSAH	Finnish Ministry of Social Affairs and Health
NAP AMR	National Action Plan on antimicrobial resistance
NAPHS	National Action Plan for Health Security
NPIS	National Poison Information Center
PHEPA	Public Health Emergency Preparedness Assessment
RCCE	Risk communication and community engagement
SCBTH	Serious Cross-Border Threats to Health
SOP	Standard Operating Procedures
SPAR	State Party Self-Assessment Annual Report
THL	The Finnish National Institute for Health and Welfare
VALVIRA	National Supervisory Authority for Welfare and Health
WGS	Whole genome sequencing
WHO	World Health Organization

Executive summary

Background

As stated in Article 8 of the Regulation (EU) 2022/2371 on Serious Cross-Border Threats to Health (SCBTH), ECDC has the responsibility, in coordination with relevant Union agencies and bodies, to conduct Public Health Emergency Preparedness Assessments (PHEPA) of all 30 European Union and European Economic Area (EU/EEA) countries every three years regarding the state of implementation of their national prevention, preparedness and response planning. This assessment is based on the 16 capacities included in the template to be used by countries when providing information on their prevention, preparedness and response planning in accordance with Article 7 of the SCBTH regulation. The aim of the PHEPA is to improve prevention, preparedness and response planning in EU/EEA countries through the implementation of evidence-based recommendations following individual country assessments. Within nine months of the receipt of the ECDC assessment report, if applicable, countries are requested to provide an action plan addressing the proposed recommendations of the assessment.

This report presents the findings and recommendations of the second assessment in the three-year programme, conducted in Finland. This involved a desk review of relevant documents, followed by a five-day mission conducted from 10 to 14 June 2024. As per the established assessment process, of the 16 capacities included in the Article 7 (SCBTH) self-assessment template, the ECDC-led team assessed five capacities in depth and validated Finland's responses to the Article 7 questions for the remaining capacities. The five capacities assessed in depth were Capacity 3 – Laboratory; Capacity 4 – Surveillance; Capacity 6 – Health emergency management; Capacity 10 – Zoonotic diseases and threats of environmental origin, including those due to the climate; and Capacity 12 – Antimicrobial resistance (AMR) and healthcare-associated infections (HAIs).

Key findings

In Finland, national preparedness planning is based on legislation and the national risk assessment (NRA), which defines what kind of risks different administrative branches and other parties shall be prepared for. The holistic whole-of-society preparedness approach is not limited to communicable diseases.

Finland has been implementing substantial changes in its social and healthcare organisational structures for the past year and these are expected to continue to occur in 2025. Instead of 300 municipalities individually organising social and healthcare activities, this responsibility is shifting to 21 wellbeing services counties and five collaborative areas that organise social, healthcare, and rescue services for the entire country. Along with the current reforms, budget and human resource cuts occurring between 2024 and 2027 will have an impact on national public health preparedness and response functions.

Key public health stakeholders in Finland include the Ministry of Social Affairs and Health (MSAH), the Finnish National Institute for Health and Welfare (THL), the wellbeing services counties, the City of Helsinki, Åland and the collaborative areas. Intersectoral collaboration takes place at all levels – from the county level to the agency and ministerial levels – through ad hoc and continuous, systematic meeting fora, such as meetings between professionals and civil servants, the heads of preparedness at different ministries or even the whole of government.

Finland has a National Action Plan for Health Security (NAPHS) that was the result of the WHO Joint External Evaluation conducted in 2017; however, the implementation of this plan was not completed during the COVID-19 pandemic. When developing Finland's Action Plan from this PHEPA, the WHO Joint External Evaluation and NAPHS should be revisited to determine if the activities and strategies it proposes are still relevant today.

Finland's intersectoral approach meant that some key findings and recommendations applied to several of the capacities under assessment, rather than only one specific capacity; these are presented together in this report under 'cross-cutting' findings or recommendations.

Cross-cutting recommendations

Develop operational plans to clarify coordination structures between administrative levels and sectors, as well as define leadership, roles and responsibilities for cross-institutional/sectoral collaboration.

Develop the relevant methodology and an instrument to clarify roles and responsibilities for cross-sectoral risk assessment for acute public health events and emergencies (e.g. standard operating procedures (SOPs).

Revisit the National Action Plan for Health Security resulting from the WHO Joint External Evaluation in 2017 to determine if the activities and strategies it proposes are still relevant today.

Retest any roles in public health that are redefined as part of the ongoing changes to social and healthcare organisational structures.

Main recommendations for each capacity assessed in depth

Capacity 3. Laboratory

Document how testing capacity was strengthened during the COVID-19 pandemic and ensure that a strategy for scaling up testing in emergency situations is part of the preparedness plan. The strategy should also reflect how critical surge capacity can be mobilised during and after the ongoing reform of Finland's public health/healthcare system.

Describe potential additional sources of testing capacity in the preparedness plan and identify any agreements or contracts that can be set in place for preparedness purposes. The plan should also address how obstacles to mobilising extra capacity can be removed.

Clearly define roles, responsibilities and legal requirements linked to both biosafety and biosecurity in the revised Communicable Diseases Act.

Ensure that the transition to the new system for licensing of clinical laboratories is executed without interruption of service. Quality aspects should be maintained to guarantee the highest possible quality and safety of operations. This requires sufficient resources, effective transfer of knowledge for the licensing process, and a defined role for THL in the new process.

Capacity 4. Surveillance

Establish an integrated clinical and laboratory sentinel system for the surveillance of mild acute respiratory infections.

Put in place a mechanism for laboratories to report the number of diagnostic tests they perform.

Ensure that the amended Communicable Diseases Act:

- defines the requirements for the establishment of a primary healthcare-based sentinel surveillance system for acute respiratory infections;
- includes provisions for rapid and secure access to enhanced clinical information (i.e. by providing more detailed information/data in a timely manner) for informed decision-making;
- defines clear responsibilities for surveillance and outbreak investigation between THL and the wellbeing services counties, maintaining national standards of quality and national competence for monitoring performance.

Capacity 6. Health emergency management

Develop a risk and vulnerability analysis that specifically addresses health sector needs/issues and complements the National Risk Assessment (NRA).

Develop operational procedures for the National Pandemic Preparedness Plan, ensuring that health preparedness plans align with those of other sectors and that mandates and responsibilities are clear.

Include the use of expertise of communicable disease control staff (from THL and/or the physician responsible for communicable diseases in the wellbeing services county) at the situation awareness group in the collaborative areas and at the MSAH in the revision of the relevant legislation, e.g. the Communicable Diseases Act or Act on Organising Healthcare and Social Welfare Services (612/2021).

Develop an agreed exercise plan to test and assess the health preparedness plan at the national level, following the ongoing national health reform, the restructuring of THL, the new operational plan and the amended Communicable Diseases Act.

Capacity 10. Zoonotic diseases and threats of environmental origin, including those due to the climate

Work to maintain and strengthen the good collaboration and communication between the animal and human health sectors, including the environmental sector, and document how this collaboration is carried out.

Improve and formalise the good coordination between animal, human and environmental sectors by working on joint products and outputs, such as joint risk assessments and joint outbreak investigations.

Capacity 12. Antimicrobial resistance (AMR) and healthcare-associated infections (HAIs)

Ensure adequate resources for addressing AMR at the national level and in the wellbeing services counties, particularly given the lack of dedicated funding for AMR activities. Specific funding might be required to close gaps in AMR surveillance, prevention, and control. Priority projects and possible mechanisms to fund them could be determined by the National Expert Group on AMR.

Conclusions

Finland has a culture of all-government and whole-of-society preparedness. The country's strong collaborative approach mitigates challenges. This collaboration is supported by a small-country style, where there are more informal (direct) lines of communication within and among sectors.

Finland had high scores in the Article 7 questionnaire. However, as a higher score can be given for capacities that have been tested within the last three years, the country's high scores may have been influenced by the fact that the questionnaire was completed within three years of the COVID-19 pandemic, which provided opportunities to test preparedness in many capacities. In addition, there is considerable uncertainty surrounding how the ongoing social and healthcare reform, restructuring, and budget and human resource cuts will impact national preparedness and response.

Limited validation with other sectors and stakeholders was possible during the ECDC mission conducted for this report. The assessment team acknowledges that the pilot character of this mission and a shorter timeframe between the publication of the Article 8 delegated act and the mission date might have had an impact on Finland's ability to prepare for the mission.

Background and legal basis

During the COVID-19 pandemic it was recognised that the legal framework for combatting serious cross-border threats to health, provided for in Decision No 1082/2013/EU, needed to be broadened and enhanced, in order to ensure a more effective response across the EU to deal with health-related emergencies. Hence, the European Commission developed and published on the 23 November 2022 the Regulation (EU) 2022/2371 on serious cross-border threats to health (SCBTH)[1].

Within the SCBTH regulation, it is recognised that prevention, preparedness and response planning are essential elements for combatting serious cross-border threats to health. In addition to creating a Union Health Crisis and Pandemic Plan, the regulation also outlined the importance of updating and seek coherence with Member States' prevention, preparedness and response plans, without prejudice to Member States' competences in this area. To this end, a template was developed under Article 7 of the SCBTH[2], such that Member States could provide the Commission with an update on the latest situation with regard to their prevention, preparedness and response planning and implementation at the national level. In order to support the assessment of those plans, as per Article 8 of the SCBTH, ECDC has the responsibility, in coordination with relevant Union agencies and bodies, to conduct assessments of all 30 European Union and European Economic Area (EU/EEA) countries every three years. These assessments are based on the 16 capacities included in the template under Article 7 of the SCBTH.

ECDC has developed a methodology for public health emergency preparedness assessment (PHEPA) to implement Article 8 of the SCBTH and the associated delegated act[3]. The assessment process is designed to maintain consistency within the EU/EEA countries throughout the three-year cycle, while allowing for adaption of plans if the national circumstance requires.

Aim and objectives

The aim of the ECDC PHEPA process drawn from Article 8 of the SCBTH Regulation is to improve prevention, preparedness and response planning in EU/EEA countries through the implementation of evidence-based recommendations following individual country assessments. Within nine months of the receipt of the ECDC conclusions, if applicable, countries are requested to provide an action plan addressing the proposed recommendations of the assessment.

The specific objectives of the assessment process are to:

- Validate the self-assessment of preparedness by countries in the 16 capacities covered by the outputs from the most recent IHR State Party Self-Assessment Annual Report (SPAR[4]) and Article 7 template.
- Collaborate with countries to identify challenges, bottlenecks, gaps or areas for improvement concerning the 16 capacities referred to in Article 7 (a list of capacities assessed is available as Annex 1).
- Encourage the inclusion of key elements within the prevention, preparedness and response planning structure such as cross-sectoral and cross-border coordination, crisis management, response governance, communication, plan testing, evaluation and regular reviews, according to lessons identified from the response to public health emergencies.
- Use the opportunity of a standardised approach to the assessment process to contribute to the improvement of EU/EEA prevention, preparedness and response capacities by promoting a common understanding of key elements and a coordinated approach.
- Provide support to countries in enhancing their national prevention, preparedness, and response capacities through recommendations based on the assessment, and providing targeted assistance upon request.

[1] European Commission (EC). Regulation (EU) 2022/2371 of the European Parliament and of the Council of 23 November 2022 on serious cross-border threats to health and repealing Decision No 1082/2013/EU. Brussels: EC; 2022. Available at: https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32022R2371&from=EN

[2] European Commission (EC). Commission Implementing Regulation (EU) 2023/1808 of 21 September 2023 setting out the template for the provision of information on prevention, preparedness and response planning in relation to serious cross-border threats to health in accordance with Regulation (EU) 2022/2371 of the European Parliament and of the Council. Brussels: EC; 2023. Available at: https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32023R1808

[3] European Commission (EC). Regulation (EU) 2024/1232 of 5 March 2024 supplementing Regulation (EU) 2022/2371 of the European Parliament and of the Council as regards assessments of the state of implementation of national prevention, preparedness and response plans and their relation with the Union prevention, preparedness and response plan. Brussels: EC; 2024. Available at: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=OJ:L_202401232

[4] World Health Organization (WHO). IHR States Parties Self-Assessment Annual Report (SPAR). WHO: Geneva; 2025. Available at: https://www.who.int/emergencies/operations/international-health-regulations-monitoring-evaluation-framework/states-parties-self-assessment-annual-reporting

Observations on the assessment process

The assessment of Finland was the second public health emergency preparedness assessment conducted under the auspices of the SCBTH regulation, as laid out in Article 8 of the regulation and the associated delegated act. The assessment team was composed of 14 experts from ECDC, the Directorate-General for Health and Food Safety and The Health Emergency Preparedness and Response Authority (HERA), together with one national expert from Norway and one from Sweden. The assessment team undertook the assessment process in collaboration with the national focal points from Finland. It consisted of a desk review phase and a country visit that took place from 10 to 14 June, 2024 in Helsinki, Finland. An expert from the European Chemicals Agency (ECHA) also took part in the mission and provided input on the assessment of Capacity 11 – Chemical events. Further details regarding the practical aspects of the mission are available in Annex 2.

As Finland was one of the first countries to undergo this assessment process, this country visit served as a pilot mission for ECDC with a severely truncated planning phase of two months, compared with the standard practice of six months. Therefore, both ECDC staff and Finnish experts considered the time between receipt of documents and the face-to-face mission, the documentary review phase and the mission planning period to be very short. Despite this, all requested documents were received prior to the mission and a specific teleconference for each in-depth topic was held to meet the dedicated teams, exchange information and seek clarification on both sides.

The pilot character of the preparatory phase also meant that participation from all relevant sectors was not always possible during the country mission. There were discussions about how the assessment process compared with the WHO Joint External Evaluation, and – as a lesson learned for ECDC and the country being assessed – it should be highlighted that participation from experts in other sectors (i.e. not just public health) is needed in the preparatory phase during relevant sessions. Nevertheless, the discussions with the national experts that were present provided an opportunity for valuable discussions.

It also needs to be recognised that situations in a country may change during the period between the completion of the Article 7 questionnaire (December 2023) and the PHEPA; therefore, responses should be considered 'as of December 2023'.

On the first day of the country visit, the assessment team piloted a scenario-based approach to discuss cross-cutting themes and obtain an overview of the country's response system. Key areas of discussion included:

- communication and coordination;
- monitoring and surge capacity; and
- risk assessment and response decision-making process.

The Finnish colleagues used a recent example of avian influenza in fur farms in Finland for this scenario to guide the discussions.

As per the established assessment process, of the 16 capacities included in the Article 7 (SCBTH) self-assessment template, the ECDC-led team assessed five capacities in depth and validated Finland's responses to the Article 7 questions for the remaining capacities. The five capacities assessed in depth were Capacity 3 – Laboratory; Capacity 4 – Surveillance; Capacity 6 – Health emergency management; Capacity 10 – Zoonotic diseases and threats of environmental origin, including those due to the climate; and Capacity 12 – antimicrobial resistance (AMR) and healthcare-associated infections (HAIs).

The mission itself was conducted with an open and transparent approach from the host country, including sharing of relevant documents for the assessment and engaging in a productive discussion. All recommendations from ECDC are based on these documents and the discussions held during the assessment week.

Findings and recommendations

In Finland, national preparedness planning is based on legislation and the national risk assessment (NRA), which defines what kind of risks different administrative branches and other parties shall be prepared for. The holistic whole-of-society preparedness approach is not limited to communicable diseases.

Finland undertook extensive health reform in 2023, with the most drastic changes in the nation's post-World War II history. The reform is still underway, with significant revision of legislation, including an updated version of the 2016 Communicable Diseases Act. The whole process is expected to be finalised in 2025. As part of these changes, the 300 municipalities will no longer individually organise social and healthcare activities. Instead, this responsibility will shift to 21 wellbeing services counties and five collaborative areas that organise social, healthcare, and rescue services for the entire country. Along with the current reforms, budget and human resource cuts occurring between 2024 and 2027 will have an impact on national public health preparedness and response functions.

Key public health stakeholders in Finland include the Ministry of Social Affairs and Health (MSAH), the Finnish National Institute for Health and Welfare (THL), the wellbeing services counties, the City of Helsinki, Åland and the collaborative areas. Intersectoral collaboration takes place at all levels – from the county level to the agency and ministerial levels – through ad hoc and continuous, systematic meeting fora, such as meetings between professionals and civil servants, the heads of preparedness at different ministries or even the whole of government.

Finland's holistic preparedness approach and strong intersectoral collaboration meant that some of the assessment's main findings and recommendations were cross-cutting, pertaining to several of the areas under assessment. Therefore, these are addressed in their own section of this report.

Cross-cutting main findings and recommendations

The strong collaborative approach in Finland mitigates challenges. This collaboration is supported by a 'small-country' style, where there are more informal and direct lines of communication within and among sectors.

Certain legislation in Finland includes the cross-sectoral collaboration dimension. Although some cross-sectoral support in the process of outbreak investigation is in place and certain agencies (e.g. THL) have processes defined, the cross-sectoral risk assessment process for public health events and emergencies is not clearly established in the country.

There is uncertainty how budget and human resource cuts will impact national preparedness and response.

A number of legislative acts relevant to this assessment are currently under revision in Finland, such as the Communicable Diseases Act, the Emergency Powers Act and the Health Protection Act. There are also broader social and healthcare reforms, as well as budget and human resource cuts occurring between 2024 and 2027. There is uncertainty what impact these changes will have on national preparedness and response.

There is a National Action Plan for Health Security that resulted from the WHO Joint External Evaluation conducted in 2017; however, implementation of this plan has not been followed recently due to the COVID-19 pandemic.

Recommendations

- Develop operational plans to clarify coordination structures between administrative levels and sectors, as well as define leadership, roles and responsibilities for cross-institutional/sectoral collaboration.
- Develop the relevant methodology and an instrument to clarify roles and responsibilities for cross-sectoral risk assessment for acute public health events and emergencies (e.g. standard operating procedures (SOPs).
- Develop and conduct inter-sectoral and cross-administrative level simulation exercises.
- Revisit the National Action Plan for Health Security resulting from the WHO Joint External Evaluation in 2017 to determine if the activities and strategies it proposes are still relevant today.
- Retest any roles in public health that are redefined as part of the ongoing changes to social and healthcare organisational structures.
- Ensure that all of the new legislative acts currently under revision are aligned, particularly with regards to the health sector.

Findings and recommendations for capacities assessed in depth

Capacity 3. Laboratory

Overall, the Finnish laboratory system is at an advanced level and can deliver a range of services needed for diagnostics and characterisation of infectious diseases. Finland has a tier-based system for laboratory diagnostics, confirmation, and characterisation in place. The roles and responsibilities are clearly defined.

Finland has laboratory and bioinformatic capacity for characterisation of a novel pathogen by whole genome sequencing. Alternative methodologies, including targeted amplification of signature sequences to metagenomic approaches, are available and practical examples where these have been applied were given.

The laboratories at THL are accredited according to international standards linked to their mandate. Clinical laboratories do not need to be accredited, but accreditation is widely achieved. Quality is also upheld through mandatory licensing, which requires laboratories to meet comprehensive prerequisites for operational capacity and capability specifically designed for laboratories involved in diagnostic testing and handling of biological material. To date, the licensing of laboratories has been informed by recommendations from an expert group chaired by THL and consisting of clinical microbiologists and specialists from the Regional State Administrative Agency and the National Supervisory Authority. This system is in the process of being revised and the responsibility of licensing clinical laboratories will fall to the Regional State Administrative Agency.

The general preparedness plan partly covers the routines for developing and operationalising a new PCR test. THL provides clinical laboratories that need to develop a new test for diagnostic purposes with certain methodological support for the validation process. A laboratory must be licensed to develop a new test and before the test can be used the laboratory needs to demonstrate that the test fulfils the expected quality and performance criteria. Laboratories must register their use of in-house tests with Finnish Medicines Agency, Fimea. As a practical example, development and early validation of the test for SARS-CoV-2 was undertaken and the test was put into operation within a week after publication of the primers and probe in a scientific publication and distribution of positive controls. Adaption of laboratory reporting systems to allow for automated reporting of results from testing of a new pathogen can be a possible delaying factor for full implementation of effective testing across the clinical laboratory network.

Finnish laboratory and surveillance data are routinely reported through existing electronic reporting systems. Reporting of emerging pathogens can be swiftly initiated if the pathogen is already defined within the system. Adding completely new pathogens requires coding that can take weeks to fully introduce. In such situations, a web-based system can be deployed for reporting, even if these solutions require manual work.

The strategy and targets for scaling up laboratory capacity in the event of a public health emergency is partially described in the preparedness plan. Mechanisms for funding for scaling up diagnostic testing capacity are in place.

Deployment of strengthened testing capacity was tested during the COVID-19 pandemic, during which bottlenecks and challenges to intensified laboratory operations were identified. Availability of staff was found as the main limiting factor for further expansion of testing capacity. Finland could still operationalise a high level of testing capacity during the pandemic, even if some prioritisation had to be done during the most intense periods. This prioritisation may have affected laboratory testing for other diseases. Even if the total population coverage for testing was high in Finland during the pandemic, availability of timely testing was not equally available across the country. Notably, in the northern parts, solutions such as transportation of samples and use of alternative testing methods were used to fully cover the testing needs.

Setting a target for diagnostic capacity is part of the country's pandemic management strategy, which was revised and a new version published in January–February 2024. The scaling up of testing capacity during the COVID-19 pandemic included enrolment of laboratories within the network of clinical laboratories, and purchase of both domestic and foreign commercial services. Finland has also planned to expand testing to other laboratories outside the clinical or public health sectors. For example, the Finnish Food Authority or other commercial and university laboratories could potentially be engaged for human testing for public health or clinical purposes.

Experiences from the COVID-19 pandemic showed that a significant surge capacity could be mobilised through the inclusion of additional laboratories. However, the process of enrolling additional laboratories for SARS-CoV-2 testing took significant time and several hurdles were identified. These included finding competent staff, setting up solutions that allowed additional laboratories to perform diagnostic services (e.g. licensing), and stockpiling equipment and supplies.

There are various national legislations and agreements in place in Finland that regulate aspects of biosafety and biosecurity. These documents cover mandatory licensing of laboratories, importation/exportation/transport of biological agents, handling of infectious waste and weapons of mass destruction. Even if biosafety and biosecurity are partly covered in these legislations and agreements, the areas would gain clarity if they were more detailed in designated documents.

BSL 3 facilities linked to diagnostic and public health applications are available in Finland. These laboratories are available within THL and main clinical laboratory centres. Safety boxes for BSL 3+ activities for deactivation of samples are available and have been used as part of routine operations.

BSL 4 facilities are not available in Finland. An agreement with the Public Health Agency of Sweden (Folkhälsomyndigheten) is, however, in place and this mechanism has been used for the purpose of diagnostics in handling such threats.

Finnish procedures for transport of biological agents are regulated by several international agreements and there are available contracts for air, sea, and land transport of this material. Procedures for packaging and handling of samples follows international standards. Linked to the use of BSL 4 facilities in Sweden, Finland has experienced delays in shipment of such samples by air. By experience, this can cause minor delays in the process of sample referral but would not fully block transport.

Recommendations

- Ensure that the transition to the new system for licensing of clinical laboratories is executed without interruption of service. Quality aspects should be maintained to guarantee highest possible quality and safety of operations. This requires sufficient resources, effective transfer of knowledge for the licensing process, and a defined role for THL in the new process.
- Document how testing capacity was strengthened during the COVID-19 pandemic and ensure that a strategy for scaling up testing in emergency situations is part of preparedness plans. The strategy should also reflect how critical surge capacity can be mobilised during and after the ongoing reform of the country's public health/healthcare system.
- Describe potential additional sources of testing capacity in the preparedness plan and consider what agreements or contracts could be set in place for preparedness purposes. The plan should also address how obstacles to mobilising extra capacity can be removed; for example, how to ensure safe and accurate human testing in laboratories with no operational licence for such activities.
- Clearly define the roles, responsibilities and legal requirements linked to both biosafety and biosecurity in the revised Communicable Diseases Act.

Capacity 4. Surveillance

Finland has a robust surveillance system with integrated laboratory and hospital data and the possibility to link with other health registries for more advanced analyses, including vaccine effectiveness, risk factors for clinical outcomes, impact of interventions, and epidemiological characteristics of pathogens. THL monitors the status of infectious diseases in Finland and maintains the National Infectious Diseases Register. The ongoing health reforms will likely give more surveillance responsibility to the wellbeing services counties, but THL will retain an overall coordinating role.

The surveillance system in Finland is based on laboratory detections, which trigger notifications from hospitals for diseases under surveillance. For most identified infections, laboratory detections are automatically collected in the National Infectious Disease Register. THL can access data from other registries and link them to the notification system as needed, based on a unique personal identifier. The whole system is electronic with incorporated automations. Finland is a pioneering country in terms of healthcare systems digitalisation and regulating data access through a dedicated permit authority. This model has been instrumental in shaping the broader European Health Data Space concept. However, despite the high level of digitalisation, the various data registries are not always standardised. Therefore, having data ready for analysis can be laborious, untimely, and prone to errors.

The timeliness of reporting to THL depends on the surveillance objectives and can vary from immediate to annual. In addition to the notifiable diseases reporting process, all positive detections from normally sterile sites (cerebrospinal fluid, blood) are reported to the public health authorities to ensure early detection and rapid response to outbreaks. Finland also has a granular wastewater surveillance system through which THL monitors the amount of coronavirus, influenza A, influenza B and RSV present as a proxy of circulation in the community. The system also monitors enteroviruses and psychoactive drugs. A wastewater monitoring newsletter is published weekly on the THL website, with an email sent to public health authorities in the wellbeing services counties.

Hospital-based surveillance of severe acute respiratory infections (SARI) is in place. The system is comprehensive, with integrated laboratory testing of all cases for influenza, SARS-CoV-2 and RSV. Surveillance of outpatient acute respiratory infections is based on extraction of relevant diagnoses (ICD-10 coded) from the electronic medical records of general practitioners.

There isn't an established sentinel primary healthcare-based system for surveillance of mild respiratory infections. Generally, patients presenting with mild acute respiratory infections are not tested. Consequently, there is lack of samples from the primary healthcare level for microbiological analyses and viral detections and virus characterisation is mostly based on samples from secondary and tertiary care. This results in lack of representativeness of laboratory detections and characterisation, with a potential risk of delayed detection of new pathogens or scarcity of available samples for virus characterisation of circulating influenza or SARS-CoV-2 viruses.

In addition, it is difficult to assess the sensitivity and specificity of such a system (i.e. the performance of the case definition built with ICD-10 codes) because of the lack of a gold standard to compare with, and the population representativeness (e.g. inclusion of children or older adults living in care homes). In the event of a pandemic, it could be difficult to change the objectives of the systems and the reporting practice of clinicians because there isn't an established network coordinated by THL, nor an ongoing communication channel. An attempt to introduce random testing of patients with acute respiratory infection was unsuccessful due to the general practitioners finding the reporting form and process too burdensome.

Although there is a strong network of capable laboratories, the number of diagnostic tests performed (i.e. both positive and negative tests) is not collected. Therefore, it is not possible to monitor compliance to testing recommendations, nor to monitor indicators such as proportion positivity and positive predictive value of clinical definitions.

The transition to a new public health system with a more prominent role for local public health authorities, jointly with the ongoing update of the Communicable Diseases Act, offer opportunities to address some of the surveillance-related challenges described above. However, ongoing budget cuts pose an additional challenge to ensure maintaining high-performing surveillance systems and outbreak investigation capacity.

Recommendations

- Ensure that the amended Communicable Diseases Act:
  - Defines the requirements for the establishment of a primary healthcare-based sentinel surveillance system for acute respiratory infections, e.g. by including requirements for wellbeing services counties to nominate sentinel sites and to ensure sample collection and referral to THL. This is necessary to allow for the representative monitoring of respiratory virus circulation in the community.
  - Includes provisions for rapid and secure access to enhanced clinical information (i.e. more detailed information/data in a timely manner) for addressing critical information needs for decision-making during public health emergencies, e.g. risk factors for severe outcomes, effectiveness of interventions, assessment of disease burden.
  - Defines clear responsibilities for surveillance and outbreak investigation between THL and the wellbeing services counties, maintaining national standards of quality and national competence for monitoring surveillance system performance.
- Establish an integrated clinical and laboratory sentinel system for the surveillance of mild acute respiratory infections.
- Put in place a mechanism for laboratories to report the number of diagnostic tests they perform to enable calculation of proportion positives and evaluation of testing recommendations and surveillance system performance.

Capacity 6. Health emergency management

Management of health emergency response

There is a strong culture of preparedness and general risk profiling in Finland. The country has a whole-of-government approach to prioritisation of risks through a National Risk Assessment led by the Ministry of the Interior. All ministries participate and there is also some form of public consultation. This is updated every five years.

Finland's ongoing health reform consolidated over 300 municipalities into 21 wellbeing services counties that will be responsible for all levels of healthcare. Tertiary care and coordination of healthcare response to emergencies (e.g. mass casualty incidents) are concentrated in five collaborative areas, each around a university hospital complex. Harmonisation of preparedness plans according to national guidance and national risk assessment has been achieved at the wellbeing services county level, supported by the oversight of the collaborative areas.

University hospitals provide tertiary care services 24/7, including treatment of infectious diseases. Collaborative areas each have an emergency operations centre with 24/7 functions. They have the possibility of contacting on-call experts, including a national infectious disease specialist. The emergency operations centres operate with an incident management system. The Chief Medical Officer of the collaborative area is usually responsible for the operation and response to emergencies and has the authority to mobilise healthcare resources from all the wellbeing services counties in their collaborative area. This does not extend to communicable disease outbreaks, where the Regional State Administrative Agencies have that authority. The process for sharing resources among collaborative areas in the event of an emergency is still under development.

The COVID-19 pandemic highlighted some important gaps in the Finnish system, such as the need to have as real-time as possible situation awareness about the status of the healthcare system. Currently, the wellbeing services counties report certain agreed indicators on a daily/weekly basis to their collaborative area operations centre, which forms the basis of the situation awareness report for that particular area. For the time being, the reporting is manual and uses a traffic light system with written explanations for disturbances. THL is in the process of developing a platform for this reporting that follows the national risk prioritisation approach. Not all collaborative areas are exactly equal and may not have the same facilities/tools.

Collaborative areas develop preparedness plans for social and healthcare emergencies. Individual hospitals update their preparedness plans accordingly. The municipalities have their own preparedness plans, although they no longer have the responsibility of organising social and healthcare services. The plans follow specific templates and are uploaded in a secure platform (VALSU).

A Situational Awareness Group organised by the MSAH is convened regularly to discuss the situation awareness picture for the whole country. The Chief Medical Officers and Chiefs of Preparedness from each collaborative area participate in this meeting, together with the Head of Preparedness of MSAH and representatives from THL, the Regional State Administrative Agency (AVI), the National Supervisory Authority for Welfare and Health (VALVIRA)

and the Prime minister's office. Collaborative Areas and THL have or are planning impressive situational awareness tools, which will be very useful in managing various crises.

Although THL staff are part of the Situational Awareness Group at the level of the MSAH, they are not really connected to the collaborative areas. Several interactions and common working groups were operating during the COVID-19 pandemic but these were not maintained. Public health personnel and THL staff can bring knowledge from the surveillance system trends and epidemic intelligence scanning (through local and ECDC reports), as well as the EU-level communication systems (e.g. EpiPulse), therefore enhancing the completeness of the situation awareness picture to inform future threats.

Currently, the role of THL is pivotal in many aspects of all-hazard response, including alerting, scientific advice, communication and technical support. Having these resources under a single roof could be considered a strength, and discussions with colleagues external to the organisation have highlighted the importance of THL to Finland's response in this area. The effects that recent budget cuts and the restructuring of THL will have on its ability to fulfil its role could not be assessed at the time of the visit but this should be closely monitored by MSAH so any necessary adjustments can be made.

There is intersectoral collaboration among ministries at the level of Heads of Preparedness and permanent secretaries of ministries, who have regular meetings under the auspices of the Security Committee to discuss national security, Chemical, Biological, Radiological, and Nuclear (CBRN) strategy and national risk assessment. Some silos exist in how the ministries work and collaborate, which is well described in the National Pandemic Preparedness Plan, which states that: 'Comprehensive security is a cooperation model of national preparedness for securing the vital functions of society during various incidents, including pandemics. Cooperation refers to planning, exercises and activities and as extensive cooperation as possible of the authorities, local government, different administrative branches, businesses, research organisations, non-governmental organisations and the population based on a shared situation picture.'

Although official intersectoral collaboration exists at the ministerial level, working groups at the technical/scientific levels are usually organised on a more ad hoc basis. Working groups that were operating during the COVID-19 pandemic were mostly not maintained afterwards.

At the international level, specific attention is given to the Nordic Collaboration Agreement (Denmark, Sweden, Norway and Iceland), and this is also true for the healthcare sector.

Several documents describing the above and the National Pandemic Preparedness Plan were shared with the PHEPA experts ahead of the country visit.

Emergency logistic and supply chain management

Identification of critical medical countermeasures (MCMs)

Finland has identified several critical MCMs to be stockpiled. The MSAH is in charge of listing them, in cooperation with relevant authorities (THL, Fimea), wellbeing services counties, etc.). Selected products include hospital supplies and medicines. Due to the sensitive nature of this information, Finland did not communicate the selected MCMs.

Policies or plans for monitoring supply and estimating demand of critical MCMs

The National Emergency Supply Agency (NESA) supervises the National Emergency Supply Organisation (NESO), a nationwide 'network of networks' of public and private entities, pooled by sectors, covering all strategic sectors (food supply, energy supply, logistics, health, etc.). In these pools, participating entities can develop a common preparedness culture in peacetime (by sharing information and developing partnerships). This then allows them to take action in an agile and concerted manner when a crisis hits.

This network also allows for the identification of vulnerabilities in the material preparedness of the healthcare system in general, and the MCMs supply chain in particular. Members can share any perceived challenges, whether they are immediate or anticipated.

NESA is currently deploying a digital tool to automate this process. The tool is developed, procured, and maintained by NESA's Research and Analysis Division. The data obtained is combined into an overall situation picture that is shared with the network and relevant authorities. In addition, THL is leading a project to automatically collect data on the supply and demand of critical healthcare products. When operating, this tool will provide up-to-date information and will be able to spot potential shortages in real time.

NESA also carries out studies to identify international risks and to spot cases of overreliance on a given manufacturer or country.

The NESA model seems to be effective overall, as through the development of a common preparedness culture, the model allows a holistic, collaborative, and adaptative approach. It then facilitates the swift mobilisation of private businesses capacities in case of emergency (which was the case during the COVID-19 pandemic).

Provisions related to mitigating supply chain vulnerabilities or mapping of production capacities

Finland has not yet implemented provisions specifically related to mitigating supply chain vulnerabilities or mapping production capacities within the country.

The challenges mentioned include:

- Competition law, which limits the criteria that can be used in tenders (for example, it can be difficult to exclude a product that is manufactured in a 'high risk' country).
- The high reliance on import for supply of MCMs (around 95% of MCMs used in Finland are imported, which makes monitoring the supply chains very difficult).

NESA has developed experimental capabilities to study the feasibility of cleaning single-use products in order to reuse them in a crisis situation, which could be an efficient way to increase availability of certain critical MCMs.

Provisions to scale-up manufacturing of critical MCMs

Finland has implemented some provisions to scale up the production of certain products to face specific crises (war, epidemics, etc.) but chose not to communicate about them. In addition, NESA has some agreements with domestic suppliers to maintain production capacities of certain critical MCMs that can be activated if needed.

NESA coordinates scaling up the manufacturing of MCMs in times of crisis. For instance, during the COVID-19 pandemic, the production of personal protective equipment increased rapidly thanks to the good cooperation between companies and public authorities. But this mechanism relies on private companies' good will, and as such, does not cover risks that can be covered by capacity reservation contracts (availability of raw products, legal obligation to deliver to the national market, etc.).

The main challenge to scaling-up domestic production of MCMs is the country's high reliance on imports.

Strategic stockpiles

NESA is the main authority in charge of managing national stockpiles of MCMs and a variety of strategic goods. This management – which includes managing contracts with the private sector, logistics and deployment – seems overall clear and effective.

There are three types of stockpiles in Finland:

- State-owned reserve stockpiles (e.g. some personal protective equipment) operated by private operators.
- Compulsory stockpiles held by pharmaceutical companies that should cover up to 10 months of demand (the list of MCMs is made by Fimea in cooperation with THL and the wellbeing services counties, and stock levels are monitored by Fimea).
- Security stockpiles managed by NESA through specific contracts but owned by private companies. The suppliers do not have an obligation to store materials specifically for the use of healthcare.

Finland also maintains stockpiles under the RescEU programme. The country received EUR 305 million in total from HERA to develop capacities, mainly against CBRN threats, by stockpiling approximately 100 medicinal products. This programme is implemented by the Ministry of Interior in cooperation with the MSAH, THL, NESA, and the Radiation and Nuclear Safety Authority and will run until autumn 2026. The country carried out an emergency deployment exercise in late May 2024, which showed the capacities of the public authorities involved and the Finnish Border Guard, Defence Forces, Customs, Helsinki University Hospital (HUS), and several private service providers to work together to make an effective use of stockpiles in an emergency.

Recommendations

Management of health emergency response

- Develop a risk and vulnerability analysis that specifically addresses health sector needs/issues and complements the NRA. These may be threats that will not necessarily escalate to the national level and that are not included in the NRA.
- Align health preparedness plans with those of other sectors, clarifying mandates and responsibilities. Technical/scientific intersectoral coordination and cooperation needs should be formalised and described in operational plans. In particular, counterparts expressed the need for operationalisation of the pandemic preparedness plan.
- Include the following in the revision of the relevant legislation, Communicable Diseases Act or Act on Organising Healthcare and Social Welfare Services (612/2021): the use of expertise of communicable disease control staff (THL and/or the physician responsible for communicable disease in the wellbeing services county) within the Situation Awareness Group in the collaborative areas. Public health staff can bring important information to the discussion.
- Clarify THL's mandate and role in the relevant legislation, specifically regarding the decision-making process, in order to support evidence-based decision-making when possible (communication and the link between local and national levels). At present, the role of THL in relation to the Regional State Administrative Agencies is not clear.

- Develop an agreed exercise plan for health preparedness at the national level, following the extensive national health reform, the restructuring of THL, the new operational plan and the amended Communicable Diseases Act. Simulation exercises can be different types and engage different levels, from discussion-led sessions with a narrow focus to large national multisector exercises. The MSAH will most likely be responsible for these activities, but they should also link to a national multi-sectoral exercise programme led by the Prime Minister's Office.
- Include cross-sectoral scientific advisory boards – including community representatives – in the preparedness plans. During crises affecting several sectors of society (e.g. pandemics), it is necessary to consider not only health but overall societal consequences in decision-making for risk management.

Emergency logistic and supply chain management

- Ensure the lists of MCMs are updated over time to take into account the potential changes in threats. When updating the list, the country should also continue including all relevant stakeholders at both national and local levels, where relevant.
- Continue the development and implementation of tools to ensure monitoring of supply and estimating demand, taking into account the reporting requirements that would be applicable in the case of a public health emergency. NESA and THL should also ensure that their tools exchange information in order to avoid duplication and to maximise the potential of the data collected.
- Map the country's MCMs production capacity in a more systematic fashion, even though NESA can provide a rather clear picture.
- Monitor vulnerabilities related to the dependency on a limited number of producers in third countries in a more systematic way and take actions to mitigate them. When feasible under applicable competition law, procurement contracts should favour domestic and EU-based manufacturers to de-risk the supply chain.
- Implement more capacity reservation programmes with domestic or EU-based MCMs producers in order to secure manufacturers' ability to deliver to the domestic market in an emergency.
- Ensure that the relevant stakeholders are included in creating the definition of the stockpiling strategy, and that all levels of the healthcare structure can deploy relevant stocks when needed, e.g. that all wellbeing services counties and collaborative areas have access to sufficient stocks.

Capacity 10. Zoonotic diseases and threats of environmental origin, including those due to the climate

Zoonotic diseases

In March 2024, a One Health Fact Finding mission took place in Finland, led by the Directorate-General for Health and Food Safety and supported by ECDC. The discussion focused on lessons learned, good practice and challenges related to an outbreak of highly pathogenic avian influenza (HPAI) in fur farms that happened the year before. With the aim of avoiding duplication and since several findings from the One Health mission are relevant to the PHEPA assessment, the conclusion and recommendations identified during the One Health Fact Finding mission guided the discussion and writing of this part of the report.

In Finland, collaboration and coordination between the human health and animal health sector is in place regarding monitoring, risk assessment and response to zoonotic diseases. This is partially reflected across the National Pandemic Preparedness Plan, where the collaboration between THL and the Finnish Food Authority (FFA) is flagged in the sharing of a situation picture or surveillance and contact-tracing data sharing for zoonotic events. The FFA is reflected as a national authority with a role in pandemic preparedness and response with a focus on zoonotic events. Examples of collaboration between the two sectors are the possibility for FFA and THL laboratories to offer support to each other in testing human and animal samples, or the response to the HPAI outbreak, where both sectors collaborated in terms of surveillance and information sharing.

The Zoonosis Centre has played a role in enhancing the collaboration between THL and FFA since it was established in 2006. The centre has mostly had an overseeing role and has coordinated some activities, such as the development of the zoonosis strategy for 2013–2017. The steering group of the Zoonosis Centre is chaired by the Ministry of Agriculture and Forestry, vice-chaired by the MSAH and includes participants from THL and FFA. Representative from the National Resources Institute Finland (Luke) and occupational health are also invited. The group meets four times a year to decide on strategic guidance for the centre. As the centre only has one designated staff member, who acts as its Director, and does not have additional staff or a specifically allocated budget, it has not had a prominent role in operational activities such as surveillance or outbreak investigation and response. The implementation of these activities is conducted by the relevant agencies and competent authorities. After the accomplishment of the centre's initial role in promoting collaboration between the animal and human sectors, and following several organisational changes at different levels, a discussion is ongoing on how to adapt the Zoonosis Centre's mandate to address the current needs and redefine its role.

The collaboration between the animal and health sectors is based on several laws and is working well in Finland. However, coordination in some activities could be enhanced. The work on independent situation pictures, risk assessments and having separate decision-making processes are examples of a lack of joint products and outputs. A large part of the collaboration is based on tacit agreements and continuation of good practice, but it is not

documented in SOPs or legislation. Additionally, there is no financial mechanism to fund joint activities related to One Health. Each sector has an independent budget allocated to each institute at national or municipal levels. The lack of a common budget can prevent the collaborative work necessary to produce joint outputs.

THL has been reviewing its priority list for pathogen surveillance since autumn 2023. As a result, a de-prioritisation is expected in some zoonotic diseases work – specifically in vector-borne diseases – due to limited resources and low disease burden for the Finnish population. The work currently done by THL may be limited for some zoonotic diseases. For example, the frequency of surveillance data analysis and reporting may be reduced and a certain number of responsibilities will be (and are already partially) transferred to the wellbeing services counties, such as routine surveillance, outbreak investigation, immunisation advice and certain risk communication activities. The decrease of work in this area might have a negative impact on the control of zoonotic diseases and this should be closely monitored in the coming years.

Several trainings on zoonotic diseases are routinely organised in Finland, targeting audiences at different administrative levels and with a cross-sectoral approach. Among the positive results of these training programs, they encourage strengthening the cooperation between regional and local One Health professionals.

The effects of climate change on zoonotic diseases and extreme weather events on public health

Finland's approach to address climate change and extreme weather events during decision-making is to find new solutions that simultaneously promote environmental and human well-being. From the Finnish perspective, climate change's impact on health can be addressed via seven main areas that take a holistic approach to both communicable and non-communicable diseases:

- Global warming (vector-borne diseases, pollen and allergies);
- Hot weather (health hazards caused by heatwaves);
- Increase in precipitation (problems with water quality, water-borne disease outbreaks, moisture damage in buildings);
- Slippery conditions (slip and fall accidents);
- Darker winters (depression);
- Cascading effects (international conflicts, climate migration); and
- Extreme weather phenomena (accidents, decrease in service reliability).

Heatwaves were highlighted as a potential priority area in Finland, as mortality was seen to increase by 10% during heatwave days, which creates additional burden on healthcare. Collaboration with the Finnish Meteorological Institute has been implemented to predict – based on trends of temperature – when the impact from heatwaves will be the strongest (e.g. in terms of mortality) and to develop national prevention strategies for the social- and healthcare sector to reduce the impact of future heatwaves.

Understanding the effects of climate change on zoonotic diseases is reliant on available data. Currently, there is no formal monitoring of vectors or vector-borne diseases in Finland. A more formal collaboration with academic institutions who do research in this area would be beneficial for future preparedness efforts on a national level. However, there is no specific funding nor resources allocated for research in this area. THL has had some collaborations with academic institutions on zoonosis. For example, with the University of Helsinki, who collect ticks and mosquitoes and other bird and mammal species and map zoonotic pathogens in those species. In addition, with a research team at the University of Turku that investigates *Ixodes* ticks and tick-borne pathogens using field sampling, citizen surveys, and molecular biology tools.

Recommendations

Zoonotic diseases

- Document how the cross-sectoral collaboration in the municipalities and wellbeing services counties is carried out to help sustain it over time. While this collaboration is mandated by several laws and decrees, such documentation can help to maintain and strengthen the good collaboration and communication between the animal and human health sectors in peacetime and during crisis.
- Establish more frequent and systematic collaboration with the environmental sector to strengthen the One Health approach in related activities.
- Improve coordination between the three sectors (human, animal, environmental) by working on joint products and outputs, such as joint risk assessments and joint outbreak investigations. We suggest developing a plan or strategy during peacetime on how to implement these joint activities and how to work in collaboration during crisis. This plan should clarify who would take the leading roles for the different parts of the activity according to the scenario (data sharing, analysis, communication). Small-scale events could serve as opportunities to test and improve these procedures.
- Redefine the future direction and role of the Zoonosis Centre, including the potential update of the zoonosis strategy. The new role should be reflected in the National Pandemic Preparedness Plan. If a new zoonosis strategy is developed, the changes in priority areas and the new country structure should be reflected.

- Monitor the performance of the de-prioritised activities related to zoonotic diseases and evaluate the impact of the de-prioritisation. Close communication and follow-up with the wellbeing services counties is encouraged to provide any needed support and early identification of challenging aspects.

Climate change and extreme weather events

- Ensure alignment between the many plans related to climate change and streamline their implementation, monitoring, and evaluation.
- Ensure that there is equity in funding for implementing activities across sectors (as individual sectors are responsible for prioritising and allocating funding for these activities) to help harmonise implementation approaches between sectors.

Capacity 12. Antimicrobial resistance (AMR) and healthcare-associated infections (HAIs)

Finland's One Health National Action Plan on antimicrobial resistance (NAP AMR) for 2024–2028 is drafted and under review, with publication planned in 2024. Lessons learned from the previous NAP AMR for 2017–2021, as assessed by the National Expert Group on AMR, are considered in this new plan, which also includes selected targets from the EU Council Recommendation on stepping up EU actions to combat antimicrobial resistance in a One Health approach[5]. The implementation plan will be drafted after publication of the NAP AMR, with support from the EU-JAMRAI 2 Joint Action. Implementation of AMR activities is carried out mostly by THL and the wellbeing services counties. Monitoring of this implementation will be the responsibility of the National Expert Group on AMR, as was the case for the NAP AMR for 2017–2021. Wellbeing services counties receive state funding and independently decide how to allocate their budget to implement disease surveillance and control (within the legal constraints), without any specific earmarked funds for the NAP AMR activities.

Finland has an existing legal basis for both AMR and HAI surveillance. For HAI surveillance, the Communicable Diseases Act leaves a lot of room for flexibility in implementation of and participation in national surveillance of various surveillance indicators. There are currently ongoing consultations and discussions on the update of the relevant legislation in 2024–2025, where new pathogens such as *Candida auris* may be included in the list of notifiable diseases.

Finland reports strong capabilities in AMR outbreak detection, as well as coordinated control of these outbreaks. Whole-genome sequencing (WGS) conducted at THL has detected multiple outbreaks of multidrug-resistant organisms (MDROs) and this has been crucial to controlling these outbreaks. Species and geno/phenotypes selected for routine WGS has depended on the volume of reported isolates. Currently, all isolates of carbapenemase-producing *Klebsiella pneumoniae* and *Escherichia coli*, as well as invasive isolates of meticillin-resistant *Staphylococcus aureus* (MRSA) undergo routine WGS, among others. With the budget cuts in public health, there is concern whether the well-functioning support system for outbreak detection and control with WGS can continue to be as extensive as it is now, or whether the list of selected pathogens might need to be shortened. It is unclear if continued prevention and control of highly consequential outbreaks can continue at the same level in the context of reduced resources and rising MDRO case numbers.

THL's guidance for control of MDROs, last updated in 2020, is detailed and reportedly followed widely. The wellbeing services counties and their infection prevention and control (IPC) teams perform local investigations and preventive actions, for example supporting outbreak control in long-term care facilities (LTCFs), when needed. Most MDROs are not endemic in Finland, and Finland has until now been able to contain MDRO outbreaks with WGS and control measures outlined in national MDRO guidelines.

Challenges with IPC and HAI coordination at the national level have arisen with changes in healthcare system structures, as most HAI surveillance and IPC responsibilities were reassigned to the wellbeing services counties. Surveillance of HAIs and IPC indicators was previously coordinated by THL in collaboration with established networks of IPC and infectious disease teams in secondary and tertiary hospitals. Regular meetings between wellbeing service county representatives and THL provide opportunities for collaboration on addressing HAIs and IPC, such as updating national IPC guidance. It remains unclear how these existing structures will coordinate with the recently established Finnish Centre for Client and Patient Safety to effectively reduce HAIs. Strengthening HAI surveillance and IPC is included as a strategic objective in the Client and Patient Safety Strategy; however, involvement or expansion of existing IPC support networks has not been clarified, and duplication or dismantling of systems that currently work well should be avoided.

While Finland has a long history of robust surveillance of AMR and HAIs, there are chronic, persistent challenges with IT and data management for both AMR and HAI surveillance. Decreases in laboratory participation in the Finnish national AMR surveillance have been observed since 2018, associated with lack of interoperability between newer laboratory information systems and existing AMR surveillance platforms.

[5] European Commission (EC). Council Recommendation on stepping up EU actions to combat antimicrobial resistance in a One Health approach (2023/C 220/01). Brussels: EC; 2023. Available at: https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=OJ:JOC_2023_220_R_0001

These interoperability issues, and thus need for more manual reporting, also hamper obtaining HAI data from hospitals. There are dedicated funds available for AMR surveillance data management updates at THL. This project has been delayed because of several issues with the availability of capable human resources, particularly in IT.

Issues with the quality of the current antimicrobial consumption (AMC) data limit usage of the data for antimicrobial stewardship activities. An upcoming online dashboard with data from the Social Insurance Institution of Finland (Kela) and Fimea should provide new opportunities for data analysis and actionable data. However, delineation of hospital and community AMC data needs to be improved, to enable measuring AMC in the hospital sector with better denominators (i.e. patient-days). Further possibilities to explore and report indications for antimicrobial treatment, especially in the community sector, are crucial for antimicrobial stewardship purposes.

Recommendations

- Ensure adequate resources for addressing antimicrobial resistance (AMR) at the national level and in the wellbeing services counties, particularly given the lack of dedicated funding for AMR activities. Specific funding might be required to close gaps in AMR surveillance, prevention, and control. Priority projects and possible mechanisms to fund them could be determined by the National Expert Group on AMR. Guidance regarding how to prioritise activities, develop a budgeted operational plan, identify funding gaps and mobilise resources for the implementation, monitoring and evaluation of the National Action Plan on AMR (NAP AMR) for 2024–2028 can be found in the WHO guidance for sustainable implementation of NAPs on AMR[6].
- Maintain whole-genome sequencing (WGS) capabilities for the detection of and response to outbreaks of multidrug-resistant organisms (MDROs) and healthcare-associated infections (HAIs). Should the strategy for WGS need to be adapted to changing epidemiology or volumes of specimens, decisions regarding which isolates to prioritise for real-time WGS should be made collaboratively with clinicians, microbiologists, and epidemiologists.
- Further clarify the national strategy and structures for HAI surveillance and infection prevention and control (IPC) activities. The roles of THL, the Finnish Centre for Client and Patient Safety, and wellbeing services counties should be clarified. There should also be agreement regarding which institutions should lead the implementation of each WHO core component of national IPC programmes, ensuring minimum requirements are met for each core component[7].
- Ensure adequate IT resources for sustaining the quality of national AMR and HAI surveillance activities. Both the AMR and HAI data management systems should be updated to ensure interoperability with the IT systems in the wellbeing services counties to ensure efficient and complete surveillance data collection.
- Ensure antimicrobial consumption (AMC) data is of sufficient quality to inform effective antimicrobial stewardship activities and consider adding the WHO AWaRe (Access, Watch and Reserve) classification of antibiotics for evaluation and reporting of AMC, particularly for hospital sector AMC data. Available data on indications for antibiotic use should be explored and reported, with the goal of providing feedback to prescribers.

Findings and recommendations for capacities not assessed in-depth

Capacity 1. Policy, legal and normative instruments to implement the International Health Regulations (IHR) 2005

Finland has a well-established functioning IHR National Focal Point (NFP). THL has been the designated IHR national focal point (NFP) for Finland, appointed by the government, since the IHR (2005) came into force in 2007. THL issues recommendations to be implemented at subordinate levels; however, follow up on the implementation is not comprehensive nor mandatory. Notably, there have been budget cuts to the THL which may affect the IHR functions of the NFP.

THL is also the Coordinating Competent Body for collaboration with ECDC and the Contact Point for the Early Warning and Response System (EWRS). In addition to the NFP function, the public health mandate of THL is broad and comprehensive.

Implementation of the IHR and the EU's SCBTH regulation in Finland includes continuous collaboration among relevant sectors that are outside the responsibilities of the NFP – such as the animal health and chemicals sectors – as well as collaboration with the regional and municipal levels. Prior to sending an urgent notification, THL generates a situation awareness picture in partnership with relevant experts within or outside the organisation to quantify, verify and assess the available information on risks to human health.

[6] World Health Organization (WHO). WHO implementation handbook for national action plans on antimicrobial resistance: guidance for the human health sector. Geneva: WHO; 2022. Available at: https://www.who.int/teams/surveillance-prevention-control-AMR/nap-amr-implementation-handbook

[7] World Health Organization (WHO). Assessment tool of the minimum requirements for infection prevention and control programmes at the national level. Geneva: WHO; 2021. Available at: https://www.who.int/publications/m/item/assessment-tool-of-the-minimum-requirements-for-infection-prevention-and-control-programmes-at-the-national-level

Finland has comprehensive legislation related to communicable diseases and emergencies, as well as the National Pandemic Preparedness Plan for Healthcare and Social Welfare. The main legislation related to communicable diseases is the Communicable Diseases Act (1227/2016), which is currently being revised. This Act includes IHR requirements and stipulates responsibilities for communicable disease prevention and control at different levels of government. Other relevant laws in Finland are the Health Protection Act, the Emergency Powers Act, the Water Services Act and decree and the Finnish Medicines Act, which are also undergoing revision.

Multisectoral collaboration occurs at the national level during emergency response and for preparedness planning; however, this collaboration is only partially mandated. When required, existing legislative mechanisms at the highest level support response to events and emergencies by the responsible authorities. Examples of these mechanisms include the Emergency Powers Act and the national and regional emergency response plans, e.g. the pandemic preparedness plan.

Recommendations

- Specify the role of THL in legislation when it relates to communication and collaboration in non-pandemic events and health emergencies, given the organisation's status as the IHR National Focal Point (NFP).
- Ensure that the revised laws related to public health preparedness and response complement each other and are free from gaps, as several laws are in the process of being revised in parallel. The MSAH could undertake this oversight.
- Revisit the partially mandated multisectoral collaboration for areas of preparedness planning and emergency response to see where areas could be mandated and strengthened.

Capacity 2. Financing

Contingency funding mechanisms for procurements and to achieve surge capacity in an emergency context are in place in Finland. Funding can be requested four times a year, but the process can be expedited when an emergency is declared. This mechanism was used during the COVID-19 pandemic, when additional funding was granted within the period of one week. This opportunity is available for all sectors involved in a certain emergency, including the wellbeing services counties and collaborative areas, which can also request additional funding from the national level through the same system.

The corresponding ministry of the requesting party (e.g. the Ministry of Social Affairs and Health in the case of a request coming from THL) would receive the initial request. This would then be communicated to the Ministry of Finance, which is responsible for allocating additional funds. There is no standard procedure or form for requesting this contingency funding.

The Ministry of Finance, together with other ministers in an interministerial meeting, is responsible for determining what situation should be considered an emergency for the purpose of allocating contingency funding. All ministers can request that the government declare an emergency.

A pre-defined list of what could be considered an emergency is available in the Emergency Powers Act.

Recommendation

- Establish financing mechanisms to ensure functioning of the IHR core capacities in the national legislation.

Capacity 5. Human resources

Finland is facing shortages of healthcare personnel, particularly in care for older adults. The MSAH is undertaking various measures to attract personnel from third countries and to train and license them appropriately. According to the discussions during the country visit, this has been moderately successful.

As clarified by Finnish colleagues, there is no real definition of the public health workforce in Finland. Outbreaks are investigated at the wellbeing services county level by medical personnel specialised in communicable diseases with the assistance of public health nurses, IPC nurses and – if needed – the advice of the Chief Infectious Disease Doctor from the corresponding wellbeing services county and/or THL. Epidemiologists work mainly at the wellbeing services county level in a hospital environment. The shift from over 300 municipalities to 21 wellbeing services counties has concentrated communicable disease personnel; however, in rural areas medical services for outbreaks may be provided by several part-time general practitioners.

Several countries in the EU/EEA have reported shortages in public health personnel and staff trained in field epidemiology for infectious diseases, as well as declining interest in the specialty of infectious diseases. Most government efforts are oriented towards maintaining the healthcare workforce and this is understandable according to the context described (e.g. aging population, geographical isolation, etc). A clear picture of the health workforce and foresight for the response to communicable disease threats is missing.

The discussion around Capacity 5 – Human resources was mostly carried out with THL partners and representatives of the MSAH. We were also provided with two related documents: 'Roadmap 2022–27: Ensuring the sufficiency and availability of healthcare and social welfare personnel' and 'Implementation plan 2024–2027: Ensuring the sufficiency and availability of personnel in the social welfare, healthcare and rescue services sectors'. Elements relevant to this area are also presented and discussed in Capacity 6 – Health emergency management and Capacity 7 – Health service provision sections of this report.

Recommendations

- Map the workforce involved in communicable disease management as an assessment of the country's available resources in the context of preparedness. This work could be undertaken by the MSAH, with other involved stakeholders as appropriate, after the completion of the health reform and restructuring.
- Hold national or regional meeting(s) targeting all county-level personnel to provide further incentive and continuing education on evolving applied epidemiology practices. These could be in addition to the meetings that THL holds with the Chief Infectious Disease Doctors of the 21 wellbeing services counties, which are good practice to keep everyone informed and connected.

Capacity 7. Health service provision

Finland's healthcare system has the capability to mobilise surge capacity for all healthcare levels (primary, secondary, tertiary). A variety of solutions were explored during the COVID-19 pandemic (e.g. hiring retired personnel, hiring airline personnel for contact tracing, etc.).

The wellbeing services counties have the responsibility to deprioritise appointments, surgeries, etc. in an emergency, although no specific national guidance on this issue is provided.

The discussion around Capacity 7 – Health service provision was mainly carried out with THL counterparts and representatives of the MSAH.

Recommendations

- Develop operational guidance on how to mobilise surge capacity for increased needs to manage an infectious disease threat or outbreak (e.g. increased needs for contact tracing, epidemiological investigation, quarantine monitoring, etc). The process for providing assistance between collaborative areas should be finalised and operationalised. This work could be undertaken by the MSAH.
- Develop prioritisation guidance for the wellbeing services counties medical services for emergencies. This work could be undertaken by the MSAH.
- Ensure there is a process in place to monitor available healthcare capacity at the local level.
- The recommendations for Capacity 5 – Human resources are also relevant here.

Capacity 8. Risk communication and community engagement

Finland has invested substantially in conducting research, developing plans and creating networks for risk communication and community engagement (RCCE).

Social listening was identified as key, enabling the production of inclusive and accessible information. It's also used for communication around other policy areas. In addition, work is being conducted to analyse what visuals are most effective.

The COVID-19 pandemic initiated a comprehensive consideration of the cultural diversity of Finland's population in risk communication that did not exist previously. Bottom-up approaches were used to identify the most appropriate and effective channels and modes for communication, as well as identifying what kind of information was needed most, e.g. by engaging community through leaders, working in co-design, and collaboration with non-governmental organisations.

Prior to the COVID-19 pandemic, there were no structures for multilingual and multichannel risk communication. The pandemic allowed the country to develop and strengthen its approaches and networks for RCCE. However, processes and responsibilities should now be clarified post-pandemic to ensure better preparedness in the future. The sustainability of the models for RCCE developed during the pandemic should be ensured strategically and systematically. Coordination between national and regional levels also remains a challenge.

Key counterparts from MSAH and THL were present during the country visit to describe current practices around Capacity 8 – Risk communication and community engagement. They outlined plans and described roles and responsibilities in several national documents, especially in MSAH, THL and government crisis communication plans, as well as in the national pandemic plan.

Recommendations

- Develop an operational risk communication plan that incorporates the lessons learned during the COVID-19 pandemic. Operationalise the plans and put the practices and networks/working groups established during the COVID-19 pandemic into sustainable structures.
- Clarify the coordination structures between administrative levels and sectors, as well as the leadership, roles and responsibilities in risk communication.
- Enhance community engagement and social listening capacities to build trust, taking into consideration the variety of communities and cultural diversity. Trust should be built continuously, including in regular health communications, especially between crises.
- Share the lessons on RCCE learned from the COVID-19 pandemic with other countries.

Capacity 9. Points of Entry (PoE) and border health

PoE are designated in the legislation in Finland. Information provided confirmed that routine core capacities with a multisectoral approach are in place at designated PoE in Finland. Also, local environmental health authorities are responsible for IHR ship inspections.

All designated PoE have developed public health emergency contingency plans and mechanisms to ensure that the adoption of international travel-related measures are risk based and practiced. Operational instruments to facilitate sharing of travel-related health data/information for response to the national level are in place and it was confirmed for biological, chemical and radioactive threats.

Finland used an instance of severe COVID-19 cases on a ship to provide an example of how multi-sectoral coordination and information flow is organised between local, regional and national levels under respective responsibilities. In this example, relevant actors such as THL, local hospitals and health units, and port authorities were rapidly informed by the cargo ship and appropriate actions were taken to manage the ill people in the event. It was retrospectively concluded that the threat was managed in a satisfactory way. Regular trainings are executed at the municipal and port level and plans are regularly updated.

PoE preparedness and event management at airports uphold IHR requirements according to the documents provided for the desk review; however, stakeholders from the air transport industry were not present for the session. Regarding ground crossings, an exercise was conducted earlier in the year of this assessment.

Recommendations

- Map and exercise the roles of public health personnel, the function of the legislation and the operational routines surrounding PoE and border health, including the preparedness contingency plans for responsible authorities in at least three points of entry.
- Incorporate relevant aspects from guidance on travel measures and IHR principles on travel and trade (Art. 2 IHR purpose and scope) in the National Pandemic Preparedness Plan for Healthcare and Social Welfare in section 10.5 'National Health Security on borders'.

Capacity 11. Chemical events

Finland complies with all requirements as regards registration of chemicals.

Colleagues from the MSAH indicated that specific site response plans were available in all large hazmat (hazardous material) sites. The respective collaborative area's chief medical officer organises the response of the healthcare facilities. The rescue services would lead the response on any large- or small-scale chemical release and, if necessary, would seek specialised scientific or technical advice. A 24/7 expert is on call for major chemical incidents to help rescue services or healthcare personnel handling issues around hazardous chemicals or protection from chemical exposures. This, it was indicated, works well in Finland and past incidents of this nature have been handled well.

For small numbers of cases or small clusters where chemical intoxication is suspected, a sensitive surveillance/monitoring system is required, which can pick up these signals. The Poison Information Center (NPIC) of Finland, based in Helsinki and co-located within the Helsinki University Hospital complex, can fulfil this role. It is operated 24/7, mainly by pharmacists and specialised medical officers, who are available during working hours. Finland provided an example of an investigation of a recently detected cluster of school children exposed to a chemical additive in food that caused acute gastrointestinal symptoms. They described the process that was undertaken during the meeting, highlighting the cooperation of different authorities in such events.

The discussion around Capacity 11 – Chemical events was carried out with representatives from THL and the Finnish representative to the European Chemicals Agency (ECHA) Management Board (from the MSAH). Another colleague from ECHA also attended, principally as an observer, to lend experience around chemical hazards.

Recommendations

There were no specific recommendations for this area.

Capacity 13. Union level coordination and support functions

Union level coordination and support functions are shared between the MSAH and THL. The Communicable Diseases Act, which is currently under revision with a wide multistakeholder group, describes the distribution of the roles and refers to EU legislation.

The MSAH duty officers have read access to Early Warning and Response System (EWRS) messages. THL's duty officers have read and write access to EWRS messages. THL also manages the national notification system, which runs through email. Non-emergency reporting is channelled by THL to the MSAH without involving other sectors.

The Health Security Committee (HSC) representative is from the MSAH. THL is represented in HSC's subgroups depending on the topic. Finland experiences the workload of the HSC and its various subgroups as heavy; however, its value – including the quality of the surveys and the subgroups – is appreciated. Information from the HSC is not systematically shared with the collaborative areas and wellbeing services counties or other sectors. Finland is considering amending the Communicable Diseases Act to require two-way communication also outside the health sector.

Recommendation

- Ensure there is good flow of information and communication across all levels in Finland (e.g. from the EU level across sectors and with collaborative areas and wellbeing services counties).

Capacity 14. Research development and evaluations to inform and accelerate emergency preparedness

Research is mentioned under multiple capacities in the Finnish preparedness plan, the pandemic plan and the national risk assessment, with mention of the limitations on the time it takes to undertake research.

In the preparedness plan, there is a description of the key role that academic institutions play in developing pandemic preparedness and evidence-based pandemic management by promoting research, providing instruction and enhancing the societal impact of results. However, it is not clear how the authorities – including THL – collaborate with academia during crises to ensure prioritised research and knowledge production for evidence-based policy and crises management.

THL is a research institution and can conduct research that is aligned with the strategic directive of the centre under the THL budget. THL has direct access to a wide variety of Finnish register-based healthcare data, although some data require permission to obtain. Academic institutes, wellbeing services counties and other organisations can obtain Finnish healthcare data for secondary use from the Finnish Social and Health Data Permit Authority, Findata.

Research to be prioritised can be based on signals identified at THL, the ministry level or the county level (from infectious disease specialists in the wellbeing services counties), or from academia.

Public health authorities have faced many challenges in conducting effective outbreak investigations and outbreak-related research (sometimes referred to as operational research) during past crises. For example, during the COVID-19 pandemic, THL found it challenging to ensure sufficient resources to generate or summarise research and other knowledge needed for crisis management.

Recommendations

- Identify the key barriers (legal, infrastructure, funding, research, collaboration, ownership issues, etc.) in generating knowledge for decision-making and crises management (surveillance, statistics, evaluation, analysis, research studies, literature reviews, etc). Consider how these barriers can be overcome with measures to improve research preparedness; for example, plans, protocols, agreements or legislation.
- Map gaps in research preparedness and establish where improvements can be made to preparedness plans to enable better utilisation of resources. This could include mapping relevant stakeholders to facilitate quick formulation of ad hoc expert advisory groups during crisis.
- Develop a strategy/framework/plan during peacetime for the rapid scaling up of analytical capability and infrastructure during crisis.
- Consider pre-crisis collaborations with academia/knowledge institutions with a research preparedness perspective to optimise operational readiness. Formulate collaboration agreements where needed (including leadership, data sharing, authorship, etc).

Capacity 15. Recovery elements

When there is a crisis that ends quickly, it is clearer when the recovery process should start and the impacts of the crisis are usually less embedded, so recovery is simpler and clearer. But as we learned during the COVID-19 pandemic, when there is a protracted crisis like a pandemic it is harder to know when to initiate the recovery phase and the issues that develop during the crisis are far more systemic, making recovery difficult.

Finland has a strong recovery ethos, as described in their legislation and plans. The country underwent a WHO Joint External Evaluation in 2017 and an action plan, approved at the ministerial level, was developed based on the recommendations. Although the regular annual review of the action plan was not undertaken due to the COVID-19 pandemic, there is an intention to restart the process. Finland has also undertaken at least two after-action reviews with ECDC and others have also been reported. Through such activities, the country has demonstrated a clear capability and desire to review events and experiences and establish, approve and implement an action plan.

In addition to looking back as part of recovery, it is also important to look forward, to rebuild and return to a 'new normal'. In Finland, this was exacerbated by moving straight from the pandemic into Russia's invasion of Ukraine, so the Finnish population has had no respite or time to start the recovery process. Negative impacts are being seen in all aspects of society (e.g. schools, workplaces, families, unemployment, etc.).

This was exemplified in our discussions with Finnish colleagues, where there were genuine concerns expressed about identifying and implementing ongoing mental health support post-pandemic in the community. This activity was championed by an AVI, but it was not felt that an AVI was the natural lead in this area and they were fulfilling that role hoping that a more appropriate government department would step in. This suggests that recovery plans should be more complete with roles and responsibilities assigned in advance.

Recommendations

- Ensure that health organisations are encouraged to implement a process to identify lessons learned following an outbreak/incident and that these lessons are incorporated into action plans so that they can be effectively acted upon.
- Ensure that representatives from all sectors and levels (ministries, THL, regions and counties) are aware of and involved with the development of the operational plan of the national preparedness plan in Finland. This will ensure that priority areas from the whole society are considered and will clarify which sectors are responsible for each area of work and how recovery will be operationalised.

Capacity 16. Actions taken to improve gaps found in the implementation of prevention, preparedness, and response plans

Finland is well recognised as a strong supporter and advocate of assessments such as the WHO Joint External Evaluation. It was one of the first countries in the world to undertake this evaluation in 2017. It also has a strong exercise culture and has been involved in a number of post-pandemic reviews, including conducting an after-action review with support from ECDC.

While Finland has generated a national action plan based on the Joint External Evaluation, there was no evidence presented of this process of creating action plans transferring into wider use, e.g. for lessons learned from the COVID-19 pandemic. It was noted during discussions that some organisations were unaware of other organisations' exercise programmes.

Recommendation

- Promote the use of a standardised action planning process in the health community to incorporate lessons learned from simulation exercises, after-action reviews and assessments using the action planning process developed in the WHO Joint External Evaluation as an example of good practice.

Conclusions

Finland has a culture of all-government and whole-of-society preparedness. There is both an informal (direct) and formal mode of communication within and among sectors in Finland, resulting in a strong collaborative approach that mitigates challenges. While Finland has laws and mandates to support cross-institutional/sectoral collaboration, we recommend that national stakeholders receive support to develop operational plans for the implementation of national preparedness plans. Additional documentation of functions and roles and definitions of leadership would also be beneficial. While THL has a clear process for conducting risk assessments within its institution, the cross-sectoral risk assessment approach is not as clear. Including this in the work on operational plans for collaboration and relevant methodology would be beneficial.

Finland had high scores in the Article 7 questionnaire. However, as a higher score can be given for capacities that have been tested within the last three years, the country's high scores may have been influenced by the fact that the questionnaire was completed within three years of the COVID-19 pandemic, which provided opportunities to test preparedness in many capacities.

Despite these high scores, there is considerable uncertainty surrounding how the ongoing social and healthcare reform, restructuring, and budget and human resource cuts will impact national preparedness and response. With the health sector in Finland undergoing significant reform in 2024, there will be ongoing impacts on national public health preparedness and response functions. In addition, three main laws governing public health preparedness – the Communicable Diseases Act, The Emergency Powers Act and the Health Protection Act – are currently under revision. Thereafter, as an example, the pandemic operational plans at the regional and local levels would be in the pipeline. All these are being prepared in close collaboration between the ministries, agencies and competent authorities (national, regional and local) to ensure synergy between the laws and to engage the key stakeholders into the process.

Due to the pilot character of the preparatory phase of the PHEPA mission in Finland, participation from all relevant sectors was not possible during the June 2024 country mission. Therefore, it was not always possible to understand potential cross-sectoral challenges. However, the face-to-face discussions with the key stakeholders in attendance from the health sector was a significant added value to the assessment, triggering discussions that may not have occurred outside of the PHEPA mission. The positive environment and discussions facilitated a clear view of the current state of preparedness in the health sector. The assessment team were able to propose several recommendations that could be used as steps to improve public health preparedness in Finland.

Annex 1. List of capacities included in the assessment

Table 1A. Capacities included in the assessment

Capacity no.	Capacity description
1	IHR implementation and coordination
2	Financing
3	Laboratory
4	Surveillance
5	Human resources
6	Health emergency management
7	Health service provision
8	Risk communications and community engagement (RCCE)
9	Points of Entry (PoEs) and border health
10	Zoonotic diseases and threats of environmental origin, including those due to the climate
11	Chemical events
12	Antimicrobial resistance (AMR) and healthcare-associated infections (HAIs)
13	Union level coordination and support functions
14	Research development and evaluations to inform and accelerate emergency preparedness
15	Recovery elements
16	Actions taken to improve gaps found in the implementation of prevention, preparedness and response plans

Annex 2. Practical arrangements for the assessment process

This document aims at describing the main practical arrangements of the assessment mission regarding the ECDC Public Health Emergency Preparedness Assessments (under Article 8 of the SCBTH regulation).

The arrangement refers to the country visit to Finland that took place in Helsinki from 10 to 14 June 2024.

The assessment team will normally be composed by:

- Team leader from ECDC
- At least one expert per in-depth capacity
- Experts from relevant Union agencies and bodies

Upon country acceptance, the below experts can also be part of the assessment team:

- one expert from the WHO Regional Office for Europe
- one expert from another EU/EEA country

Experts from certain Directorate General (DGs) of the European Commission may also join to support the assessment as subject matter expert.

The experts involved in this assessment are detailed in the table below.

Assessment team and national experts

Assessment team

The experts involved in this assessment are detailed in Table 2A.

Table 2A. Members of the assessment team

Capacity no.	Name	Institution (ECDC/WHO/EU agencies and bodies, Commission services, other countries)	Role in the team (team leader/expert)	Capacities assessed
1	Thomas Hofmann	ECDC	Team leader	- IHR implementation and coordination - Health Emergency Management - Risk communications and community engagement - PoEs and border health - Union level coordination
2	Daniel Palm	ECDC	Expert	- Laboratory - Surveillance - AMR and HAIs - PoEs and border health
3	Bruno Ciancio	ECDC	Expert	- Surveillance - Laboratory - AMR and HAIs - Health service provision
4	Paul Riley	ECDC	Expert	- Health Emergency Management - Financing - Chemical events - Recovery elements - Actions taken to improve gaps
5	Agoritsa Baka	ECDC	Expert	- Health Emergency Management - Human resources - Health service provision - Chemical events
6	Vivian Leung	ECDC	Expert	- AMR and HAIs - Laboratory - Surveillance
7	Tommi Kärki	ECDC	Expert	- AMR and HAIs - Laboratory - Surveillance

Capacity no.	Name	Institution (ECDC/WHO/EU agencies and bodies, Commission services, other countries)	Role in the team (team leader/expert)	Capacities assessed
8	Adriana Romani	ECDC	Expert	- Zoonotic diseases and environmental threats - Financing - Human resources
9	Favelle Lamb	ECDC	Expert	- Zoonotic diseases and environmental threats - Health Emergency Management - Research development and evaluation - Recovery elements - Actions taken to improve gaps
10	Petronille Bogaert	SANTE	Expert	- Union level coordination - Health Emergency Management
11	Pierre Francois Beaulieu	HERA	Expert	- Health Emergency Management - Emergency logistic and supply chain management
12	Sara Bengtsson	EU/EEA country expert (Sweden)	Expert	- Laboratory - IHR implementation and coordination - PoEs and border health
13	Karin Maria Nygård	EU/EEA country expert (Norway)	Expert	- Health Emergency Management - Risk communications and community engagement - Research development and evaluation
14	Catherine Cornu	ECHA	Expert	- Chemical events

National experts supporting the document sharing

The aim of this section is to facilitate the identification of national experts that will support the document collection and sharing with the assessment team for phase 1: the desk review. It is suggested that around 2–5 experts are involved in this task together with the country Focal Point. The country is requested to fill the below table with the national experts to be involved in this process and which need to have access to the SharePoint team site set up by ECDC.

Table 3A. Members of the country team

No.	Name	Email address	Organisation
1.	Hannu Kiviranta	hannu.kiviranta@thl.fi	Institute for Health and Welfare (THL)
2.	Otto Helve	otto.helve@thl.fi	Institute for Health and Welfare (THL)

National experts participating to the assessment process

The table below aims at sharing the institutions from the assessed country involved in the assessment process.

Table 4A. National institutions participating in the assessment process

National institutions participating in the assessment process
Finnish Institute for Health and Welfare Ministry of Social Affairs and Health HUS Group The Wellbeing Services County of Pirkanmaa Social and Health Care Services of Helsinki City Finnish Food Authority National Emergency Supply Agency Environmental Health Services, Porvoo Finnish Institute of Occupational Health Regional State Administrative Agency for Southern Finland

Table 5A. Agenda for the in-country visit

Time	Monday	Tuesday	Wednesday	Thursday		Friday
08:30	Welcome and registration	Registration	Registration	Registration		
09:00	Opening remarks (Finland)	Assessment of in-depth capacities (2 break-out sessions): 1. *Laboratory and surveillance* 2. *Health emergency management*	Assessment of in-depth capacities (3 break-out sessions): 1. *Laboratory* 2. *Health emergency management* 3. *Zoonotic diseases*	Assessment of in-depth capacity: *AMR/HAI*	C.9 PoE	
09:30	Overview and key aspects of the assessment process (ECDC)					
10:00	Overview of the country public health structure and preparedness and response mechanisms in the country (Finland)				C.11 Chemical	
10:30	Break	Break	Break	Break		Registration
11:00	Overview of the country public health structure and preparedness and response mechanisms in the country (continued) (Finland)	Assessment of in-depth capacities (2 break-out sessions): 1. *Laboratory and surveillance* 2. *Health emergency management*	Assessment of in-depth capacities (3 break-out sessions): 1. *Laboratory* 2. *Health emergency management* 3. *Zoonotic diseases*	Assessment of in-depth capacity: *AMR/HAIs*	Break	Main findings and conclusions (ECDC)
11:30	Assessment of cross-cutting aspects of the 5 in-depth capacities.				C.8 RCCE	Recommendations and next steps (ECDC presentation and discussion with Finland)
12:00						Debrief on the ECDC pilot (structure, preparation, organisation)
12:30	Lunch	Lunch	Lunch	Lunch	Lunch	
13:00						Concluding remarks (Finland)

<table>
<tr><th>Time</th><th>Monday</th><th>Tuesday</th><th>Wednesday</th><th colspan="2">Thursday</th></tr>
<tr><td>13:30</td><td rowspan="2">Assessment of cross-cutting aspects of the 5 in-depth capacities.</td><td rowspan="2">Assessment of in-depth capacities (2 break-out sessions):
1. Laboratory and surveillance
2. Health emergency management</td><td rowspan="2">C.2 Finance</td><td rowspan="2">Assessment of in-depth capacity: AMR/HAIs</td><td rowspan="2">C.14 Research</td></tr>
<tr><td>14:00</td></tr>
<tr><td>14:30</td><td>Non in-depth C.1 IHR and C.13 Union-level coordination</td><td>C.5 Human resources</td><td>C.15 Recovery</td></tr>
<tr><td>15:00</td><td>Break</td><td>Break</td><td>Break</td><td>Break</td><td>Break</td></tr>
<tr><td>15:30</td><td rowspan="3">Non in-depth C.1 IHR and C.13 Union-level coordination (continued)</td><td rowspan="3">Assessment of in-depth capacities (2 break-out sessions):
1. Laboratory and surveillance
2. Health emergency management</td><td>C.5 Human resources</td><td rowspan="3">Assessment of in-depth capacity: AMR/HAIs</td><td>C.16 Action plan</td></tr>
<tr><td>16:00</td><td rowspan="2">C.7 Health service provision</td><td rowspan="2">Additional time for further discussion on non in-depth capacities</td></tr>
<tr><td>16:30</td></tr>
</table>

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