

JOINT EXTERNAL EVALUATION OF IHR CORE CAPACITIES

of the

REPUBLIC OF SLOVENIA

Mission report:
5-9 June 2017



World Health
Organization

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Abbreviations

ACPDR	Administration of the Republic of Slovenia for Civil Protection and Disaster Relief
AFSVPP	Administration for Food Safety, Veterinary Sector and Plant Protection (known in Slovenia as the UVHVVR)
ECDC	the European Centre for Disease Prevention and Control
ESAC	European Statistical Advisory Committee
ESVAC	European Surveillance of Veterinary Antimicrobial Consumption
EU	European Union
EWRS	Early Warning and Response System
FAO	Food and Agriculture Organization of the United Nations
HIRS	Health Inspectorate of Republic of Slovenia
IHR	International Health Regulations 2005
IMI	Institute of Microbiology and Immunology
JEE	Joint External Evaluation
MOH	Ministry of Health
NFP	National IHR Focal Point
NIPH	National Institute of Public Health
NLHEF	National Laboratory for Health, Environment and Food
NVI	National Veterinary Institute
OIE	World Organisation for Animal Health
PHEIC	Public Health Emergency of International Concern
PVS	Performance of Veterinary Services
UCRA	University Clinic of Respiratory and Allergic Disease
WHO	World Health Organization

Executive summary

In general, Slovenia has a strong public health system that is well integrated into the national health-care infrastructure, and coordinated in many ways with the national programme for emergency preparedness and response. The Ministry of Health (MOH) and the subordinate National Institute of Public Health (NIPH) have adequate authorities for human health, which complement the authorities for animal health and food safety in the charge of the Ministry of Agriculture, Forestry and Food. Health security concerns—including certain elements of the International Health Regulations (2005) (IHR)—have been included in the Slovenian structures for national emergency preparedness, through legislation as well as an inter-ministerial coordinating body. However, not all functions or activities take full advantage of an “all-hazards” approach, end-to-end risk communication, and/or strategies for One Health.

Many Slovenian systems integrate with those organized by the European Centre for Disease Prevention and Control (ECDC) or requirements imposed by the European Union (EU), which gain strength from the availability of those mechanisms for international coordination and normalization. However, in some technical areas—including control of communicable diseases at points of entry, coordination for food and radiation emergencies with an international component, and receiving emergency medical teams—the functionality of existing plans and strategies developed following EU recommendations remains untested. Public health preparedness, including for points of entry, chemical events, and radiation hazards, would benefit from additional exercises and multisectoral discussions to clarify quarantine, isolation, transportation of material, patient medical movement, and treatment mechanisms in an emergency. Additional coordination, policy development, and potentially capacity building based on the results of simulations and other consultations are needed to enhance coordination between the emergency management sector and the health sector, especially in the areas of risk communication, implementation of public health interventions, and triage/treatment of affected individuals.

Human and animal laboratory diagnosis and surveillance activities are sophisticated and available across the country, but timeliness and completeness, and detection of outbreaks, would improve with greater multisectoral coordination and the use of modern electronic platforms for data collection and analysis. In addition to information systems, it was noted the NIPH needs to develop stronger analytic capabilities, especially in the biostatistical and information technology disciplines, along with mechanisms to conduct rapid data collection, real-time analysis, and outbreak alert. Their capability to organize and coordinate surveillance programmes using scientific principles and best practices, as well as to conduct outbreak investigation and respond to public health events (i.e. the competencies of the public health professionals themselves) is very strong, and can be leveraged to develop and implement a faster and more sensitive analytic system.

Slovenia maintains strong ties to international normative organizations (WHO, OIE, FAO, ECDC) and follows international recommendations for notifiable diseases. However, it remains unclear whether current systems for detecting and assessing public health threats (through a multisectoral mechanism) would meet the IHR’s 72-hour notification standard. No potential public health emergencies of international concern (PHEIC) under IHR Articles 6 or 7 have been reported. Additionally, Slovenia could benefit from an evaluation using the OIE Performance of Veterinary Services (PVS) Pathway Tool, the recommendations from which would complement and expand on the recommendations from the JEE.

Most response plans seem up-to-date and well-conceived, and the professional staff responsible for day-to-day public health work and emergency response are highly trained and motivated. However, there is very little capacity for a surge response, and efforts at intersectoral planning and coordination are hindered by very small staff sizes. Increasing global complexity requires a plan to grow and sustain the public health workforce in Slovenia; and a dedicated Ministry of Health team for health security coordination,

communication, and planning would be a great benefit to the country. The results of a workforce assessment and subsequent planning, which would ideally include taking advantage of regional training opportunities and subject matter expertise, can be used to build other professional disciplines into the public health preparedness system (e.g. various types of public health and environmental specialisms, risk communication, social work, etc.).

Slovenia: High-Level Summary and Recommendations

1. Slovenia has a strong public health system that is well integrated into the national healthcare infrastructure and coordinated in many ways with the national programme for emergency preparedness and response. Public health emergency prevention, preparedness, and response are supported by many forms of legislation and policy.
2. Despite the strong overarching emergency management structure and skilful implementation of many systems, day-to-day activities and emergency response action could be strengthened by taking full advantage of an “all-hazards” approach, with greater alignment of plans and procedures from various ministries, with end-to-end risk communication and a strategy for One Health.
3. Human and animal laboratory diagnosis and surveillance activities are sophisticated and available across the country, but timeliness, completeness, and detection of outbreaks would improve with greater multisectoral coordination and use of modern electronic platforms for data collection and analysis.
4. There are many strong connections between the human and animal health sectors, some of which are required by law and some of which have grown out of best practices. Still, there remain a number of areas that could be improved, such as a stronger alignment of surveillance programmes for zoonotic diseases, including intentional sharing of human and animal specimens; and coordinated programmes for addressing antimicrobial resistance and ensuring biosafety and biosecurity among laboratory facilities.
5. Utilization of material and human resources for public health security is, in general, very efficient. However, there needs to be a concerted focus on evaluating the current status of the public health workforce and identifying mechanisms to ensure that there are enough public health professionals to meet Slovenia’s needs. One specific recommendation is to establish a permanent office with the Ministry of Health that can be responsible full-time for health security policy and planning, with the ability to collaborate across the government prior to and during a public health emergency.

Republic of Slovenia scores

Technical areas	Indicators	Score
National legislation, policy and financing	P.1.1 Legislation, laws, regulations, administrative requirements, policies or other government instruments in place are sufficient for implementation of International Health Regulations (IHR) (2005)	5
	P.1.2 The state can demonstrate that it has adjusted and aligned its domestic legislation, policies and administrative arrangements to enable compliance with IHR (2005)	4
IHR coordination, communication and advocacy	P.2.1 A functional mechanism is established for the coordination and integration of relevant sectors in the implementation of IHR	4
Antimicrobial resistance	P.3.1 Antimicrobial resistance detection	4
	P.3.2 Surveillance of infections caused by resistant pathogens	3
	P.3.3 Healthcare associated infection prevention and control programmes	5
	P.3.4 Antimicrobial stewardship activities	4
Zoonotic disease	P.4.1 Surveillance systems in place for priority zoonotic diseases/pathogens	4
	P.4.2 Veterinary or animal health workforce	4
	P.4.3 Mechanisms for responding to zoonoses and potential zoonoses are established and functional	4
Food safety	P.5.1 Mechanisms are established and functioning for detecting and responding to foodborne disease and food contamination	5
Biosafety and biosecurity	P.6.1 Whole-of-government biosafety and biosecurity system is in place for human, animal and agriculture facilities	3
	P.6.2 Biosafety and biosecurity training and practices	4
Immunization	P.7.1 Vaccine coverage (measles) as part of national programme	4
	P.7.2 National vaccine access and delivery	5
National laboratory system	D.1.1 Laboratory testing for detection of priority diseases	5
	D.1.2 Specimen referral and transport system	5
	D.1.3 Effective modern point-of-care and laboratory-based diagnostics	5
	D.1.4 Laboratory quality system	4
Real-time surveillance	D.2.1 Indicator- and event-based surveillance systems	5
	D.2.2 Interoperable, interconnected, electronic real-time reporting system	2
	D.2.3 Analysis of surveillance data	4
	D.2.4 Syndromic surveillance systems	4
Reporting	D.3.1 System for efficient reporting to WHO, FAO, and OIE	4
	D.3.2 Reporting network and protocols in country	4
Workforce development	D.4.1 Human resources are available to implement IHR core capacity requirements	4
	D.4.2 Field epidemiology training programme or other applied epidemiology training programme in place	3
	D.4.3 Workforce strategy	3

Technical areas	Indicators	Score
Preparedness	R.1.1 Multi-hazard national public health emergency preparedness and response plan is developed and implemented	5
	R.1.2 Priority public health risks and resources are mapped and utilized	4
Emergency response operations	R.2.1 Capacity to activate emergency operations	5
	R.2.2 Emergency operations centre operating procedures and plans	3
	R.2.3 Emergency operations programme	4
	R.2.4 Case management procedures are implemented for IHR relevant hazards.	4
Linking public health and security authorities	R.3.1 Public health and security authorities (e.g. law enforcement, border control, customs) are linked during a suspect or confirmed biological event	4
Medical countermeasures and personnel deployment	R.4.1 System is in place for sending and receiving medical countermeasures during a public health emergency	5
	R.4.2 System is in place for sending and receiving health personnel during a public health emergency	5
Risk communication	R.5.1 Risk communication systems (plans, mechanisms, etc.)	3
	R.5.2 Internal and partner communication and coordination	3
	R.5.3 Public communication	4
	R.5.4 Communication engagement with affected communities	3
	R.5.5 Dynamic listening and rumour management	3
Points of entry	points of entry.1 Routine capacities are established at points of entry	4
	points of entry.2 Effective public health response at points of entry	4
Chemical events	CE.1 Mechanisms are established and functioning for detecting and responding to chemical events or emergencies	4
	CE.2 Enabling environment is in place for management of chemical events	3
Radiation emergencies	RE.1 Mechanisms are established and functioning for detecting and responding to radiological and nuclear emergencies	4
	RE.2 Enabling environment is in place for management of radiation emergencies	4

Scores: 1=No capacity; 2=Limited capacity; 3=Developed capacity; 4=Demonstrated capacity; 5=Sustainable capacity.

PREVENT

National legislation, policy and financing

Introduction

The International Health Regulations (2005), or IHR (2005), provide obligations and rights for States Parties. In some States Parties, implementation of the IHR may require new or modified legislation. Even if new or revised legislation may not be specifically required, states may still choose to revise some regulations or other instruments in order to facilitate IHR implementation and maintenance more effectively. Implementing legislation could serve to institutionalize and strengthen the role of IHR and operations within the State Party. It could also facilitate coordination among the different entities involved in their implementation. See detailed guidance on implementing IHR in national legislation at http://www.who.int/ihr/legal_issues/legislation/en/index.html. In addition, it is important to have policies that identify national structures and responsibilities, and allocate adequate financial resources.

Target

Adequate legal framework for States Parties to support and enable the implementation of all their obligations, and rights to comply with, and implement, the IHR (2005). In some States Parties, implementation of the IHR (2005) may require new or modified legislation. Even where new or revised legislation may not be specifically required under the State Party's legal system, states may still choose to revise legislation, regulations or other instruments in order to facilitate their implementation and maintenance in a more effective manner. States Parties to ensure the provision of adequate funding for IHR implementation, through the national budget or another mechanism.

Slovenia level of capabilities

The Resolution on National Security Strategy of the Republic of Slovenia was adopted in 2010 and includes Section 5.4.4 Response to Medical and Epidemiological Threats. This resolution obliges the government to strengthen cooperation for the early detection and management of medical and epidemiological threats in the EU member states, within the context of related WHO systems.

The government's National Security Council is a consultative coordinating body that acts as a coordinator of ministries and state agencies in response to complex crises. Slovenia maintains a national, subsidized health insurance programme for all residents via the Health Care and Health Insurance Act, in which Article 7 provides a state budget for monitoring and study of infectious diseases and other public health threats; and for proposing, developing, and deploying control measures to address those threats. Many individual parliamentary acts and resolutions, including those that implement EU legislation, establish requirements and authorities for implementation of public health core capacities among the various ministries.

Within the authorities of the Ministry of Health (MOH), the National Institute of Public Health (NIPH) is responsible for human health risk assessments; monitoring of communicable diseases; early detection of and response to events that are a danger to public health; vaccination programmes; and other measures for the control of communicable and other diseases associated with specific exposures in the natural environment.

NIPH maintains Slovenia's National IHR (2005) Focal Point (NFP), which is also the ECDC contact point for the Early Warning and Response System (EWRS). The combined international contact point provides a central location and groups of experts for communicating public health event information with EU Member

States and WHO. The focal point activity includes: 24/7 information collection, detection and verification of events at international and state levels; assessing reported events immediately and, if needed, directing implementation of preliminary control measures; conducting international notifications pursuant to relevant legislation; and communication with the general public and the media. The central coordination team for the JEE in June 2017 was the Directorate of Public Health (MOH) and the NIPH (as the National Focal Point). With all of this in place, however, no specific legislation or policy that specifically provides funding for IHR implementation, oversight and/or monitoring.

The Administration of the Republic of Slovenia for Civil Protection and Disaster Relief (ACPDR) maintains National Disaster Response Plans, which include public health emergency preparedness and response. Individual response plans, of which there are many, are developed with multisectoral input from relevant ministries, and are exercised regularly (this is discussed in greater detail in the Preparedness technical area). Quarantine and isolation authorities are provided to the Minister of Health through the Contagious Disease Act and are implemented based on recommendations from NIPH.

These various plans, policies, and authorities are described more comprehensively in the respective technical area sections of this mission report. While they seem to be adequate overall, the absolute number of individual plans and the gaps in operationalizing a multisectoral approach, without an all-hazards framework, constitutes a risk for coordination during an unexpected event. This was recently realized during a significant event at a chemical waste disposal site. Additionally, there seems to be a lack of human resources and budget within the technical agencies that are dedicated to preventing and mitigating health and public health consequences. While existing staff members are highly professional and technically competent, there is a critical need for enough people familiar with both the civil emergency response systems and public health principles (including One Health and risk communication) to develop and implement interventions to prevent major national events from becoming national and international emergencies; and to prepare the country to respond to pandemics and other international health hazards.

Recommendations for priority actions

- Continue the current strategy of combining national security and public health preparedness, while considering legislative or policy mechanisms to achieve an all-hazards/One Health approach.
- Strengthen health security programmes within the Ministry of Health, with a focus on public health emergency prevention and preparedness—for example, by creating a special staff section assigned to coordinate national capacities, and developing multisectoral policies and plans that complement the national civil protection strategy.

Indicators and scores

P.1.1 Legislation, laws, regulations, administrative requirements, policies or other government instruments in place are sufficient for implementation of International Health Regulations (IHR) (2005) - Score 5

Strengths/best practices

- National legislation contains commitments to the systems for health security established by WHO and the EU.
- Health security planning and preparedness is an integral component of the national emergency security strategy.
- The Ministry of Health and NIPH are active members of the European health security Communicators Network.

Areas that need strengthening/challenges

- While supported by national legislation, knowledge about the specific requirements of the IHR (2005) is generally weak outside the Ministry of Health.

P.1.2 The state can demonstrate that it has adjusted and aligned its domestic legislation, policies and administrative arrangements to enable compliance with the IHR (2005) - Score 4

Strengths/best practices

- National planning for civil protection includes all the public health core capacities, and there is good coordination between the human and animal health sectors.
- The Inter-Ministerial Emergency Planning Committee has the authority to align plans and systems to achieve optimal outcomes.

Areas that need strengthening/challenges

- Increasing the number of individual staff members who dedicate a significant portion of their time to public health emergency planning and preparedness, and who are authorized to coordinate with other agencies prior to and during a public health event.
- Streamlining of national, regional, and local public health emergency response plans to take advantage of an all-hazards, One Health approach to health security; and conducting frequent, focused exercises to ensure alignment.

Relevant documentation

- Resolution on National Security Strategy of the Republic of Slovenia http://www.mo.gov.si/fileadmin/mo.gov.si/pageuploads/pdf/ministrstvo/RSNV2010_slo_en.pdf
- Government of the Republic of Slovenia Act
- Health Services Act
- Health Care and Health Insurance Act
- Contagious Diseases Act
- Council Decision no. 1082/2013/EU of the European Parliament and of the Council of 22 October 2013 on serious cross-border threats to health
- Resolutions on the National Programme for Protection against Natural and Other Disasters (2016-2022)
- Act on Protection Against Natural and Other Disasters
- Agriculture Act
- Veterinary Compliance Criteria Act
- Environmental Protection Act, Occupational Health and Safety Act
- Ionising Radiation Protection and Nuclear Safety Act
- Transport of Dangerous Goods Act
- Rules of Procedure of the Government of the Republic of Slovenia.

IHR coordination, communication and advocacy

Introduction

The effective implementation of the IHR requires multisectoral/multidisciplinary approaches through national partnerships for efficient and alert response systems. Coordination of nationwide resources, including the designation of a national IHR focal point (which is a national centre for IHR communications), is a key requisite for IHR implementation.

Target

The national IHR focal point to be accessible at all times to communicate with the WHO regional IHR contact points and with all relevant sectors and stakeholders in the country. States Parties to provide WHO with contact details of their national IHR focal points, update them continuously, and confirm them annually.

Slovenia level of capabilities

There is a well-established coordination structure for communicable disease control and environmental health threats at the NIPH, based on strong collaboration with other ministerial agencies. A permanent coordination group meets weekly, covering early warning and response for communicable diseases and environmental health threats. The Slovenia NFP is composed of members of that group, and is also responsible for supporting EWRS. NFP staff members are very knowledgeable about the IHR (2005), but it seems that the IHR (2005) are less well known in other ministries, although plans and response algorithms have been developed and tested with the Ministry of Agriculture, Forestry and Food (Administration for Food Safety, Veterinary Sector and Plant Protection or AFSVPP — known in Slovenia as the UVHVVR).

Within the national emergency response plans, the MOH ensures health care services and emergency medical services by following the official Guidelines for the operation of emergency medical services at mass disasters. The NIPH conducts health risk assessments and responds to communicable disease threats. Large public health emergency responses fall under the purview of the national emergency commander in the Ministry of Defence (Administration for Civil Protection and Disaster Relief/ACPDR).

The existing multitude of individual plans for public health emergencies would be more efficient and more effectively coordinated using an all-hazards/One Health approach.

Recommendations for priority actions

- Coordinate with agencies to transform the multitude of individual plans/standard operating procedures (SOPs) into effective all-hazards SOPs consistent across all ministries, with annexes to help guide responses to unique situations.
- Formalize and regularly exercise multisectoral risk assessments for all situations, using the criteria in IHR Annex 2.
- Strengthen intersectoral communication and coordination regarding the IHR and responses to public health threats, and clarify the roles of the participating institutions.

Indicators and scores

P.2.1 A functional mechanism is established for the coordination and integration of relevant sectors in the implementation of IHR - Score 4

Strengths/best practices

- The National IHR Focal Point is well-trained and functions are aligned with the EU EWRS.
- All required points of contact with all agencies are updated as needed.
- SOPs have been established and coordinated with many stakeholders.
- There is a dedicated coordination group available, based at the National Institute of Public Health and the Ministry of Health.

Areas that need strengthening/challenges

- There is a need to reduce “plan fatigue,” which leads to confusion and lack of immediate actions during the earliest stages of an unexpected event.
- Intersectoral communication and coordination is required for public health risk assessments.
- Realistic simulation exercises should be held, with a specific strategy to identify and integrate lessons.
- A permanent staff section is needed within the MOH dedicated to public health planning, exercises, and evaluation.

Antimicrobial resistance

Introduction

Bacteria and other microbes evolve in response to their environment and inevitably develop mechanisms to resist being killed by antimicrobial agents. For many decades, this problem was manageable, as the growth of resistance was slow and the pharmaceutical industry continued to create new antibiotics.

Over the past decade, however, this problem has become a crisis. Antimicrobial resistance is evolving at an alarming rate and is outpacing the development of new countermeasures capable of thwarting infections in humans. This situation threatens patient care, economic growth, public health, agriculture, economic security and national security.

Target

Support work coordinated by the FAO, OIE and WHO to develop an integrated global package of activities to combat antimicrobial resistance, spanning human, animal, agricultural, food and environmental aspects (i.e. a One Health approach). This would include: (i) having a national comprehensive plan for each country to combat antimicrobial resistance; (ii) strengthening surveillance and laboratory capacity at national and international levels following agreed international standards developed in the framework of the Global Action Plan; and (iii) improved conservation of existing treatments and collaboration to support the sustainable development of new antibiotics, alternative treatments, preventive measures and rapid, point-of-care diagnostics with systems to preserve new antibiotics.

Slovenia level of capabilities

Slovenia has systems and strategies in place to detect priority pathogens for both the human and animal sectors. In human health, all seven WHO priority pathogens and *M. tuberculosis* can be identified as part of routine diagnostic testing, including occurrence of antimicrobial resistance (AMR). In the animal health sector, some WHO priority pathogens are included in routine surveillance activities. Slovenia has not yet published a unique document guiding detection and reporting of WHO priority pathogens for both the human and animal health sectors, but individual agencies have official programmes in place with some inter-agency coordination; and with some programmes for control of resistance in the health care system.

Surveillance for AMR in human populations is part of yearly communicable disease surveillance activities laid out in official agreements among multiple partners, including the Health Insurance Institute of Slovenia. Surveillance and detection of AMR is organized by the National Institute of Public Health (NIPH) and the National Laboratory for Health, Environment and Food (NLHEF). Participation in The European Surveillance System (TESSy) is part of the national plan, and is coordinated by NIPH. AMR surveillance includes the Europeane Antimicrobial Resistance Surveillance network (EARS-Net) pathogens (*E. coli*; *K. pneumoniae*; *S. aureus*; *S. pneumoniae*; *Enterococcus faecalis*; *Enterococcus faecium*; *Pseudomonas aeruginosa*; *Acinetobacter* species) and *Salmonella* spp., *Campylobacter jejuni* and *C. coli*. *N. gonorrhoeae* are part of European Gonococcal Antimicrobial Surveillance Programme (Euro-GASP).

Though no national reference laboratory has officially been appointed for human health, reference activities for AMR are performed by institutions that are licensed to conduct medical microbiology. NLHEF has seven medical microbiology departments in different regions that function as regional diagnostic laboratories for AMR. There are also three hospital laboratories and one large university laboratory, the Institute of Microbiology and Immunology (IMI), with the capacity to diagnose AMR. Finally, the University Clinic of Respiratory and Allergic Disease (Golnik) (UCRA) has a laboratory for mycobacteria capable of identifying

resistance. Laboratories test all pathogens using the guidelines of the European Committee on Antimicrobial Susceptibility Testing (EUCAST).

In the veterinary sector, the National Veterinary Institute/Institute of Microbiology and Parasitology is the designated national reference laboratory (NRL) for AMR. In addition to the NRL, six regional veterinary laboratories occasionally participate in AMR testing, but only for limited numbers of isolates obtained from clinical samples sent by veterinarians in their regions (mostly bovine mastitis milk samples). The NRL is able to test for resistance in *E. coli* and *Salmonella* spp. (including ESBL/AmpC, carbapenemase resistance and colistin resistance); *S. aureus*; *E. faecalis* and *E. faecium* (including VRE); *C. jejuni*; and *C. coli*. For clinical purposes additional bacterial species are also tested—for example, *P. aeruginosa*, *Streptococcus* sp., *S. pseudintermedius*, and other enterobacteria (*Proteus*, *Klebsiella*, *Serratia*, *Enterobacter*). The veterinary NRL is also able to test all pathogens listed in the EUCAST guidelines breakpoint tables.

All laboratories of the human and animal sectors have quality assurance systems, including internal quality controls and external quality assurance (EQA). EUCAST guidelines are the basis for IQC. For the human sector, all laboratories must be enrolled in EQA. The United Kingdom National External Quality Assessment Scheme (UK NEQAS) aspartate aminotransferase (AST) is the basis of EQA for antimicrobial susceptibility testing in designated laboratories; and additional EQAs are part of European networks such as the European Antimicrobial Resistance Surveillance Network (EARS-Net) and the TB Europe Collation (TBC). For the animal sector, the NRL participates in proficiency tests organized by the EU Reference Laboratory for Antimicrobial Resistance (EURL-AR), which includes at least seven different schemes from different clinical and food matrices.

A formal national action plan for surveillance and control of infections caused by AMR pathogens for both the human and animal sectors is yet to be adopted, although all medical facilities are required by law to have dedicated infection prevention and control (IPC) programmes, including medical personnel with requisite specialized training. In Slovenia there are 26 hospitals, including five psychiatric hospitals, with IPC programmes consistent with their patient populations. Functioning IPC policies, an operational plan, and standard operating procedures (SOPs) are available in all acute care hospitals. Currently, medical facilities only routinely collect data on MRSA as a quality indicator on a quarterly basis, which does not distinguish between colonisations versus nosocomial infections. In the animal sector, clinical veterinarians occasionally send samples for microbiology testing when considered necessary for diagnosis and treatment. Every three years, all acute care hospitals are audited by expert members of the National Committee for Infection Prevention and Control, to check their performance in the prevention and control of healthcare-associated infections (HCAIs). National guidelines are available for the protection of health care workers. Clinical teams caring for high-risk groups of patients have protocols to detect HCAIs. According to the bacteria isolated, antibiotic susceptibility tests are performed, and results are sent to the customers only (e.g. not routinely collected for surveillance purposes).

In Slovenia, there are two university medical centres, in Ljubljana and Maribor, which have separate wards for treating patients with HCAIs. In addition, UCRA has a separate ward that allows airborne isolation for treating patients with TB. There are two patient rooms with negative pressure, and one negative pressure room in the intensive care unit. Tertiary hospitals can adopt and enlarge their isolation capacity depending on the numbers of patients needing isolation (e.g. cohorting and sealing off the ward).

The human and veterinary sectors have established a Joint National Commission on the Prudent Use of Antimicrobials, which prepared a 2006 report called the National Strategy for Combating Microbial Resistance against Antimicrobials. That strategy is currently in the process of being updated with a national action plan leading up to the year 2022. Prescriptions from licensed professionals are required for use of antibiotics in human and animal medicine. With respect to antimicrobial stewardship in the human sector, there are national guidelines for appropriate antibiotic use for some syndromes (such as community-acquired pneumonia, acute exacerbation of chronic obstructive lung disease, and antibiotic

prophylaxis for some surgical procedures). The Slovenian Society for Antimicrobial Chemotherapy also publishes handbooks containing recommendations for antimicrobial treatment of the most common infections. The last handbook was published in 2013, and an electronic version for handheld devices has been available since 2016.

Since 2008, Slovenia has focused on awareness-raising in the veterinary profession to promote responsible use of antimicrobials in animals. Activities have included professional trainings, presentations, articles and campaigns observing European Antibiotic Awareness Day each year. A targeted research project entitled 'Resistance against Antibiotics in Bacteria of Animal Origin' resulted in recommendations for the use of antibiotics in animals. The gazette *Vestnik Veterinarske zbornice* (Veterinary Chamber Journal) publishes guidelines and articles on prudent use of antimicrobials for animal health, as well as the results of monitoring of the evaluated consumption of antimicrobials in animals based on antimicrobial sales data collected in the European Surveillance of Veterinary Antimicrobial Consumption (ESVAC) reports. According to that data, Slovenia was 5th among EU countries assessed, with the lowest antimicrobial use in animal food production.

In hospitals, proper administration of antibiotics is surveyed during routine audits and by ECDC and other international point-prevalence studies. Antibiotic use is monitored by a centralized system developed for the European Statistical Advisory Committee (ESAC) programme and includes all hospitals, public and private, in the Slovenian public health system. Antimicrobial use data for hospitals are collected on the national level, per hospital, per type of hospital, and per type of ward. In outpatient clinics, antibiotic use is monitored at national level, and stratified by region, age group, and gender. Specific national research on the proper administration of antibiotics in veterinary medicine has not yet been conducted.

In early 2016, Slovenia was visited by a fact-finding mission from the European Commission for Prudent Use of Antimicrobials in Animals. The mission report identified numerous, mostly voluntary, political incentives intended to reduce the use of antimicrobials in animals. These have contributed to relatively low sales of antimicrobial agents in Slovenia as compared to other EU Member States.

Recommendations for priority actions

- Expand existing protocols for identification of infections with resistant organisms to all medical facilities, consistent with WHO and ECDC guidance.
- Establish a multisectoral working group to evaluate current antimicrobial resistance and antibiotic stewardship programmes, and develop a national antimicrobial resistance action plan consistent with the WHO AMR Global Action Plan.

Indicators and scores

P.3.1 Antimicrobial resistance detection - Score 4

Strengths/best practices

- Current laboratory methods are available for detection of wide variety of resistant bacteria.
- There are integrated human and animal health laboratories with clinical and public health functions.
- Laboratories for human and animal health have high professional standards.
- Regional and National AMR surveillance covers all laboratories in the country.
- Regional distribution of laboratories allows good communication with clinicians and IPC professionals.
- AMR monitoring includes the majority of microorganisms in food-producing animals that have the potential to spread AMR to people.

- The National Reference Laboratory communicates with human microbiology laboratories in matters related to AMR research.

Areas that need strengthening/challenges

- There is a need for a more formalized network of public health and human microbiology laboratories that are coordinated in their surveillance programmes/projects.
- Professional staff and material resources should be dedicated to AMR surveillance, analytic activities, human and animal health-system research, and development of control strategies.

P.3.2 Surveillance of infections caused by resistant pathogens - Score 3

Strengths/best practices

- All laboratories serving acute care hospitals are participating in AMR surveillance.
- There is a system for reporting infections in acute hospitals caused by resistant pathogens, including Tuberculosis.

Areas that need strengthening/challenges

- A national action plan for surveillance of AMR infections is needed.
- The real-time national alert system for specific AMR infections across all hospitals should be strengthened.
- Dedicated staff for information technology (IT), IPC and administration are required.

P.3.3 Healthcare associated infection prevention and control programmes - Score 5

Strengths/best practices

- There is a fully functional IPC Committee in all hospitals, with audits in four acute care hospitals each year.
- There is a national TB programme that includes specialised laboratories; registries of TB cases, with tracing of all contacts and management of all TB patients, contacts and exposed health care workers (HCW); and management of outbreaks, including molecular typing.
- Postgraduate courses on IPC are available at the Medical Faculty in Ljubljana, and postgraduate education is available at the Faculty of Health Care in Jesenice.
- IPC doctors and nurses from all acute care hospitals meet with members of the National IPC Committee twice a year to discuss real-life problems and find solutions benefiting all hospitals.
- Hand hygiene is prioritized as a quality indicator.

Areas that need strengthening/challenges

- There is a need for more IPC professionals (doctors and nurses) and support staff.
- Additional isolation units are needed in some acute care hospitals.
- Aging health system infrastructure should be addressed: current architectural issues will impede efforts to reduce HCAI and contain AMR as well as other communicable diseases.

P.3.4 Antimicrobial stewardship activities - Score 4

Strengths/best practices

- There is legislation for surveillance of antimicrobial use, and antimicrobial stewardship.
- Surveillance of antimicrobial use takes place in the community at regional and national level, according to age and gender; and in hospitals at national level, per hospital and per type of ward.

- There is relatively low antimicrobial consumption in outpatients, including in long-term care facilities.
- Educational courses in antimicrobial prescribing and stewardship are available for the primary care and hospital sectors.

Areas that need strengthening/challenges

- Closer oversight and monitoring of antibiotic use to ensure national coverage and targeting of specific interventions based on established indicators.
- Antimicrobial stewardship programmes in all hospitals (i.e. those that are not already doing so).
- Antimicrobial stewardship programmes for long-term care facilities.

Zoonotic diseases

Introduction

Zoonotic diseases are communicable diseases that can spread between animals and humans. These diseases are caused by viruses, bacteria, parasites and fungi carried by animals, insects or inanimate vectors that aid in their transmission. Approximately 75% of recently emerging infectious diseases affecting humans were of animal origin; and approximately 60% of all human pathogens are zoonotic.

Target

Adopt measured behaviours, policies and/or practices that minimize the transmission of zoonotic diseases from animals into human populations.

Slovenia level of capabilities

Slovenia has some of the core elements of a One Health approach to address zoonotic diseases through the collaboration of NIPH and AFSVPP. Specific systems are in place to coordinate the investigation of potential zoonotic events, including a national disaster response plan in the event of an occurrence of a highly contagious animal disease. There are nationwide surveillance systems for zoonoses, covering all nine designated health regions, and there is a relevant legal framework that includes a 'National Law on Communicable Diseases,' the 'Veterinary Compliance Criteria Act,' and a 'Rule on Notification of Communicable Diseases.'

Zoonotic diseases of greatest public health concern within Slovenia are: campylobacteriosis, salmonellosis, listeriosis, *C. difficile* infections, and dermatophytoses. Control policies for specific zoonotic diseases are formally described, including for: brucellosis (*B. abortus*, *B. melitensis*, *B. suis*); leptospirosis; echinococcosis; Q fever; rabies; trichinellosis; anthrax; porcine cysticercosis; avian influenza; avian chlamydiosis; avian mycoplasmosis; listeriosis; and microsporosis. Additionally, a Salmonella National Control Programme has been implemented, and prevalence of *S. enteritidis* and/or *S. typhimurium* has been reduced to less than 2% in laying hen flocks, and less than 1% in breeding flocks, broiler flocks and turkey flocks. Slovenia has obtained OIE official disease-free status for tuberculosis, bovine brucellosis (*B. abortus*), and ovine and caprine brucellosis (*B. melitensis*). Self-declaration as a rabies-free country was published in the OIE Bulletin in 2016.

In accordance with Directive 2003/99/EC of the European Parliament and of the Council of 17 November 2003 on the Monitoring of Zoonoses and Zoonotic Agents, a programme of systematic monitoring of animal health status (including the monitoring of zoonoses and zoonotic agents) is prepared annually. Reports of zoonotic events are regularly shared between the animal and human health sectors, and diseases of significance are reported internationally, as required, to WHO and the OIE. Although a joint Ministry of Health/Ministry of Agriculture Commission on Zoonoses has been established, it meets only on an ad hoc basis, and regular liaison activities could enable more robust identification of, and strategic planning to address, common gaps in the capacity of national human and animal health systems to prevent, detect and respond to zoonoses.

Training in zoonotic diseases is covered in the programme curricula of both medical schools and graduate programmes, although there has been no training to date in a One Health-oriented strategic approach. However, the animal health and public health sectors have recently begun to engage in One Health consultations, and have collaborated in zoonoses simulation exercises and campaigns. Slovenia's capacity to meet international standards for addressing zoonotic disease has not been wholly evaluated, and could

benefit from an independent external assessment through the OIE Performance of Veterinary Services (PVS) Pathway evaluation. This would contribute to the identification of relevant gaps that could then be jointly addressed by the Ministries of Health and Agriculture.

Standard operating procedures and guidelines for zoonotic events and outbreak investigations have been established, and surveillance information is exchanged in a timely manner. Slovenia is continuing to develop these standard operating procedures and guidelines, and is aware of the need to enhance and upgrade intersectoral communications links as part of its ongoing effort to strengthen its One Health strategy for addressing zoonotic threats.

Recommendations for priority actions

- Identify and strategically address common gaps in national human and animal health system capacities to prevent, detect and respond to zoonoses, through assessments and regularly scheduled One Health ministerial meetings.
- Develop standard operating procedures (SOPs) for coordinated surveillance activity and information sharing between human and animal health sectors.
- Enhance training of veterinary and public health professionals on the management of zoonotic diseases, using a One Health approach.

Indicators and scores

P.4.1 Surveillance systems in place for priority zoonotic diseases/pathogens - Score 4

Strengths/best practices

- The human and animal health sectors have systems in place for the surveillance and epidemiology of all important zoonotic diseases.
- Reports of zoonotic events are shared regularly between the animal and human health sectors, and diseases of significance are immediately reported internationally to the WHO and the OIE as required.
- Using a cooperative intersectoral approach, there is an annual national programme on the prioritization and monitoring of zoonoses.
- There is an established Ministry of Health/Ministry of Agriculture Commission on Zoonoses.

Areas that need strengthening/challenges

- Intersectoral working groups such as the Commission on Zoonoses meet only on an ad hoc basis. They could enhance their progress through more regularly scheduled collaboration.
- There is no routine process for the sharing of laboratory specimens or analyses between human and animal laboratories.

P.4.2 Veterinary or animal health workforce - Score 4

Strengths/best practices

- Both veterinary and human medicine university curricula address zoonotic disease training well, with each offering post-graduate degree courses in field epidemiology.
- Each regional unit of the AFSVPP's Animal Identification and Registration and Information Systems Division has veterinary professionals on the staff; and each unit of the NIPH has doctors and other medical professionals specialised in public health.

- There are zoonoses simulation exercises and campaigns organised by the animal health sector to which representatives of the human health sector are regularly invited and involved; as well as an annual One Health consultation to improve intersectoral cooperation on local, national and regional levels.

Areas that need strengthening/challenges

- Training curricula that focus on the One Health strategic approach should be implemented.
- There is a lack of incoming new specialists in public health in both the human and animal medicine sectors.
- The capacity of national veterinary services to meet international standards and guidelines has not been assessed through an OIE PVS Pathway Evaluation.

P.4.3 Mechanisms for responding to zoonoses and potential zoonoses are established and functional - Score 4

Strengths/best practices

- Trained epidemiologists, veterinarians and laboratory staff are available in both public and animal health.
- The notification of zoonoses is regulated by national animal health and human health legislation.
- Standard operating procedures and guidelines have been established to facilitate collaboration and information-sharing between the human and animal health sectors in relation to zoonotic events and outbreak investigations.
- There is a specific national plan for the multisectoral management of important foodborne or feedborne events/outbreaks at various risk levels.

Areas that need strengthening/challenges

- Further development is required of standard operating procedures for collaboration between human and animal health sectors, to strengthen One Health responses to zoonoses at national and regional levels.

Food safety

Introduction

Food- and water-borne diarrhoeal diseases are leading causes of illness and death, particularly in less developed countries. The rapid globalization of food production and trade has increased the potential likelihood of international incidents involving contaminated food. The identification of an outbreak's source and its subsequent containment are critical for control. Risk management capacity must be developed with regard to control throughout the food chain continuum. If epidemiological analysis identifies food as the source of an event, suitable risk management options that ensure the prevention of human cases (or further cases), based on risk assessments, must be put in place.

Target

State Parties to have surveillance and response capacity for risks or events related to food- and water-borne diseases, with effective communication and collaboration among the sectors responsible for food safety and safe water and sanitation.

Slovenia level of capabilities

Slovenia complies with international and EU standards and obligations for food safety. The legal framework is well defined to comply with EU requirements, with relevant national legislation, guidelines, and internal SOPs. The competent authorities are the AFSVPP in the Ministry of Agriculture, Forestry and Food, which is in charge of all food of animal and non-animal origin; and the Health Inspectorate of Republic of Slovenia (HIRS) in the Ministry of Health, which is responsible for the safety of drinking water and certain food (supplements, food for medical purposes, and food for infants and children). Specific food safety obligations for Slovenian food business operators (FBOs) at each step of the food chain are available on the competent authorities' websites.

FBOs at all stages of production, processing and distribution are responsible for ensuring that food safety meets the minimum requirements of food laws. The AFSVPP and the HIRS implement food laws, and monitor and verify that operators comply with the relevant requirements of feed and food at all stages of production, processing and distribution. They also perform all relevant enforcement tasks.

The frequency of inspections is regular and is established based on risk assessments, taking into account the results of checks carried out by operators in the food sector in accordance with their own quality assurance/control programmes, based on hazard analysis and critical control points. Official control techniques include sampling programmes in cooperation with official laboratories, and inspections to verify the compliance status of operators at all stages of production, processing and distribution. Provisions are also in place for management of foodborne diseases and/or fraud. Laboratory diagnostics and quality and safety testing are conducted by NLHEF and the National Veterinary Institute (NVI), which are accredited to ISO standards.

The EC Directorate General for Health and Food Safety (DG SANTE) carries out external audits, inspections and related non-audit activities aimed at ensuring that EU legislation is properly implemented and enforced on food and feed safety; animal health; animal welfare; plant health; and medical devices. Recent audits have taken place related to emergency preparedness arrangements in the event of a food/feed crisis, and in particular those concerning contingency plans for food and feed; and to evaluate the Salmonella National Control Programme for particular poultry populations (breeders, laying hens, broilers and turkeys). Official control bodies must implement a system of internal auditing to meet the requirements of EU official control regulation.

In line with EU legislation, AFSVPP has developed contingency plans for major cross-border animal diseases including zoonoses (foot and mouth disease, avian influenza, classical swine fever, bluetongue, etc.). Contingency plans include national measures in the case of suspected and confirmed cases of disease, and delineate specifics such as the chain of command; responsibilities of involved parties (competent authorities, private veterinarians, laboratories, farmers, etc.); official laboratories and diagnostics resources; financial provisions; and instructions for veterinarians.

Information exchange is well established at national and international levels. At international levels, information exchange is provided via:

1. The Rapid Alert System for Food and Feed (RASFF), a system for exchanging information among EU member states on all food and feed safety events presenting serious direct or indirect risk to human health
2. The Administrative Assistance and Cooperation System (AAC), which facilitates exchange of information among member states for non-compliance related to food and feed, including the Food Fraud AAC.

The RASFF national contact point, located at AFSVPP, is also the national contact point for the International Network of Food Safety Authorities (INFOSAN). At national level there is regular exchange of information on food/feed safety events such as withdrawals/recalls of food, EU RASFF reports and cases of communicable disease.

Recommendations for Priority Actions

- Officially adopt the National Contingency Plan on the management of unusual events associated with food or feed, and test it via simulation exercises involving all stakeholders.
- Engage in training exercises to sustain and improve the technical capacities of competent authorities in charge of food safety and food business operators.
- Enforce inter-sectoral and multidisciplinary cooperation for food and feed, using a One Health approach.

Indicators and scores

P.5.1 Mechanisms are established and functioning for detecting and responding to foodborne disease and food contamination - Score 5

Strengths/best practices

- The competent authorities have clearly defined food safety responsibilities established in legal and institutional frameworks.
- Responsibility for the development of legislation and the implementation of official controls on most food safety issues is covered by one institution, following the EU's 'farm to fork' approach.
- A national contingency plan is prepared for the management of unusual events associated with food or feed, and includes all relevant institutions.
- Multisectoral cooperation exists in the response to outbreaks of food- and waterborne diseases. The algorithm for responding to outbreaks of such diseases, and food poisoning, is prepared, signed and operational. SOPs and recommendations for outbreak investigations of infectious diseases that are transmissible through food are prepared, signed and operational.

Areas that need strengthening/challenges

- The national contingency plan for managing unusual events associated with food or feed must be formally approved.
- Simulation exercises are recommended for all stakeholders involved in the food/feed safety chains, exercising the official approved national contingency plan for managing unusual events associated with food or feed.
- Internal SOPs for foodborne diseases must be established, practised and periodically revised within the AFSVPP.

Biosafety and biosecurity

Introduction

It is vital to work with pathogens in the laboratory to ensure that the global community possesses a robust set of tools – such as drugs, diagnostics, and vaccines – to counter the ever-evolving threat of infectious diseases.

Research with infectious agents is critical for the development and availability of public health and medical tools that are needed to detect, diagnose, recognize and respond to outbreaks of infectious diseases of both natural and deliberate origin. At the same time, the expansion of infrastructure and resources dedicated to work with infectious agents has raised concerns about the need to ensure proper biosafety and biosecurity to protect researchers and the community. Biosecurity is important in order to secure infectious agents against those who would deliberately misuse them to harm people, animals, plants or the environment.

Target

A whole-of-government national biosafety and biosecurity system is in place, to ensure that: especially dangerous pathogens are identified, held, secured and monitored in a minimal number of facilities according to best practices; biological risk management training and educational outreach are conducted to promote a shared culture of responsibility, reduce dual use risks, mitigate biological proliferation and deliberate use threats, and ensure safe transfer of biological agents; and country-specific biosafety and biosecurity legislation, laboratory licensing and pathogen control measures are in place as appropriate.

Slovenia level of capabilities

Slovenia has implemented legislation for laboratories working with dangerous pathogens—for example, Rules on Requirements to be Met by Laboratories Performing Laboratory Medicine Tests (Official Gazette RS, no. 64/04); the Occupational Health and Safety Act; and the Act on Workers Protection Against Risk of Biological Factors Exposure Related to Work (Official Gazette RS, no. 04/02).

Slovenia also has separate legislation concerning genetically modified organisms (GMOs)—The Management of Genetically Modified Organisms Act – as well as a fully operational national administrative system for GMOs with scientific oversight committees and GMO and incident registries.

In addition, all medical microbiological laboratories performing diagnostics are licenced by the Ministry of Health before starting operations, and must undergo regular inspections thereafter. These inspections include but are not limited to inspections of the laboratory information system and biosafety plan, records of laboratory staff, lists of laboratory accidents, and lists of biological agents. All laboratories assess the risks related to biological hazards, and risk mitigation mechanisms are reflected in SOPs. All laboratory employees, including supporting staff, have mandatory medical evaluations before starting in their positions. Vaccinations are evaluated and recommended at regular medical checks. In all laboratories, provision of personal protective equipment (PPE) is mandatory, and SOPs are available for handling incidents.

All persons working in biological risk laboratories undergo mandatory courses on safe biological work practices and prevention of sharp injuries. Training is repeated at least once a year, but also upon changes in laboratory procedures or when new pathogens are introduced to the facilities. Training includes use of PPE and safety cabinets, incident procedures, and safe waste management. A written statement confirming understanding of risks is signed by all personnel—including temporary staff—before admittance to the laboratories.

Through the laboratory licensing process, oversight of institutes handling dangerous pathogens is available. Only three institutes have permission to work with these pathogens: the Institute of Microbiology and Immunology (IMI); the Institute of Microbiology and Parasitology, Veterinary Faculty, Ljubljana; and the Centre for Microbiology at the National Laboratory of Health, Environment and Food. Staff at these institutes are highly educated and well trained in biosafety and biosecurity. IMI and the veterinary laboratory each host a biosafety level (BSL)-3 laboratory with necessary security and maintenance measures. All transport of dangerous pathogens is handled by certified staff who follow the European Agreement concerning the International Carriage of Dangerous Goods by Road (ADR) and International Air Transport Association (IATA) regulations.

Slovenia has made further progress in establishing regulations on GMOs than on biosafety and biosecurity in medical and veterinary laboratories handling dangerous pathogens. There is a need to establish a national level common body for oversight of all aspects of biosafety and biosecurity, including toxins. Such a programme should include a coordinating body that can—for example— review institutional risk assessments; set national training standards; monitor research activities; and keep a national register of biological agents. Even if the training at each institute is of a high level, there is also a need to develop a common biosafety and biosecurity curriculum for technicians, students and experts working in the laboratories. Establishment of a train-the-trainers programme would also be beneficial for Slovenia.

Long-term sustainability of the biosafety capacities is key, and therefore dedicated funding for maintenance of BSL-3 laboratories is recommended.

Recommendations for priority actions

- Establish a comprehensive national level body for biosafety and biosecurity, and develop a formal, multisectoral mechanism for oversight and monitoring of dangerous pathogens.
- Ensure sustainable funding for biosafety equipment and programmes.
- Consolidate the common curriculum for biosafety and biosecurity for human, veterinary, and agricultural laboratories, as well as industry partners.
- Establish a common train-the-trainers programme in the area of biosafety and biosecurity, and maintain staff training at all facilities.

Indicators and scores

P.6.1 Whole-of-government biosafety and biosecurity system is in place for human, animal and agriculture facilities - Score 3

Strengths/best practices

- Biosafety and biosecurity legislation is adopted, with mandatory authorisation to perform activities with dangerous pathogens.
- Good intersectoral cooperation has been established.
- BSL-3 laboratories are available, with highly trained and educated staff.

Areas that need strengthening/challenges

- A national level common body is required for biosafety and biosecurity, covering all areas of duties (i.e. the medical, veterinary, research and industrial sectors, with oversight for pathogens, GMO materials and toxins).
- A formal national register of pathogens and toxins is required.

P.6.2 Biosafety and biosecurity training and practices - Score 4

Strengths/best practices

- Biosafety training is mandatory for all staff and follows international recommendations.
- There is sharing of knowledge and best practices between institutions and contacts.
- Systems are in place to provide education in biosafety issues for industry partners.

Areas that need strengthening/challenges

- A common curriculum for biosafety must be developed for all users.
- A common train-the-trainers programme, supported by external experts, is required.

Immunization

Introduction

Immunizations are estimated to prevent more than two million deaths a year globally. Immunization is one of the most successful global health interventions, and one of the most a cost-effective way to save lives and prevent disease.

Target

A functioning national vaccine delivery system – with nationwide reach, effective distribution, easy access for marginalized populations, adequate cold chain and ongoing quality control – that is able to respond to new disease threats.

Slovenia level of capabilities

Slovenia sustains a comprehensive, accessible system for administering and recording immunizations. Vaccination for children is mandatory under national legislation. Mandatory vaccines, free of charge to children, include diphtheria, tetanus, H. influenza type B (Hib), pertussis, polio, hepatitis B, measles, mumps and rubella. In addition, pneumococcal pneumonia and HPV vaccines are voluntary and free of charge. Vaccinations for preschool and school children are administered by public and private paediatricians. National and regional coordinators provide guidelines and expertise to support vaccination teams. Vaccines recommended for specific risk groups are provided when prescribed by a physician, but must be paid for by the patient.

An annual programme of immunization is prepared by the NIPH and issued by the Ministry of Health. This programme also determines the providers, the method of supply and the distribution of vaccines and specific immunoglobulins. During the process of drafting the programme, the opinion of the Health Insurance Institute of Slovenia is obtained regarding its financial consequences.

NIPH also prepares and delivers guidelines for vaccinating target groups. There are specific recommendations for various age categories (children, adults and the elderly) and other groups, with special guidance for: those with health conditions; those exposed to certain occupational hazards; international travel; and/or those with chronically ill family members.

Vaccine safety and the monitoring of adverse events following immunization are registered, analyzed, classified and reported to the Agency for Medicinal Products and Medicinal Devices of the Republic of Slovenia, for rapid action when needed to prevent harm. These findings are presented at regular meetings of the National Immunization Technical Advisory Group (NITAG). Yearly reports on immunization are published and available on the NIPH webpage:

<http://www.nijz.si/sl/spremljanje-nezelenih-ucinkov>

NIPH provides centrally procured vaccines with effective distribution chains, adequate cold chain and ongoing quality control. National funding is available for central vaccine procurement to ensure vaccines for all children. The following vaccine preventable diseases are covered by this programme:

- Compulsory vaccinations of children against diphtheria, tetanus, pertussis, Hib, polio, pneumococcal infections, measles, mumps, rubella and hepatitis B;
- Recommended vaccination against pneumococcal infection for children;

- Recommended vaccination against HPV for girls;
- Selective immunization against tuberculosis for newborns and children following epidemiological indication: newborns whose parents immigrated from countries with a high incidence of tuberculosis in the five years before the infant's birth; children whose mothers are being treated for tuberculosis; and children who, in the first years of life, lived permanently in, or frequently visited, countries with a higher incidence of tuberculosis;
- Hepatitis B vaccination of newborns whose mothers are carriers of Hepatitis B surface antigen (HBsAg);
- Vaccination in response to specific epidemiological indications: rabies; yellow fever; cholera; typhoid fever; Japanese encephalitis; influenza; tick-borne meningoencephalitis; pneumococcal infection; meningococcal disease (A, B, C, W, Y); and hepatitis A.

In Slovenia, tick-borne meningoencephalitis (TBE) is endemic. TBE vaccination is recommended for residents who practice outdoor activities in endemic areas. It is obligatory for students and persons who are professionally exposed (e.g. forestry workers). Immunization against cholera, Japanese encephalitis, meningococcal disease, Hepatitis A, typhoid and yellow fever is recommended for travellers.

Slovenian vaccination programmes have eliminated many vaccine-preventable diseases and reduced the incidence of several others; but opportunities still exist for additional reductions and the associated decreases in morbidity and mortality.

There are a number of programmatic challenges, including evolving issues such as the anti-vaccination movement. To address this issue, public perception is monitored through regular and periodical surveys. Monitoring of media reporting is done via clipping. Information is gathered through feedback on social media, and questions and comments are received from citizens, mostly through direct contact via the web.

Regarding animal vaccination, an annual decree by the Ministry of Agriculture, Forestry and Food directs systematic monitoring of animal health status, disease eradication programmes, and vaccinations. All grazing ungulates (cattle, small ruminants and equids) in anthrax-endemic districts must be vaccinated against anthrax, as must ungulates fed with feed originating from those locations. All dogs in Slovenia must be vaccinated against rabies, as prescribed in Rules on Measures for the Detection, Prevention and Suppression of Rabies; Slovenia is a rabies-free country.

In order to ensure vaccine delivery throughout the country, the cold chain is maintained in accordance with 2013 Guidelines on Good Distribution Practice of Medicinal Products for Human Use (2013/C 343/01) and Rules on the System for the Receipt, Storage and Traceability of Medicinal Products (Official Gazette of RS No. 82/15 and 70/16).

Recommendations for priority actions

- Strengthen and expand programmes within the NIPH to develop health promotion activities and apply risk communication principles, with targeted promotion and communication activities for specific risk groups.
- Conduct additional training for vaccination workers.
- Increase interoperability among regional immunization registries and electronic health records.

Indicators and scores

P.7.1 Vaccine coverage (measles) as part of national programme - Score 4

Strengths/best practices

- National guidelines are in place for routine and annual vaccinations.
- Legislation and national budgets support vaccination programmes, with no cost for childhood vaccinations; central storage and good cold chain management; and transport to vaccine providers.
- A nationwide cross-sectional survey was carried out in 2016 to measure and characterize vaccine confidence among mothers of children aged less than two years.
- Meetings on immunization are organized by NIPH and the Slovenian Medicine Association.

Areas that need strengthening/challenges

- A strategy is required to improve vaccination coverage in all age groups, and in particular to achieve the measles coverage goal of 95% by 2020; and work is needed to strengthen the ability to communicate with, and influence, parents who avoid vaccines. Strengthened, expanded NIPH programmes to develop health promotion activities and apply risk communication principles—with targeted promotion and communication activities for specific risk groups—could help.
- Risk communication is required around adverse events following immunization (AEFI).
- Accuracy of documentation and use of electronic registries must be improved, through increasing interoperability between regional immunization registries and electronic health records.

P.7.2 National vaccine access and delivery - Score 5

Strengths/best practices

- Legislation exists for procurement of vaccines in accordance with the WHO Expanded Programme on Immunization (EPI); central storage; and transport to providers.
- Guidelines are in place for maintenance of the cold chain; good distribution practice for medicinal products for human use; and rules on the system for the receipt, storage and traceability of medicinal products.
- The NIPH maintains stockpiles of all vaccines needed for the EPI (routine paediatric vaccines), which can be used to mitigate vaccine supply shortages
- Since 1997 staff have been trained, in health care centres and at regular NIPH workshops, on “vaccination safety and good distribution practice of vaccines.”

Areas that need strengthening/challenges

- Accuracy of documentation and use of electronic registries must be improved, through increasing interoperability between regional immunization registries and electronic health records.
- The individual responsibilities of staff in health care centres should be more clearly delineated.

DETECT

National laboratory system

Introduction

Public health laboratories provide essential services including disease surveillance; disease and outbreak detection; emergency response; and environmental monitoring. State and local public health laboratories can serve as focal points for a national system, through their core functions for human, veterinary and food safety. These include disease prevention, control and surveillance; integrated data management; reference and specialized testing; provision of laboratory oversight; emergency response; public health research; training and education; and partnerships and communication.

Target

Real-time biosurveillance with a national laboratory system and effective modern point-of-care and laboratory-based diagnostics.

Slovenia level of capabilities

The Republic of Slovenia has developed and sustains a very strong national network of human and veterinary laboratories for public health surveillance and clinical purposes. In the human health sector, there are six medical microbiology laboratories - the National Laboratory for Health, Environment and Food (NLHEF), with 7 regional departments, one research and one specialized public health laboratory; the Institute of Microbiology and Immunology, Medical Faculty, Ljubljana; the University Clinic of Respiratory and Allergic Diseases Golnik; the laboratory for microbiology in the General Hospital Dr. Franca Derganca Nova Gorica; the laboratory for microbiology in the General Hospital Slovenj Gradec; and the Blood transfusion centre of Slovenia. Together these employ roughly 400 people. Slovenia has (at the time of the 2017 JEE) 43 microbiologists, with over 700 internationally accredited testing methods and techniques, resulting in more than 2 million tests per year. NVI within the Veterinary Faculty at the University of Ljubljana oversees six regional veterinary microbiology laboratories, with roughly 177 employees. NVI serves as a national reference laboratory for more than 20 priority animal diseases, as well as for the monitoring of milk and milk products, heavy metals in feed and food, and marine biotoxins. Regional NLHEF laboratories also possess unique testing capabilities for chemical and microbiological analysis of food, water, and other environmental samples. NLHEF is also the designated WHO National Influenza Centre and reference centre for measles, rubella and poliovirus.

In addition to the public health laboratories, the Institute of Microbiology and Immunology (IMI) of the Medical Faculty in Ljubljana is a partner of the Global Outbreak and Response Network (GOARN), and hosts a BSL-3 laboratory with advanced molecular diagnostics. The IMI serves as a collaborative centre for epidemiological surveillance of HIV infections in Slovenia, and is the main educational institution responsible for national coordination of specialisations in clinical microbiology. Slovenia also has a Blood Transfusion Centre that performs serology testing, especially related to transfusion risks.

Transportation of samples from all regions of the country to the national laboratories is well established, funded by individual institutional budgets. IMI provides appropriate material and guidance for shipment of potentially dangerous pathogens.

Human and animal laboratories are well-resourced through a national procurement model to perform many types of tests, using standard methods, on a large variety of material. All laboratories are certified in accordance with ISO 9001. While the NVI laboratories are independently accredited (i.e. by accreditors external to the Ministry of Health) to ISO 17025 standards, the human laboratories are licenced by the MOH using national guidelines similar to ISO 15189. Accreditation of human laboratories is not currently required under Slovenian law, but certification by MOH and work permits are. The NLHEF participates in EQA programmes using external providers, whereas the NRL within NVI conducts comparative testing and follow-up for the national veterinary health laboratories.

Slovenia has selected the following ten core human laboratory tests:

- Polymerase chain reaction (PCR) testing for influenza virus
- Virus culture for poliovirus
- Serology for HIV
- Microscopy for mycobacterium tuberculosis
- Rapid diagnostic testing for Plasmodium spp.
- Bacterial culture for Salmonella typhi
- Serology for borreliosis
- Culture for campylobacter
- PCR testing for noroviruses and rotaviruses in stool samples
- Detection of ESBL-producing bacteria.

All laboratories use highly sophisticated tools and rapid diagnostic techniques such as PCR. Point-of-care testing is used in clinics where it is justified. Financing of public health laboratories and diagnostic testing is a component of the national health insurance strategy, whereas financing for the veterinary laboratories is a component of the national budget.

Challenges that Slovenia currently encounters include how to organize laboratory preparedness for rare infections, and how to reduce the costs of accreditation and external controls. Human resources are an issue, as is the availability of information technology and technologists for data management and automation, especially in the national public health laboratories. In addition, as the competent authority for biosafety and biosecurity in the human health sector, the Chemical Office in MOH would benefit from more expertise in biological hazards.

Recommendations for priority actions

- Designate official public health reference laboratories for priority diseases, and consider central funding for their human and technical resources.
- Accredite public health laboratories according to international standards, and continue using external quality assessments for quality assurance.
- Evaluate the options for rapid data analysis and outbreak detection, including the combination of data from human and veterinary surveillance programmes through the development of systems for electronic data collection.
- Ensure upsurge capacity of technical and human resources in epidemic situations.
- Develop a coordination mechanism for sharing specimens between public health and veterinary laboratories.

Indicators and scores

D.1.1 Laboratory testing for detection of priority diseases - Score 5

Strengths/best practices

- Modern equipment and diagnostic methods are available.
- Personnel are highly trained.
- Reporting of laboratory results for high priority pathogens to clinicians and epidemiologists is fast.
- There is good communication between institutions and individual experts.
- Implementation of new laboratory techniques happens quickly.
- Diagnostics for primary, secondary and tertiary level health care are provided by the same laboratory network.

Areas that need strengthening/challenges

- Reference laboratories should be officially appointed and accredited, and provided with stable financing for their activities.
- The quality and level of detail in clinical data received by the laboratories must be improved—this could be achieved by providing resources for rapid data transmission and analysis using IT solutions for laboratory-based surveillance programmes; and by implementation of new molecular techniques.
- Laboratory networking should be improved, including through greater organization of the sharing of laboratory specimens between veterinary and public health sectors.
- There is a need for development of a laboratory network with improved preparedness for diagnosing rare diseases.

D.1.2 Specimen referral and transport system - Score 5

Strengths/best practices

- The relevant personnel are highly trained regarding rules for referring and transporting specimens.
- Institutional courier services are in place.
- There are many competent external providers for transportation of dangerous goods and biological materials, and there are contracts in place with providers.
- Laboratories keep lists of referred samples and materials.
- Specimen transportation is conducted under national guidelines with special systems in place for potentially dangerous specimens.

D.1.3 Effective modern point-of-care and laboratory-based diagnostics - Score 5

Strengths/best practices

- Laboratory functions are integrated for clinical activities, reference work, public health, education and research.
- Data are available with near 100% coverage of the population.
- International reference laboratories are used for confirmation if needed.
- There is some form of national funding for most capacities.

Areas that need strengthening/challenges

- Legislative changes may be needed in order to implement accreditation of medical microbiology laboratories.
- Common national diagnostic protocols should be developed, and existing ones consolidated.
- NLHEF and IMI extension units should be established in hospitals that are not close to the laboratories.
- Standardisation and quality assurance for microbiological point-of-care testing performed in clinical laboratories.

D.1.4 Laboratory quality system - Score 4

Strengths/best practices

- There is a long tradition of certified or accredited laboratory quality systems.
- A national system for licensing is in place, with licensing required for all medical laboratories. The system is based on requirements equivalent to ISO 15189.
- Quality controls are established for most laboratory methods. Results of internal and external quality controls are excellent.
- The laboratory information system is shared among medical microbiology laboratories.
- Good quality practices are shared among institutions performing different types of tests.

Areas that need strengthening/challenges

- Completion of the pilot project for accreditation of medical laboratories according to international standards.
- Reducing the costs of accreditation and external controls.

Relevant documentation

- Health Services Act (Official Gazette RS, no. 23/05)
- Contagious Diseases Act (Official Gazette RS, no. 33/06)
- Rules on Reporting Contagious Diseases and Special Measures for their Prevention and Containment (Official Gazette RS, no. 16/99)
- Rules on Requirements to be Met by Laboratories Performing Laboratory Medicine Tests (Official Gazette RS, no. 64/04)
- Occupational Health and Safety Act (Official Gazette RS, no. 43/11)
- Veterinary Service Act
- Veterinary Compliance Criteria Act
- Act on Medical Devices (Official Gazette RS, no. 98/09)
- Strategic Material Act (Official Gazette RS, no. 8/10)
- Appointment of persons who have access to strategic material, NLHEF
- Appointment of responsible person in accordance with Strategic Material Act, NLHEF
- Postal Service Act (Official Gazette RS, no. 51/09)
- The Resolution on National Health Care Plan 2016-2025 (Official Gazette RS, No. 25/16)
- A list of medical laboratories with work permits is available at:

- http://www.mz.gov.si/si/delovna_podrocja_in_prioritete/zdravstveno_varstvo/mreza_na_primarni_sekundarni_in_terciarni_ravni/laboratoriji_za_izvajanje_preiskav_na_podrocju_laboratorijske_medicine/
- Regulation (EC) No 882/2004 of the European Parliament and of the Council of 29 April 2004 on official controls performed to ensure the verification of compliance with feed and food law, animal health and animal welfare rules
- Annex to accreditation certificate LP-014: <http://www.slo-akreditacija.si/accreditation/nacionalni-laboratorij-za-zdravje-okolje-in-hrano-nlzoh>
- Annex to the accreditation certificate LP-021: <http://www.slo-akreditacija.si/accreditation/univerza-v-ljubljani-veterinarska-fakulteta>
- OA05 Participation in inter-laboratory comparisons: <http://www.slo-akreditacija.si/wp-content/uploads/Dokumenti/OA/oa05.pdf>
- Quality Manual of the Institute of Microbiology and Immunology, Medical Faculty, Ljubljana
- Quality Manual of the National Laboratory of Health, Environment and Food, 7th edition
- Quality Manual of the Veterinary Faculty, University of Ljubljana
- 2016 annual report for quality indicators for the Centre for Medical Microbiology, National Laboratory for Health, Environment and Food
- NIPH data portal: <https://podatki.nijz.si/pxweb/sl/NIJZ%20podatkovni%20portal/>
- Annual reports on AMR - Slovenian National Antimicrobial Susceptibility Testing Committee: <http://www.imi.si/strokovna-zdruzenja/skuopz>
- 2016 Annual Report for "Terciar II" Programmes, NLHEF
- Weekly reports on respiratory viruses, NLHEF
- DSK-III-MKB-V-D-077 Safety in the laboratories of the Departments of Medical Microbiology and Department of Microbiologic Analysis of Food, Water and Other Environmental Samples, Celje, NLHEF. 8th ed.
- Safety in the laboratories of the Centre for Medical Microbiology, NLHEF. Draft version
- SP-II-NLZOH-03 Human resource management, 5th edition
- SP-II-NLZOH-CMM-02 Equipment, 1st edition
- DSK-III-MKB-D-053 Analysis of surveillance cultures for MDR bacteria, NLHEF. 9th edition
- DSK-III-MKB-M-D-090 Detection of resistance mechanisms in MDR bacteria (ESBL, AMPC, carbapenemases), NLHEF. 2nd edition
- SOP-VIN-06 The Simplexa Flu A/B & RSV Direct Assay real-time RT-PCR system
- Changes in processing and interpretation of the results of cultivation of urine samples for bacteria, NLHEF: <http://www.nlzoh.si/navodila-za-uporabnike/centre-za-medicinsko-mikrobiologijo/vsi-oddelki>
- Instructions on sampling, transportation of samples to microbiology laboratory and communication with the laboratory for each department of CMM, NLHEF: <http://www.nlzoh.si/navodila-za-uporabnike/centre-za-medicinsko-mikrobiologijo/vsi-oddelki>
- Research catalogue of the Institute of Microbiology and Immunology: <http://www.imi.si/diagnosticna-dejavnost-en>
- Indications and interpretations of the results of immunological researches: <http://www.imi.si/diagnosticna-dejavnost>
- Circular of the Head of the Centre for Medical Microbiology, NLHEF, regarding correct packing and shipment of strains and biological materials (August 2014)

Real-time surveillance

Introduction

The purpose of real-time surveillance is to advance the safety, security and resilience of the nation by leading an integrated biosurveillance effort that facilitates early warning and situational awareness of biological events.

Target

Strengthened foundational indicators, and event-based surveillance systems that are able to detect events of significance for public health, animal health and health security; improved communication and collaboration across sectors and between subnational, national and international levels of authority regarding surveillance of events of public health significance; and improved country and regional capacity to analyse and link data from and between strengthened, real-time surveillance systems, incorporating interoperable, interconnected electronic reporting systems. Epidemiologic, clinical, laboratory, environmental testing, product safety and quality, and bioinformatics data; and advancement in fulfilling the core capacity requirements for surveillance in accordance with IHR and OIE standards.

Slovenia level of capabilities

Slovenia has a strong public health system for control of communicable diseases. Indicator-based surveillance and event-based surveillance have been developed over many years to detect public health threats. Event-based surveillance is established through national and regional contact points, with some informal media monitoring at the NIPH. The NIPH is also one of the contact points within the national emergency response system (phone number 112). Additionally, epidemiologists are on call 24/7 to consult with clinicians on health situations in the country and abroad.

Reporting of specified communicable diseases and outbreaks is mandated by law. Communicable diseases are arranged into four groups according to urgency of public health action. For non-urgent conditions, medical doctors and microbiological laboratories use paper case reporting forms for mandatory reporting to the responsible regional unit of the NIPH. At the regional units, the case reporting forms are entered manually into the national electronic communicable diseases database, which is managed by the NIPH Communicable Diseases Centre. For conditions or diagnoses that fall into the urgent categories, local clinicians or laboratories have contact information for the regional epidemiologist, and reports are given by telephone.

There are no electronic reporting systems for human health that connect the clinical diagnostic centres and the regional epidemiologists, but electronic reporting for animal diseases has been used since 2007. An electronic national tuberculosis registry is located in UCRA, which is responsible for coordinating treatment, contact tracing and outbreak investigation across the country.

Syndromic surveillance is conducted for some conditions (acute watery diarrhoea, acute flaccid paralysis, acute haemorrhagic fever, and jaundice with fever) based on the identification of clinical syndromes by medical staff, which are then reported to the regional epidemiologist. Additionally, there are sentinel surveillance programmes for acute respiratory diseases, influenza-like illness, and acute gastroenteritis/colitis.

The lack of infrastructure for electronic health records, digital data collections, collection of non-traditional data for community health indicators, syndromic outbreak detection beyond the established clinical syndromes (i.e. unexpected biological events), and health information technologists and analysts limits the degree to which the current programme can expand.

Recommendations for priority actions

- Expand existing infrastructure (at local, regional and national levels) to establish electronic case reporting for notifiable conditions from the local level.
- Standardize forms/lists of variables for electronic reporting of communicable diseases from microbiological laboratories.
- Create an electronic data management system for integration of data from clinical case reporting with data from microbiological laboratories.
- Train and maintain human resources for health information technologies, data management, and analytic systems.

Indicators and scores

D.2.1 Indicator- and event-based surveillance systems - Score 5

Strengths/best practices

- Legislation is in place that defines the list of mandatory notifiable diseases (with priority diseases).
- National databases for communicable diseases and the core data set used in indicator-based surveillance are also defined by legislation.
- For certain diseases or pathogens, systematic indicator-based surveillance is also supported with expanded laboratory surveillance.
- Event-based surveillance is in place through national and regional contact points. Epidemiologists are held at 24/7 preparedness for monitoring events (threats to public health) in the country and abroad.
- Priority diseases are: diphtheria; purulent meningitis according to pathogens (bacterial); haemorrhagic fever according to pathogens (Ebola, dengue, Lassa, Marburg); cholera; plague; measles; polio; yellow fever; rabies; and anthrax.
- Expanded laboratory surveillance is in place for food borne diseases, vaccine preventable diseases, invasive infections and influenza.
- Four epidemiologists at regional level are available 24/7 to receive reports of priority communicable diseases and outbreaks.

Areas that need strengthening/challenges

- Medical doctors and microbiological laboratories are still using paper case reporting forms to report communicable diseases and send them by post to NIPH regional units.
- Data validation and quality assurance for indicator-based surveillance of communicable diseases is performed manually at NIPH regional units.
- Timeliness and completeness of reporting for indicator-based surveillance could be improved significantly.
- Media monitoring (major national and regional printed and electronic submissions) could be improved, by expanding the number of search terms and formalizing protocols.

D.2.2 Interoperable, interconnected, electronic real-time reporting system - Score 2

Note: There is no electronic real-time reporting system, but an electronic reporting system is in use for animal diseases.

Strengths/best practices

- Public health staff at NIPH (epidemiologists, sanitary engineers) are well-trained in disease surveillance at regional and national level.
- Communicable diseases reporting is included in internship training for all medical doctors.
- An electronic reporting system for animal diseases has been in use since 2007.
- Weekly, monthly, quarterly, and annual reports are published on events related to communicable diseases that may pose a risk to public health.
- Weekly reports are published on sentinel surveillance of influenza and other acute respiratory infections.

Areas that need strengthening/challenges

- Resume the planning that was previously begun in 2015 to improve the timeliness, completeness, and accuracy of the required disease reporting, which should involve the development of electronic reporting structures, adapting tools that are already available.
- Improve human resources and technology infrastructure at the regional and national level for collection and sharing of health surveillance data in real-time.

D.2.3 Analysis of surveillance data - Score 4

Strengths/best practices

- Every microbiological laboratory is obliged to report communicable diseases from a list defined by legislation, within 24 hours of completing final laboratory results, to the responsible regional unit of NIPH.
- A mechanism is in place for the integration of data from clinical case reporting with data from microbiological laboratories at regional units of NIPH.
- Routine analysis of surveillance data on communicable diseases is performed for regional and national levels, and reported in several publications.
- Sentinel surveillance of influenza is in place.

Areas that need strengthening/challenges

- For mandatory reporting of communicable diseases, medical doctors and microbiological laboratories use the same paper case reporting forms (i.e. computer printouts of test results).
- When integrating data from clinical case reporting with data from microbiological laboratories, public health staff at NIPH regional units complement case reports from medical doctors with data from case reporting forms from laboratories.
- It is necessary to standardize forms and lists of variables for electronic reporting of communicable diseases from microbiological laboratories.

D.2.4 Syndromic surveillance systems - Score 4

Strengths/best practices

- Surveillance for priority conditions is in place using international guidelines.
- Slovenia participates in ECDC-defined surveillance protocols, ensuring that data are provided to ECDC and regional partners for integrated epidemic intelligence.

Areas that need strengthening/challenges

- Given the lack of electronic data and integration of system components, expansion to other infectious diseases or surveillance for unexpected conditions is limited.

Reporting

Introduction

Health threats at the human–animal–ecosystem interface have increased over the past decades, as pathogens evolve and adapt to new hosts and environments, imposing a burden on human and animal health systems. Collaborative multidisciplinary reporting on the health of humans, animals and ecosystems reduces the risk of disease.

Target

Timely and accurate disease reporting according to WHO requirements, and consistent coordination with FAO and OIE.

Slovenia level of capabilities

Slovenia generally enjoys very good communication between its human and animal health sectors, and reports diseases to the EU and internationally in a timely manner according to WHO and OIE requirements, and in consistent coordination with FAO.

Slovenia has a designated IHR NFP within the NIPH, and an OIE contact point within AFSVPP. The latter also acts as a point of contact for the FAO International Food Safety Authorities Network (INFOSAN). Slovenia participates in the EpiSouth communicable diseases early warning and epidemic network of the Mediterranean and Balkans region.

In accordance with the Slovenian Law on Communicable Diseases and the Rules for Reporting of Communicable Diseases, outbreaks of communicable disease are internally reported within 3-6 hours of occurrence, usually via telephone or email. The further development of IT communications systems could ensure greater timeliness and accuracy in the transmission of information between internal stakeholders.

In addition to the rapid notification of PHEICs and listed diseases to WHO and OIE, Slovenia also posts weekly, monthly, quarterly and annual reports on their NIPH website regarding communicable diseases and specific sentinel surveillance.

The human and animal health workforce undergoes frequent training and simulation exercises, and SOPs are in place to ensure consistency and accuracy when reporting internationally to the WHO and to the OIE; however, this training could be broadened to a wider range of stakeholders, and the SOPs could be more frequently updated.

Recommendations for priority actions

- Improve understanding and fulfilment of OIE and WHO reporting requirements among wider stakeholder groups, through the establishment of a multisectoral procedure for the assessment of potential events, and regular multisectoral communications and training.
- Invest in upgrading IT systems, to improve the quality and timeliness of disease communications both within and between key stakeholder sectors.

Indicators and scores

D.3.1 System for efficient reporting to WHO, FAO and, OIE - Score 4

Strengths/best practices

- There is an established system of consistent and correct reporting to WHO, OIE and FAO.
- National agencies that most commonly identify notifiable events are knowledgeable and experienced in their respective operational procedures and reporting requirements.

Areas that need strengthening/challenges

- Improve understanding of OIE and WHO reporting requirements for all stakeholder groups.
- Enhance understanding and coordination of stakeholder roles through facilitated discussions, training, exercises and communication.
- Improve and update IT communications systems, particularly in terms of detecting and relaying information concerning unexpected events.

D.3.2 Reporting network and protocols in country - Score 4

Strengths/best practices

- National human and animal health officials share reports in a timely and regular manner, and comply with procedures for international reporting.
- Standard operating procedures are in place for communication between the public health and veterinary sectors.

Areas that need strengthening/challenges

- Communications amongst wider stakeholder groups should be improved.
- A national procedure should be formulated for reporting, and communicating around, PHEIC events, in order to improve overall coordination and timeliness.
- More regular communication should be established between the scientific community and governmental authorities and institutes.
- Simulation exercises to test and update SOPs, timeliness of response, communication channels and risk assessment tools should be more frequent.

Workforce development

Introduction

Workforce development is important in order to develop a sustainable public health system over time. A highly qualified public health workforce should be developed and maintained with appropriate technical training, scientific skills and subject-matter expertise.

Target

State Parties to have skilled and competent health personnel for sustainable and functional public health surveillance and response at all levels of the health system, and the effective implementation of the IHR (2005).

Slovenia level of capabilities

For all IHR functions, human resources are available including primary health care and medical specialists; epidemiologists; microbiologists and other scientists; veterinarians; and sanitary engineers. The NIPH team is dedicated, motivated and well trained. Currently the country has 11 epidemiologists at national level and 14 at regional level, with six trainees in public health at regional level. This is currently sufficient, but it is a vulnerable situation.

At national level, staff members are responsible for many functional areas simultaneously, with very little back-up. Imminent retirement of staff members in the coming years means a staff shortage is imminent. There is no career structure in place for effective replacement and retention of eligible and qualified candidates.

There is a well-established medical specialization in public health, requiring four years of training. This specialization offers generic training in public health with relevant parts dedicated to communicable disease control. Specialists are licensed by the Slovenian Medical Chamber, with renewal of licensing every seven years.

Clear rules are in place for continuous professional development. There is a mechanism for annual workforce planning for medical specialists, including for public health. A specific strategy for the communicable disease control workforce (relevant for IHR), based on a needs assessment, is yet to be developed. Medical specialization programmes in microbiology and infectious diseases are well established, with an annual strategy for workforce planning. For veterinarians, public health is (a small) part of the education programme.

Part of the training for the specialty in public health can be seen as intermediate-level FETP. Next to this, Slovenia has a yearly seat on the Member State track of the EPIET programme provided by ECDC. In the past, two medical doctors in public health followed the EPIET programme; currently one colleague is in the programme. There is no school for public health in Slovenia, but collaboration with schools for public health in neighbouring countries or through the Association of Schools for Public Health in the European Region (ASPHER) could offer possibilities.

Importantly, Slovenia maintains a very strong training programme for sanitary engineers, which is a four-year degree that covers epidemiology, general hygiene principles, environmental topics, and data management. For nurses, there is also additional training focused on hospital hygiene, though no programmes exist to expand further beyond more traditional nursing roles (e.g. programmes for community health nursing, or public health nurse practitioners).

Recommendations for priority actions

- Develop a comprehensive, multidisciplinary public health workforce policy to address targets based on national priorities and international requirements, with strategies for recruitment, training and retention.
- Develop a clear career structure to ensure effective replacement and retention of eligible and qualified public health candidates.
- Utilize training opportunities available in neighbouring countries and the EU, to supplement the workforce through regional collaboration.
- Develop positions for other types of public health professionals, including Masters-level specialists, social scientists, and health information technologists.

Indicators and scores

D.4.1 Human resources are available to implement IHR core capacity requirements – Score 4

Strengths/best practices

- Human resources are available including primary health care and medical specialists; epidemiologists; microbiologists and other scientists; veterinarians; and sanitary engineers.
- Training programmes are of high quality and are conducted at the national universities.
- Capacity to implement IHR core requirements is available at both national and regional levels.
- There is strong professional networking at national and regional levels.
- There is timely exchange of knowledge and practices, through weekly videoconferences and monthly epidemiological meetings.

Areas that need strengthening/challenges

- Training options are required for a multidisciplinary workforce, and to generate and sustain intermediate-level professionals in multiple disciplines including public health, community nursing, biostatistics and social science.
- Funding constraints result in attrition of the public health workforce due to limited career opportunities.
- Training in risk communication needs to be integrated into the curricula for training and continuous professional development for all public health professionals.
- To ensure the workforce is sustainable for the future, working conditions and payment should be attractive to young professionals from multiple disciplines.

D.4.2 Field epidemiology training programme or other applied epidemiology training programme in place - Score 3

Strengths/best practices

- The current education programme for medical specialists in public health is of high quality and well-established, with strong elements of an FETP programme for communicable disease control at intermediate level.
- The available EPIET training programme is utilized, offering Slovenia a yearly seat in the Member State track.

Areas that need strengthening/challenges

- Training options are lacking for a multidisciplinary workforce. Training is required for intermediate professionals in multiple disciplines such as public health, community nursing, biostatistics and social science.
- Further use should be made of training opportunities in neighbouring countries and the EU, to supplement workforce collaboration.

D.4.3 Workforce strategy - Score 3

Strengths/best practices

- The medical education programme is well-established. There is a mechanism for forecasting the workforce for medical and public health specialists, with a legal demand for continuous education (via a licensing procedure).

Areas that need strengthening/challenges

- A comprehensive multidisciplinary public health workforce policy must be developed, in order to address specific public health workforce targets based on national and international requirements, priorities and needs. This policy must address capacity building for various cadres in the areas of strategies for training, recruitment, and retention.
- A better developed career structure is needed, to ensure the effective replacement and retention of eligible and qualified public health candidates.
- Other disciplines should be attracted to the public health workforce as well as medical doctors—such as holders of Masters in Public Health, social scientists, and biostatisticians.

RESPOND

Preparedness

Introduction

Preparedness includes the development and maintenance of national, intermediate and community/primary response level public health emergency response plans for relevant biological, chemical, radiological and nuclear hazards. Other components of preparedness include mapping of potential hazards, the identification and maintenances of available resources, including national stockpiles and the capacity to support operations at the intermediate and community/primary response levels during a public health emergency.

Target

Development and maintenance of national, intermediate (district) and local/primary level public health emergency response plans for relevant biological, chemical, radiological and nuclear hazards. This covers mapping of potential hazards, identification and maintenance of available resources, including national stockpiles and the capacity to support operations at the intermediate and local/primary levels during a public health emergency.

Slovenia level of capabilities

National and regional emergency response plans are in place for natural and other disasters, and take into account public health threats. One such plan concerns the response to epidemics/pandemics in humans. National emergency response plans are governed by the ACPDR, a body within the Ministry of Defence, in cooperation with other ministries, state bodies, and relevant scientific organizations; and with inputs from the private sector as needed.

Risk assessments and other plans are developed for many situations, including: earthquakes; floods; large fires in natural environments; nuclear or radiological accidents; mass events; particularly dangerous animal diseases; accidents at sea; railway accidents; accidents of aircraft; use of weapons for mass destruction and terrorist purposes, or terrorist attacks; and other disasters that could hit large parts of the country and cause extensive consequences or public health threats.

Risk assessments and plans are reviewed—and, if necessary, supplemented or amended—every three years, and after every activation period. The plan for communicable diseases in humans was prepared in 2016 and has not yet been updated.

Emergency response plans using the same structure are developed at all levels:

- National emergency response plans—are prepared by the Administration of the Republic of Slovenia for Protection and Rescue in cooperation with other ministries, state bodies and relevant professional organizations;
- Regional emergency response plans are prepared by branches of the Administration of the Republic of Slovenia for Protection and Rescue;
- Municipal emergency response plans are prepared at local level;
- Specific plans of services for protection and rescue are developed in institutions and other organizations that prepare corporate plans.

The ACPDR is a dedicated part of an organized system and comprises management bodies, units and services for protection, rescue and assistance; protection and rescue equipment; and facilities for protection, rescue and relief. It is fully organized at both regional and national levels, and in local communities. A comprehensive system, it covers planning, organization, implementation, supervision, financing measures and activities for protection against natural and other disasters, including public health threats. Core areas include:

- Detection, monitoring and research of natural and other disaster hazards;
- Prevention of natural and other disasters;
- Notification, warning of and alerting to imminent danger and giving instructions on protection, rescue and relief;
- Education and training for protection, rescue and relief duties;
- Organization of civil protection and establishment and maintenance of other forms of preparedness for protection, rescue and relief;
- Self-protection, self-help and mutual assistance (or “personal and mutual protection”);
- Mobilisation and activation of protection, rescue and relief forces and resources;
- Determination and implementation of protective measures;
- Rescue and relief;
- Recovery from natural and other disasters up to the provision of basic living conditions;
- Assessment of damage caused by natural and other disasters;
- International co-operation relating to the implementation of protection against natural and other disasters;
- Supervision of the implementation of regulations on the protection against natural and other disasters;
- Providing assistance to other countries in the event of natural and other disasters.

National structures and responsible government offices needed to fulfil IHR core capacity requirements under Annex 1A of the IHR have been identified, and are present, although it seems that some roles and responsibilities are not well-defined. This can be particularly problematic during the immediate response to an event with unknown or uncertain health consequences, such as the recent response to a fire at a chemical waste site.

Every year, a detailed plan for exercises is prepared by the Ministry of Defence and adopted by the government. Plans already implemented and used in practice (especially those for flooding) are tested more frequently. Plans do not specifically incorporate points of entry, but these are covered by general plans within Civil Protection; and there have not been extensive exercises that test the ability of the existing plans to address massive health or public health consequences.

National profiles on risk and resources are reviewed and, if necessary, supplemented or amended every three years. The Decision on the Mechanism of the Union in the Field of Civil Protection (Official Gazette no. 62/14 and 13/17) determines the type and content of risk assessments (which should be carried out by the state) and the deadlines for making them. Risk assessments for individual disasters, including risk assessments for threats to human health of biological, chemical, environmental or unknown origin, have recently been completed.

A unique feature of the Slovenian preparedness system is the fact that a large network of volunteers is available to support professional rescue workers in different fields.

Recommendations for priority actions

- Designate a special unit at the Ministry of Health for permanent, interdisciplinary work on preparedness planning, coordination, communication and education.
- Develop a national all-hazards public health emergency preparedness and response plan, to complement and coordinate existing specific plans for different emergencies. Revise existing plans to be congruent with the all-hazards plan.

Indicators and scores

R.1.1 Multi-hazard national public health emergency preparedness and response plan is developed and implemented - Score 5

Strengths/best practices

- There is a well-organised civil protection system in place.
- There is a vast network of volunteers working in civil protection, rescue and aid.
- There is a strong National Notification/Call Centre that receives information from across the country and reaches out to the responsible government agencies as needed.
- Preparedness plans are in place for prioritized natural disasters and/or threats.
- Commonly used plans are exercised annually.
- An interdisciplinary approach is taken to addressing communicable disease threats.

Areas that need strengthening/challenges

- Plans from different fields are not yet well-linked, with some lack of detail for pre-established roles and responsibilities, especially during the early stages of an unexpected event.
- Systems for technical information and communication require upgrading.
- Greater connections should be made with other countries, through participation in international exercises and concerted efforts to learn from others' good practices.

R.1.2 Priority public health risks and resources are mapped and utilized - Score 4

Strengths/best practices

- Civil protection mapping is established for the most important public health risks.
- Simulation exercises are conducted regularly.
- An interdisciplinary approach has been taken to mapping, as evident in the existing guidelines document for communicable diseases.
- A system has been implemented for the prevention of public health threats at mass gatherings.

Areas that need strengthening/challenges

- A more comprehensive system is needed to connect existing plans and guidelines with responsibilities and resources for managing health and public health consequences (both short-term and long-term).

Emergency response operations

Introduction

A public health emergency operations centre (PHEOC) is a central location for coordinating operational information and resources for strategic management of public health emergencies and emergency exercises. Emergency operations centres provide communication and information tools and services, and a management system during responses to emergencies, or during emergency exercises. They also provide other essential functions to support decision-making and implementation, coordination and collaboration.

Target

Country has capacity for: a public health emergency operations centre functioning according to minimum common standards and maintaining trained, functioning, multisectoral rapid response teams; real-time biosurveillance laboratory networks; information systems; and trained PHEOC staff capable of activating a coordinated emergency response within 120 minutes of the identification of a public health emergency.

Slovenia level of capabilities

The national emergency response plan for the occurrence of an epidemic or pandemic of a communicable disease in humans clearly defines that in case of a disaster as a result of an epidemic or pandemic, the MOH will lead and coordinate all activities, assisted by public health experts and epidemiologists, and supported by the resources of the ACPDR. In cases where the outbreaks or epidemics are caused by natural disasters, or when the one of the national emergency response plans is activated, public health experts are also included in the coordination expert group, but activities are led by ACPDR.

When there is a need to coordinate a response to an outbreak of communicable disease, a public health emergency operations centre (PHEOC) will be activated at the NIPH. A space for the PHEOC has been identified in the same building as the Centre for Communicable Diseases and Environmental Health, and all of the material and human resources are on standby. During day-to-day work, the PHEOC space is used for routine programme coordination activities, but in case of urgent events the entire floor on which the PHEOC is located can be closed and all the rooms, kitchen and other facilities are assigned to the expert groups managing the outbreak.

Disasters and outbreaks are managed at three levels: municipal, regional and national. Command can be led at all levels. The level of activation depends on the size, type and geographic scope of the event, and the risk assessment. Based on the assessment, the relevant level is activated and the dedicated institutions responsible for coordination, communication, response and technical support are engaged. If the situation is beyond the scope of the local level, regional units are responsible for the coordinating the response. If they are unable to ensure proper management of the event, they ask the national level to coordinate the intersectoral response.

The Ministry of Health, NIPH experts and other public health experts are all members of the national headquarters of the ACPDR. When any of the national emergency response plans are activated, colleagues from NIPH are invited depending on the type of event. The national EOC capacity is 30-35 people.

In addition to these EOCs, within the framework of Slovenian civil protection and disaster management, a national notification centre and 13 regional notification centres all respond to emergency calls via the universal help number (112), 24 hours a day, 365 days a year. The operation of the regional notification centres guarantees availability of emergency medical assistance and rescue workers during natural and other disasters.

Exercises are held regularly to test national disaster plans and the EOCs. For example, in recent years exercises have taken place to test responses to Ebola, polio, and a scenario including fire and a communicable disease threat board a cruise ship. In 2016, during the Europe-wide refugee crisis, the NIPH group of experts was recruited to assist the ACPDR in responding to the migrants crossing through Slovenia.

Recommendations for priority actions

- Exchange best practices among various operations centres and ensure education and collaborative exercises with all partners.
- Improve and develop guidelines, fact sheets, and background materials defining the roles and functions of the emergency operations centre, to ensure continuity and traceability of operations.
- Develop common information technology standards to include all institutions in the system.

Indicators and scores

R.2.1 Capacity to activate emergency operations - Score 5

Strengths/best practices

- The EOC team is trained in emergency operating procedures and is available to respond within two hours.
- Fast communication technologies are available, including teleconference/videoconference facilities for coordination of outbreaks, and international reporting through EWRS and IHR systems.

Areas that need strengthening/challenges

- More resources are needed to ensure consistent response activation at all levels.

R.2.2 Emergency operations centre operating procedures and plans - Score 3

Strengths/best practices

- Plans and procedures are in place for emergency response.
- Communicable disease threats reports (CDTR) are published weekly for a professional readership.
- Emergency response resources are in place, including surveillance data, guidance, technical reports, meeting reports, special reports and assessments.

Areas that need strengthening/challenges

- There is a need for more surge staff.
- Back-ups are required to ensure stable communications during an emergency response.
- Improved sharing of best practices is required with partners.

R.2.3 Emergency operations programme - Score 4

Strengths/best practices

- Regular exercise and evaluation programmes are in place.
- Training programmes are in place.

Areas that need strengthening/challenges

- More systematic evaluation is required of the resources needed at each level to ensure consistent response activation.

R.2.4 Case management procedures are implemented for IHR relevant hazards - Score 4

Strengths/best practices

- ECDC Rapid Risk Assessments are available and utilized.
- EPIET and ECDC programmes ensure the training of epidemiologists: at least one EPIET Member State track place is available to the NIPH every year.

Areas that need strengthening/challenges

- Under-reporting and delayed reporting are an issue.
- Contingency and continuity plans are not well harmonized.
- There is a general lack of an interdisciplinary and intersectoral approach.
- Improvement is needed in communication and networking between sectors and organisations.
- Enhanced information technology would improve reporting and analysis of cases and laboratory results, as well as other emergency management information, and help to coordinate response activities.

Linking public health and security authorities

Introduction

Public health emergencies pose special challenges for law enforcement, whether the threat is manmade (e.g. anthrax terrorist attacks) or naturally occurring (e.g. flu pandemics). In a public health emergency, law enforcement must coordinate its response quickly with public health and medical officials.

Target

Country conducts a rapid, multisectoral response in case of a biological event of suspected or confirmed deliberate origin, including the capacity to link public health and law enforcement, and to provide and/or request effective and timely international assistance, such as to investigate alleged use events.

Slovenia level of capabilities

There is close cooperation between different stakeholders in the area of protecting public health. The Ministry of the Interior (MOI) is responsible for the fields of public security; police work; internal administrative affairs; and migration. The MOI has two affiliated bodies: the National Police and the Internal Affairs Inspectorate.

Ministries prepare their own action plans according to national plans. Law enforcement agencies are obliged to implement tasks related to public health under the relevant laws.

There is no specific memorandum of understanding (MOU) or other agreement between public health and security authorities at national level. However, there are some relevant instruments that exist, including the emergency response plan for cases of use of weapons of mass destruction for terrorist purposes or terrorist attacks with conventional means; and the emergency response plan for cases of epidemic/pandemic infectious diseases in humans. These plans are detailed on a regional level and enacted by specific regional police units. Temporary restrictions on movement are possible under the law, and according to national emergency plans.

There is an operational document on response procedures in case of contact with biological agents. This was developed by representatives of the police, the fire service, public health experts, the Slovenian army and other relevant first responders. The document and the protocol it contains have been used frequently in response to suspected anthrax cases in suspicious mail.

Joint training is regularly conducted to test existing plans at both regional and national levels. This includes training of public health and security authorities on topics related to information sharing and joint responses to different types of emergencies. There are draft SOPs that aim to connect existing plans and technical guidelines and improve effective communication, standardize risk assessments, and ensure uniform preparedness and response to public health threats. There is regular monthly exchange of information on communicable diseases between public health and security authorities.

The MOI is also responsible for relations with INTERPOL. In accordance with a 1992 governmental decision, the Criminal Police Directorate of the MOI's General Police Directorate (state level) represents the National Central Bureau of INTERPOL within Slovenia. International Police Cooperation within the framework of INTERPOL is implemented by the Criminal Police Directorate's International Police Cooperation Division.

Recommendations for priority actions

- Strengthen monitoring and detection of global health security issues, with focus on new and emerging threats.
- Conduct joint exercises and training on a regular basis with all stakeholders, especially in the fields of biological, chemical, radiological and other threats that can impact public health.
- Review, make recommendations, and initiate processes to improve efficient planning and legislation among the traditional security and public health sectors.

Indicators and scores

R.3.1 Linking public health and security authorities – Score 4

Strengths/best practices

- Slovenia has the ability to respond quickly due to notification and coordination systems.
- Regular exercises are held at international, national and regional levels.

Areas that need strengthening/challenges

- Laws, plans and procedures should be better integrated to achieve an all-hazards/One Health approach.
- Collective competencies and knowledge need strengthening in biological, chemical and radiological fields.

Medical countermeasures and personnel deployment

Introduction

Medical countermeasures are vital to national security. They protect nations from potentially catastrophic infectious disease threats. Investments in medical countermeasures create opportunities to improve overall public health. It is also important to have trained personnel who can be deployed in case of a public health emergency for response.

Target

A national framework for transferring (sending and receiving) medical countermeasures and public health and medical personnel between international partners during public health emergencies.

Slovenia level of capabilities

Slovenia has solid mechanisms related to sending and receiving medical countermeasures during a public health emergency. Those mechanisms address regulatory concerns around receiving drugs or devices from an international source; and sending, receiving and distribution of medical countermeasures during an emergency and/or shortage. It is regulated by the Medicinal Products Act. Agreements with manufacturers are in place through the Joint Procurement Agreement at EU level. For personnel deployment, agreements are set up within the European context.

Following the advice of the NIPH, Slovenia has a selected stockpile of vaccinations, drugs, antibiotics, and laboratory supplies and equipment. The same plan also takes animal health protection into consideration. Stockpiling and procedures related to animal countermeasures are advised by the AFSVPP.

Slovenia has had experience of receiving medical personnel in the recent past, notably during the recent migrant crisis in the Balkans. Medical staff came from France, Hungary, Slovakia and NGOs such as Médecins sans Frontières (MSF), and the country demonstrated mechanisms for facilitating the receipt of foreign medical staff during emergencies. The foreign medical providers were focused on providing aid to the migrant population, but were not involved in augmenting and delivering care to Slovenian residents.

In 2015, Slovenia sent medicinal products to Serbia, Bosnia and Herzegovina within the framework of humanitarian aid. Because of its small size, Slovenia has no permanent capacities for sending large numbers of health professionals to other countries experiencing emergencies. Nevertheless, during the Ebola pandemic, a Slovenian mobile laboratory team was sent to Africa to assist in the response.

Recommendations for priority actions

- Develop a plan for exercising the receipt and integration of international public health and medical personnel during an emergency.

Indicators and scores

R.4.1 System is in place for sending and receiving medical countermeasures during a public health emergency - Score 5

Strengths/best practices

- All the necessary rules and mechanisms are in place for sending and receiving medical countermeasures during a public health emergency.
- Recent good examples have shown that Slovenia has the mechanisms for countermeasures during emergencies.
- For pandemic influenza, Slovenia participates in the Joint Procurement Agreement at EU level.

Areas that need strengthening/challenges

- While rules and mechanisms for sending and receiving medical countermeasures during a public health emergency are in place, they have not been exercised.

R.4.2 System is in place for sending and receiving health personnel during a public health emergency - Score 5

Strengths/best practices

- All the necessary rules and mechanisms are in place for sending and receiving health personnel during a public health emergency.
- Recent good examples have shown that Slovenia has the mechanisms for sending and receiving health personnel during public health emergencies.
- Slovenia has participated in the European Medical Corps.

Areas that need strengthening/challenges

- While rules and mechanism for sending and receiving personnel during a public health emergency are in place, they have not been exercised.

Risk communication

Introduction

Risk communication should be a multilevel, multifaceted process that helps stakeholders define risks, identify hazards, assess vulnerabilities and promote community resilience—thereby promoting the capacity to cope with an unfolding public health emergency. An essential part of risk communication is disseminating information to the public about health risks and events, such as disease outbreaks. For communication about risk to be effective, the social, religious, cultural, political and economic effects of the event should be taken into account—including the voice of the affected population.

Communications of this kind promote appropriate prevention and control action through community-based interventions at individual, family and community levels. Disseminating information through appropriate channels is essential. Communication partners and stakeholders need to be identified, and functional coordination and communication mechanisms should be established. In addition, the timely release of information and transparency in decision-making are essential for building trust between authorities, populations and partners. Emergency communications plans should be tested and updated as needed.

Target

States Parties should have risk communication capacity that includes multilevel, multifaceted real-time exchange of information, advice and opinion between experts and officials and people who face a threat or hazard to their survival, health or economic or social wellbeing. This information should enable them to take informed decisions to mitigate the effects of the threat or hazard, and to take protective and preventive action). It should consist of a mix of communication and engagement strategies such as media and social media communication, mass awareness campaigns, health promotion, social mobilization, stakeholder engagement, and community engagement.

Slovenia level of capabilities

There are established lines of command for communication at national, regional and local levels, with institutional branches throughout Slovenia. The Public Relations Offices of the Ministry of Health, the ACPDR, the Ministry of Defence, and the NIPH are responsible for risk communication during crises. The Government Communication Office is responsible for coordinating communication, and is involved in public notification activities. However, there is still significant work needed to integrate risk communication as a core element of emergency preparedness, response management and decision-making.

National communication plans exist, such as the National Disaster Response Plan for the Occurrence of an Epidemic or Pandemic of a Communicable Disease in Humans, and the Response Plan of the Ministry of Health in case of an Epidemic or Pandemic of Communicable Diseases in Humans (Pandemic plan); but these are not comprehensive. With a well-developed foundation for risk communication, an all-hazards national risk communication strategy and plan would be beneficial. Such a plan would serve as a foundation to integrate media and social media communication, mass awareness campaigns, health promotion, social mobilization, stakeholder engagement, and community engagement.

A new handbook is in development on coordinating government crisis communication, principles for the use of social and traditional media, and preparation planning within government agencies; but this is limited to government agencies and is for crisis communication alone—whereas crisis communication is only one of several components of effective risk communication. The MOH is also preparing a new, internal crisis communication plan. These plans could be expanded and harmonized to become a single multisectoral, all-hazards risk communication plan.

Formal and informal procedures exist at local, regional and national levels for internal and partner communication and coordination during crises. Identified stakeholders include: national hospitals; the AFSVPP; the Slovene Environment Agency; the Institute of Microbiology and Immunology, the Faculty of Medicine, University of Ljubljana; the University Medical Centre Ljubljana - Department of Infectious Diseases; and the Ministry of Environment - Slovene Nuclear Safety Agency.

Despite established collaborative mechanisms, there have been some incidences where local agencies and health authorities have released inconsistent, uncoordinated information to the media. Collaboration and coordination with stakeholders outside the government sector (such as the private sector, NGOs, civil and community-based organizations, and international organizations) could be better defined and strengthened.

Public communication and work with the media is prioritized and regularly conducted by relevant agencies. The MOH and the Government Communication Office coordinate for outbreaks and health emergencies, with a formalized public relations unit, designated spokespersons, and a formal message clearance system. A network of multisectoral spokespersons exists and is used when necessary. Primary methods for information sharing include press releases, media advisories and press conferences. An in-depth audience analysis, including for the media, could improve understanding of how key audiences receive and use health information through a variety of channels. Regular training of spokespersons and media trainings would be beneficial.

Social mobilization, health promotion and community engagement are informally carried out by the NIPH. Although communication is intended to be proactive with all audiences, qualitative or formative research methods are usually not used. Risk perception is gathered using quantitative methods such as media clippings, Google analytics, and Facebook and Twitter analytics. Gathering of risk perception, testing messages in target audiences, and detecting, verifying and responding to rumours and misinformation could all be improved and strengthened.

Identified challenges include the lack of a dedicated budget line for communications personnel, materials and activities for emergencies.

Recommendations for priority actions

- Integrate risk communication as a recognised core element of emergency preparedness and response management and decision-making.
- Expand the proposed government crisis communication plan to an all-hazards national risk communication plan.
- Strengthen community engagement mechanisms to better assess risk perception through formative research, and test public health messages in target audiences.
- Strengthen mechanisms for dynamic listening and rumour detection, verification and response through effective communication channels.
- Conduct regular risk communication trainings, workshops, and simulation exercises to test an all-hazards risk communications plan, and strengthen local, regional and national capacities among government agencies and stakeholders.

Indicators and scores

R.5.1 Risk communication systems (plans, mechanisms, etc.) - Score 3

Strengths/best practices

- Communication lines of command are established from national, regional and local levels.
- Institutional branches for risk communication exist throughout Slovenia.
- There is a multisectoral network of identified spokespersons.
- There is an established system for the clearance of messages and the exchange of information between government institutions and some stakeholders.

Areas that need strengthening/challenges

- There is limited recognition of risk communication as a core component of emergency preparedness, response management and decision-making.
- The limited scope and practice of existing communication plans necessitate development of a new all-hazards risk communication plan.

R.5.2 Internal and partner communication and coordination - Score 3

Strengths/best practices

- Formal and informal procedures are identified for internal and partner communication and coordination during health emergencies.
- There is a developed network of organizations and authorities in the scientific community and health sector at local, regional and national levels.

Areas that need strengthening/challenges

- Collaboration mechanisms with stakeholders outside the government sector—such as the private sector, NGOs, civil and community-based organizations, and international organizations—should be improved.
- Enhanced training is required for various stakeholders, including the media. Regular exercises should be conducted to test communication and coordination before, during and after health emergencies.

R.5.3 Public communication - Score 4

Strengths/best practices

- Engagement with the media is prioritized and takes place regularly.
- There is a formalized public relations unit, with designated spokespersons, within the Ministry of Health and the Government Communication Office.
- There is an established system for organising press conferences, public announcements, etc.

Areas that need strengthening/challenges

- Audience and stakeholder analyses, including media analysis, should be enhanced, to improve understanding of how target audiences receive and use health information.
- Improvement is required in the use of complementary tools and channels (i.e. websites, information products, SMS, social media, hotlines, etc.) to listen and respond to a variety of audiences.
- There is a need for improved, regular training for spokespersons and the media.

R.5.4 Communication engagement with affected communities - Score 3

Strengths/best practices

- Decentralized systems are in place for community engagement, with institutional branches throughout Slovenia.

Areas that need strengthening/challenges

- Social mobilization, health promotion and community engagement are recognized in the National Response Plan but are conducted informally.
- Mechanisms could be developed and/or strengthened to improve the use of audience segmentation; formative research is required to assess risk perception; and materials and messages in target audiences should be proactively tested.

R.5.5 Dynamic listening and rumour management - Score 3

Strengths/best practices

- Media is monitored and quantitative methods are used to gather risk perception through media clippings, Google analytics, and Facebook and Twitter analytics.
- An SOS phone and dedicated email are available during crises.

Areas that need strengthening/challenges

- A system should be developed and implemented to gather risk perception through formative research.
- The allocation of human and financial resources should be improved in order to strengthen two-way communication channels to respond to rumours and misinformation.
- Improvement is required in the application of risk communication principles through trusted channels and sources of information such as health care workers.
- Regular training should be provided for journalists on best practices of reporting before, during and after outbreaks and health emergencies.

OTHER IHR-RELATED HAZARDS AND POINTS OF ENTRY

Points of entry

Introduction

All core capacities and potential hazards apply to points of entry, and thus enable the effective application of health measures to prevent the international spread of diseases. States Parties are required to maintain core capacities at designated international airports and ports (and, where justified for public health reasons, a State Party may also designate ground crossings as points of entry). These should implement specific public health measures to manage a variety of public health risks.

Target

States Parties designate and maintain core capacities at international airports and ports (and, where justified for public health reasons, designated ground crossings), which implement specific public health measures to manage a variety of public health risks.

Slovenia level of capabilities

Slovenia has two officially designated points of entry requiring public health capacities under the IHR: the International Airport in Ljubljana, and Port Koper. Slovenia is part of the Schengen area, as are the neighbouring countries of Italy and Austria; it shares a border with Croatia, which is a non-Schengen state. Access to appropriate medical services is available at the airport and at Port Koper. There are dedicated medical personnel on-site, and there is access to a pre-hospital unit with a designated referral hospital for affected travellers. For cases of a suspected communicable disease, the on-site medical teams at both points of entry have 24/7 access to a regional epidemiologist.

Points of entry operate different inspection services via various authorities: the Labour Inspectorate; the Health Inspectorate; the Inspectorate of the Republic of Slovenia for the Environment and Spatial Planning (IRSOP); the AFSVPP for animal and food consignments; the Transport Directorate of the Ministry of Infrastructure (the Department for Aviation/Port and Airport Authorities); the Slovenian Maritime Administration; and the Inspectorate of Infrastructure.

With no specific vector-borne disease risk profile based on geography and the ecology of Slovenia, there is no specific programme for vector control or reservoir control needed in or near the points of entry. Normal hygiene and sanitation programmes currently ensure that areas are kept free of pest insects and animals. However, there are disinfection, disinsection, and deratting capacities available in reserve if they are needed in response to findings during an inspection.

In 2015, an interdisciplinary field exercise took place at the airport, based on the Ebola preparedness plan.

National and regional emergency response plans, operated by ACPDR, cover possible threats at points of entry. A public health guideline focused on points of entry and infectious diseases that present high public health risk is in its final preparation phase. Based on Slovenia's experiences in preparing for a possible patient with Ebola, it is expected that this guideline will be published in 2017. It will be tested every two years.

An additional field exercise was organised at Port Koper in 2016, based on a scenario of a fire and communicable disease threat on a cruise ship.

Recommendations for priority actions

- Develop a plan for periodic public health emergency training and simulation exercises at points of entry to improve multisectoral preparedness and response.
- Conduct a human, animal, and food risk assessment based on incoming travelers and consignments, considering the additional policies, human resources, and equipment needed to strengthen quarantine and isolation procedures for major public health risks.
- Continuous training and simulation exercises should be carried out at points of entry to improve multisectoral preparedness and response.
- Financing is required for human resources and equipment at points of entry, to enable the handling of large numbers of passengers, and/or long-term holding at the airport.

Indicators and scores

Points of Entry 1. Routine capacities are established at points of entry - Score 4

Strengths/best practices

- Travellers have access to medical services, primary care, a pre-hospital unit and a hospital.
- There is a multisectoral approach in place, with an advisory group of experts involved in the response plan.
- Staff at the points of entry are educated and trained.
- Disinfection, disinsection and deratification services are available for points of entry.
- An NIPH regional unit has authority to issue Ship Sanitation Control Certificates, and a procedure is in place.
- Reference emergency ambulance units are in place to respond to cases of highly contagious diseases.
- Epidemiologists are available 24/7 via regional offices of the NIPH.

Areas that need strengthening/challenges

- Education and training should be improved to increase familiarity with, and ability to implement, emergency quarantine and isolation protocols.
- All inspection services should be included in the common plan and activities—a general plan is required with uniform coordination for all public health risks.

Points of Entry 2. Effective public health response at points of entry - Score 4

Strengths/best practices

- The existing plan covers all relevant sectors.
- Medical staff are available 24/7.
- Safe transport is in place and SOPs are operational at ambulance stations.
- Operational guidelines are available for non-medical staff.
- An Ebola plan is in place and a simulation exercise has been carried out.
- A further simulation exercise has been carried out at the port, in partnership with the ACPDR.

- Training is available for non-medical staff at the airport.
- There is a well-organised system of ambulance services and education is available to ambulance staff.
- Guidelines are in place for mass events/disasters and are tested every year.
- There are strong links between points of entry and regional epidemiologists.

Areas that need strengthening/challenges

- More resources would be need to handle large numbers of passengers and/or long-term holding at the airport.
- Work must be done to increase awareness of the need for IHR implementation at points of entry and ensure the commitment of all stakeholders to IHR implementation.
- Risk communication plans should be included in the general guidelines.

Chemical events

Introduction

Timely detection and effective response of potential chemical risks and/or events require collaboration with other sectors responsible for chemical safety, industries, transportation and safe disposal. This would entail that State Parties need to have surveillance and response capacity to manage chemical risk or events and effective communication and collaboration among the sectors responsible for safety.

Target

States Parties should have surveillance and response capacity for chemical risks or events, with effective communication and collaboration among the sectors responsible for chemical safety, industries, transportation and safe disposal.

Slovenia level of capabilities

The Republic of Slovenia has a long tradition of chemical safety, both nationally and through its active contribution to the development of international treaties and conventions. The government has ratified the treaties of Basel, Rotterdam, Stockholm, and Minamata, and is party to the Chemical Weapons Convention (CWC); the Strategic Approach to International Chemicals Management (SAICM); the Biological and Toxin Weapons Convention (BTWC); the Australia Group (AG); the UNECE Convention on the Transboundary Effects of Industrial Accidents; the International Association for Impact Assessment (IAIA) Strategic Environmental Assessment (SEA); and other international treaties on transboundary waters and lakes. The country has also adopted all international conventions and relevant European legislation.

Chemical management covering the lifecycles of chemicals is therefore a consistent element of national strategic documents and legislation. The Chemicals Office in the MOH serves as a hub for chemical-related policies, including around the environment; health and safety at work; public health; the economy; and agriculture.

The key health sector actors in chemical safety are the NIPH; the National Laboratory for Health, Environment and Food; the Health Inspectorate; the Clinical Institute of Occupational, Traffic and Sports Medicine; and the Poison Control Centre. These bodies provide the whole spectrum of health services from research, surveillance and monitoring and risk assessment to prevention, emergency preparedness and response, and treatment of poisonings. Comprehensive EU chemicals regulation legislation serves as background for prevention and management of chemical events.

Elements of the chemical events control and management system have been established in legislation, tested, and demonstrated in practice. These include systems for identifying hazards; specific control regimes for establishments with potential for major events; preparedness procedures; and emergency response and restoration systems.

There have been no major chemical events in the past five years. However, a fire occurred in KEMIS (a hazardous and non-hazardous waste disposal facility) that was still under investigation at the time of the JEE, and it is not possible at time of writing to make a comprehensive assessment of that incident. The subject matter experts from Slovenia recognized that the initial response to the incident and subsequent risk communication were somewhat disorganized, with lack of clarity regarding roles and responsibilities, thresholds for emergency activation, inconsistent risk assessments at the local and national levels, and public communication and coordination.

Active implementation of the EU Civil Protection Mechanism has meant that control of chemical events and hazards has been possible, through its incorporated measures for fire safety; specific control regimes for establishments with potential for major accidents involving hazardous substances; and measures for other installations with potential for chemical events. Notification systems for chemical events are in place, through calling 112 and 113 to reach national and regional information centres.

Systems for emergency response are available at the regional and local levels, covering assessments of threats; elaboration of emergency response plans; response services; division of responsibilities; alerting and informing the public; and stockpiling and maintenance of response equipment. The emergency response system is dependent on professional, duty and volunteer services.

Capabilities are in place for monitoring emissions and the state of the environment (air, water, sediment and soil), and for monitoring food and feed during and after a chemical event. Slovenia has the capability to assess chemical events and their health consequences, both with regard to public health and to the health implications for emergency responders.

Stakeholders in chemical events in Slovenia are listed below:

- Prevention: Ministry of Health (hazardous chemicals lists, safety data sheets, hazardous chemicals registry); Ministry of Defence (fire safety); Ministry of Interior (explosive safety); Ministry of Labour, Family, Social Affairs and Equal Opportunities (health and safety at work); and Ministry of the Environment and Spatial Planning (control regime (planning, licensing, inspections) of specific groups of installations with chemical event potential).
- Preparedness and response: Ministry of Defence (lead and coordinating authority); local communities; organizations and specific groups of installations with chemical event potential; local communities.
- Health related: public health network of health centres; immediate aid teams and ambulances; NIPH; University Medical Centre Ljubljana (National Poison Control Centre; Institute of Occupational, Traffic and Sports Medicine).
- Environment related: ecological mobile units; Slovenian Environment Agency and its accredited laboratories.
- Food and feed related: Ministry of Agriculture (AFSVPP); police.
- Long-term rehabilitation of the environment: Ministry of the Environment and Spatial Planning.

Recommendations for priority actions

- Based on recent events and lessons, evaluate, revise and exercise the existing national response plan(s) for chemical events in order to improve immediate response activities and risk communication.
- Formalize the routine sharing of case-based information regarding chemical events in order to improve the overall national risk assessment.

Indicators and scores

CE.1 Mechanisms are established and functioning for detecting and responding to chemical events or emergencies - Score 4

Strengths/best practices

- A chemicals information system and emergency response plans are in place and are used by key ministries (Ministry of the Environment and Spatial Planning; Ministry of Defence; Poison Control Centre).
- An emergency notification and information system is in place (via 112).
- Monitoring capabilities are established for the environment, health, food and feed.
- Slovenia has a Poison Centre in the University Medical Centre, Ljubljana.

Areas that need strengthening/challenges

- Improvements are needed to the risk assessment protocols to coordinate local and regional information with national input as needed.
- Communication with the public during and immediately after a chemical event could be improved.
- Systematic connections should be made between the reporting of chemical events/intoxication, public health risk assessments, and chemical event surveillance.

CE.2 Enabling environment is in place for management of chemical events - Score 3

Strengths/best practices

- Strong national regulation exists for chemical materials.
- Slovenia maintains registers of sites with chemical event potential.
- EU-based chemicals management legislation is in place.
- There is a high level of sensitivity to environment- and health-related issues across Slovenian society.

Areas that need strengthening/challenges

- Local awareness, understanding, and preparedness for chemical hazards should be strengthened.
- Greater involvement of all sectors and private business is needed in national public health preparedness for chemical events, and development of improved response plans that cover a variety of scenarios.

Radiation emergencies

Introduction

State Parties should have surveillance and response capacity for radionuclear hazards/events/emergencies. This requires effective communication and collaboration among the sectors responsible for radionuclear management.

Target

State Parties should have surveillance and response capacity for radionuclear hazards/events/emergencies, with effective communication and collaboration among the sectors responsible for radionuclear management.

Slovenia level of capabilities

Slovenia maintains a comprehensive National Emergency Response Plan for Nuclear and Radiological Accidents. While the focus of the plan is preparedness for accidents in and around the country's two functional nuclear reactors, it extends to potential radiological emergencies outside their immediate vicinity.

The plan was last updated in 2010 and is currently being reviewed and revised to integrate lessons from the Fukushima nuclear plant accident, as well as recommendations from the International Atomic Energy Agency (IAEA) and the European Union.

Between 2008 and 2011, Slovenia activated the national emergency response plan for four discrete events that ultimately involved no radiological threat, but which allowed them to further refine their precautionary and response protocols.

For low-risk situations, the Slovenian Nuclear Safety Administration (SNSA) has the authority to act to prevent emergencies, but when the response plan is activated, command and control becomes the responsibility of the ACPDR and falls within existing national emergency response structures. In those situations, SNSA continues to provide guidance and maintain communications with international agencies.

Because the primary nuclear reactor is close to the border with Croatia, Slovenia maintains technical collaboration with the government of Croatia to ensure alignment of emergency response plans, including providing Croatian authorities with access to the online national nuclear incident communication and coordination system, Medresorni komunikacijski sistem med izrednim (MKSID).

Human and animal health, environmental protection, and food safety are also included in the national response plan. The Ministry of Health is responsible for medical guidelines for emergency medical teams and long-term treatment of those who are exposed, as well as evacuation of patients from hospitals if needed. The Ministry maintains a stockpile of potassium iodide (KI) tablets and is responsible for their distribution if called for by the incident commander. It has been noted, however, that the number of healthcare professionals who are trained to respond to radiological emergencies is low, and that additional resources are needed for safe patient treatment on-site, transportation, and whole-body dosimetry in the case of a significant event.

The HIRS is responsible for health and hygiene in temporary accommodation facilities, as well as for overseeing the safety of medical supplies, food services, drinking water supply, public nutrition, educational facilities, and child care facilities. In the case of a radiation event, the NIPH would be responsible for coordinating health-related information and resources with WHO. The Ministry of Agriculture, Forestry and Food would be called on to protect food sources, food production, and animal feed.

Slovenia maintains a number of laboratories capable of radiological testing, as well as mobile response units. The national Ecological Laboratory (Jozef Stefan Institute, Ljubljana) and the Institute of Occupational Safety (Ljubljana) have mobile laboratories approved for radiological assays. There are also a number of mobile units for environmental monitoring and reconnaissance.

Recommendations for priority actions

- Adopt guidelines (these are already under preparation) for managing medical responses in nuclear or radiological emergencies for all local, regional and national levels of response, including operational procedures for triage and treatment of contaminated and/or exposed patients, etc.
- Strengthen models for occupational protection among first responders who could potentially be exposed to radiation hazards, while increasing their capacity to stabilize patients on-site.
- Continue to strengthen the capacity of the primary treatment hospital to enable whole-body dosimetry, risk stratification, and long-term follow-up.

Indicators and scores

RE.1 Mechanisms are established and functioning for detecting and responding to radiological and nuclear emergencies - Score 4

Strengths/best practices

- The National Emergency Response Plan for Nuclear and Radiological Accidents defines roles and responsibilities for all stakeholders for nuclear site and other radiation events.
- Slovenia enjoys strong international collaborations in general, and specific technical exchanges with Croatia.

Areas that need strengthening/challenges

- Simulation exercises should be carried out for scenarios occurring outside the immediate vicinity of the nuclear power plant, including situations that require significant on-site triage and stabilization of patients.

RE.2 Enabling environment is in place for management of radiation emergencies - Score 4

Strengths/best practices

- Slovenia has a strong national regulatory and safety environment, including the inter-ministerial emergency communications system (MKSID).
- Existing regional emergency communication centres are all connected with the national emergency preparedness system.

Areas that need strengthening/challenges

- Education and training for healthcare providers should be provided across the country, with specialized resources available for assessment and treatment of significant exposures.
- Greater collaboration and coordination between the National Nuclear Security Administration (NNSA) and the Ministry of Health could help ensure resources are available for immediate and long-term care of affected persons.

Appendix 1: JEE implementation details

Mission place and dates

Ljubljana, Slovenia (Hotel Slon)

5-9 June 2017

Mission team members

Name	Affiliation
Christopher L. Perdue, MD, MPH (Team Lead)	Chief, International Health Regulations Branch Office of the Assistant Secretary for Preparedness and Response, Health and Human Services Washington, D.C., United States of America
Mahmudur Rahman, MBBS, MPH, PhD (Team Co-Lead)	Former Director, Institute of Epidemiology, Disease Control and Research & National Influenza Centre Dhaka, Bangladesh
Jeannette de Boer, MD, MPH	Communicable Disease Control Specialist National Institute for Public Health and the Environment Bilthoven, Netherlands
Eeva Broberg, PhD	Associate Professor, Expert in Virology / Influenza, Surveillance and Response Support Unit, European Centre for Disease Control and Prevention Stockholm, Sweden
Susan Corning, BA, MSc, BVSc, MRCVS, FRSPH	Senior Advisor to the Deputy Director General, International Standards and Science World Organisation for Animal Health, Rome, Italy
Cory Couillard, MD, MPH, PhD	Technical Officer, Division of Health Emergencies and Communicable Diseases, WHO Regional Office for Europe Copenhagen, Denmark
Mark Nunn, BA (Oxon), MSc	Technical writer & editor Independent
Bozidarka Rakocevic, MD, MPH	Director, Centre for Control and Prevention of Communicable Diseases Institute of Public Health Podgorica, Montenegro
Andriy Rozstalnyy, DVM, PhD	Animal Health Officer FAO Regional Office for Europe Budapest, Hungary
Anders Wallensten, MD, PhD	Deputy State Epidemiologist Public Health Agency of Sweden Stockholm, Sweden

Objective

To assess (host country's) capacities and capabilities relevant to the 19 technical areas of the JEE tool for providing baseline data to support (host country's) efforts to reform and improve their public health security.

The JEE process

The JEE process is a peer-to-peer review. The entire external evaluation, including discussions around the scores, the strengths, the areas that need strengthening, best practices, challenges and the priority actions should be collaborative, with JEE team members and host country experts seeking full agreement on all aspects of the final report findings and recommendations.

Should there be significant and irreconcilable disagreement between the external team members and the host country experts, or among the external, or among the host country experts, the JEE team lead will decide the outcome; this will be noted in the final report along with the justification for each party's position.

Preparation and implementation of the mission

- Slovenia's self-assessment documents were delivered to the external experts approximately two weeks prior to the JEE mission.
- Prior to the mission, the team lead hosted a teleconference with the JEE organizers from Slovenia, the WHO JEE coordinators (Geneva), WHO European Regional Office (Copenhagen) and the WHO country office.
- Prior to the mission, the team lead hosted a teleconference with the external assessment team.
- On the Sunday before the JEE meetings, the team lead and co-lead met with the Slovenian organizers and WHO staff in Ljubljana to finalise the agenda.
- On the Sunday before the JEE meetings, the JEE external experts met to discuss the format and objectives for the JEE, and to review the agenda.
- The assessors were divided into smaller groups to simultaneously visit each of the three functional sites (see table below for site visit assignments).
 - A. University Medical Centre, Clinic for Infectious Diseases and the Medical Faculty, Institute for Microbiology and Immunology
 - B. National Institute for Public Health and the Administration for Civil Protection and Disaster Relief
 - C. Jože Pučnik Airport.

	Lead (Site Visit Assignment)	Co-Lead
National Legislation, Policy and Financing	Christopher Perdue (C)	Mahmudur Rahman
IHR Coordination, Communication and Advocacy	Jeannette de Boer (B)	Bozidarka Rakocevic
Antimicrobial Resistance (AMR)	Mahmudur Rahman (A)	Cory Couillard
Zoonotic Diseases	Susan Corning (C)	Andriy Rozstalnyy
Food Safety	Andriy Rozstalnyy (B)	Susan Corning
Biosafety and Biosecurity	Eeva Broberg (A)	Mahmudur Rahman
Immunization	Mahmudur Rahman	Jeannette de Boer
National Laboratory System	Eeva Broberg	Christopher Perdue
Real Time Surveillance	Bozidarka Rakocevic (C)	Anders Wallensten
Reporting	Susan Corning	Andriy Rozstalnyy
Workforce Development	Jeannette de Boer	Bozidarka Rakocevic
Preparedness	Anders Wallensten (B)	Cory Couillard
Emergency Response Operations	Anders Wallensten	Eeva Broberg
Linking Public Health and Security Authorities	Cory Couillard (B)	Jeannette de Boer
Medical Countermeasures and Personnel Deployment	Jeannette de Boer	Eeva Broberg
Risk Communication	Cory Couillard	Anders Wallensten
Points of Entry	Bozidarka Rakocevic	Christopher Perdue
Chemical Events	Mahmudur Rahman	Christopher Perdue
Radiation Emergencies	Christopher Perdue	Anders Wallensten

Limitations and assumptions

- The evaluation was limited to one week, which limited the amount and depth of information that could be managed.
- The evaluation was not conducted as an independent audit.
- Information provided by Republic of Slovenia was not independently verified but discussed openly among peers.
- The evaluation rating (scores) were mutually agreed to by the host country and the evaluation team.

Key host country participants and institutions

Country Lead Organizers

- Mojca Gobec, Director General, Directorate for Public Health, Ministry of Health
- Nuška Čakš Jager, National Institute of Public Health
- Maja Jurjevec, Ministry of Health
- Alenka Kraigher, PhD, National Institute of Public Health
- Marjeta Recek, PhD, Ministry of Health

Minister of Health

- Mrs. Milojka Kolar Celarc

Special Presenters (in order of presentation)

- Mojca Gobec, MD, Director General of Public Health, Ministry of Health
- Marjeta Recek, PhD, Ministry of Health
- Nuška Čakš Jager, MD, Specialist in Public Health, National Institute of Public Health
- Igor Sirc, Ministry of the Environment and Spatial Planning, Slovenian Nuclear Safety Administration
- Viktorija Tomič, MD, PhD, Head of Laboratory for Respiratory Microbiology, University Clinic of Respiratory and Allergic Diseases Golnik
- Bojana Beovič, MD, PhD, Senior Councillor
- Branko Dervodel, Deputy Director of the Administration for Civil Protection and Disaster Relief
- Maja Sočan, MD, PhD, Specialist in Internal Medicine and Public Health, Head, Communicable Disease Centre
- Andrej Fink, University Medical Centre of Ljubljana, Head of Ambulance Station
- Ana Šinkovec, Ministry of Health
- Iztok Štrumbelj, MD, MSc, president of Slovenian National Antimicrobial Susceptibility Testing Committee
- Eva Grilc, MD, Specialist in Public health, MSc, National Institute of Public Health
- Alenka Kraigher, MD, PhD, Specialist in Public Health, National Institute of Public Health
- Miroslav Petrovec, MD, PhD, Head of the Institute for Microbiology and Immunology
- Nadja Škrk, Administration for Food Safety, Veterinary and Plant Protection
- Doroteja Novak Gosarič, Ministry of Health
- Irena Utroša, Head of Security Planning Service, Ministry of the Interior
- Jasmina Karba, Ministry of the Environment and Spatial Planning
- Tjaša Čretnik Žohar, MD, MSc, National Laboratory of Health, Environment and Food
- Jernej Drofenik, PhD, Deputy Director of the Administration for Food Safety, Veterinary and Plant Protection
- Veronika Učakar, MD, PhD, Public Health Specialist, National Institute of Public Health

Additional supporting documentation provided by host country

- JEE Self-Assessment documents (19 files)
- Overview of the Slovenian Healthcare System (PowerPoint presentation)
- Overview of Administration of the Republic of Slovenia for Food Safety, Veterinary Sector and Plant Protection (PowerPoint presentation)
- Overview of the Administration of the Republic of Slovenia for Civil Protection and Disaster Relief (PowerPoint presentation)
- JEE Technical Area presentations (19 PowerPoint files)

National legislation, policy and financing

- Resolution on National Security Strategy of the Republic of Slovenia http://www.mo.gov.si/fileadmin/mo.gov.si/pageuploads/pdf/ministrstvo/RSNV2010_slo_en.pdf
- Government of the Republic of Slovenia Act
- Health Services Act
- Health Care and Health Insurance Act
- Contagious Diseases Act
- Council Decision no. 1082/2013/EU of the European Parliament and of the Council of 22 October 2013 on serious cross-border threats to health
- Resolutions on the National Programme for Protection against Natural and Other Disasters (2016-2022)
- Act on Protection Against Natural and Other Disasters
- Agriculture Act
- Veterinary Compliance Criteria Act
- Environmental Protection Act, Occupational Health and Safety Act
- Ionising Radiation Protection and Nuclear Safety Act
- Transport of Dangerous Goods Act
- Rules of Procedure of the Government of the Republic of Slovenia.

IHR coordination, communication and advocacy

- MOH IHR National Focal Point Standard Operating Procedure (in Slovenian)

Antimicrobial resistance

- European Centre for Disease Prevention and Control (ECDC). *Antimicrobial resistance surveillance in Europe 2015: Annual report of the European Antimicrobial Resistance Surveillance Network (EARS-Net)*. Stockholm: ECDC; 2016. <http://ecdc.europa.eu/en/publications/publications/antimicrobial-resistance-europe-2015.pdf>
- European Centre for Disease Prevention and Control/WHO Regional Office for Europe. *Tuberculosis surveillance and monitoring in Europe 2017*. <http://ecdc.europa.eu/en/publications/Publications/ecdc-tuberculosis-surveillance-monitoring-Europe-2017.pdf>
- European Centre for Disease Prevention and Control. *Gonococcal antimicrobial susceptibility surveillance in Europe, 2014*. Stockholm: ECDC; 2016. <http://ecdc.europa.eu/en/publications/Publications/gonococcal-antimicrobial-susceptibility-surveillance-Europe-2014.pdf>
- *The European Union summary report on antimicrobial resistance in zoonotic and indicator bacteria from humans, animals and food in 2014*. 2016 http://www.uvhvr.gov.si/si/delovna_podrocja/zdravila
- Krizman M, Avgustin JA, Zdovc I, Golob M, Trkov M, Ciglencek UJ, Biasizzo M, Kirbis A. Antimicrobial Resistance and Molecular Characterization of Extended-Spectrum β -Lactamases and Other Escherichia coli Isolated from Food of Animal Origin and Human Intestinal Isolates. *J Food Prot.* 2017 Jan; 80(1):113-120

- Dermota U et al. I. Survey of community-associated-methicillin-Resistant *Staphylococcus aureus* in Slovenia: identification of community-associated and livestock-associated clones. *Int J Med Microbiol*. 2015 Sep; 305(6): 505-10. doi: 10.1016/j.ijmm.2015.05.002. Epub 2015 May 27. PubMed PMID: 26055648. 3:
- Dermota U, Zdovc I, Strumbelj I, Grmek-Kosnik I, Ribic H, Rupnik M, Golob M, Zajc U, Bes M, Laurent F, Mueller-Premru M. Detection of methicillin-resistant *Staphylococcus aureus* carrying the *mecC* gene in human samples in Slovenia. *Epidemiol Infect*. 2015 Apr; 143(5): 1105-8. doi: 10.1017/S0950268814001861. Epub 2014 Jul 18. PubMed PMID: 25036113.
- Zorman-Rojs et al. Possible sources of *Escherichia coli* introduction in broiler breeder and turkey flocks in Slovenia and molecular characterization of isolates. V: *Abstracts, programme and show guide, 19th World Veterinary Poultry Association Congress, Capetown, 7-11 September 2015*. Capetown: World Veterinary Poultry Association, 2015, str. 795-799.
- Jeverica S et al. Phenotypic and molecular characterization of *Neisseria gonorrhoeae* isolates from Slovenia, 2006-12: rise and fall of the multidrug-resistant NG-MAST genogroup 1407 clone? *J Antimicrob Chemother*. 2014 Jun; 69(6): 1517-25.
- Quality Indicators 2012 – 2013 http://www.mz.gov.si/fileadmin/mz.gov.si/pageuploads/kakovost/16032016_MZ_letno_porocilo_KK12-13_KV_0911_2015.pdf
- Report: *An indicator of the quality of hand hygiene 2015* http://www.mz.gov.si/fileadmin/mz.gov.si/pageuploads/zdravstveno_varstvo/17022017_Porocilo_o_higieni_rok_za_letno_2015_P.pdf
- Professional guidelines to prevent hospital infections http://www.mz.gov.si/si/delovna_podrocja_in_prioritete/zdravstveno_varstvo/kakovost_in_varnost/nacionalna_komisija_za_obvladovanje_bolniscnih_okuzb/strokovnjaki/
- Slovene Statutes: Section for antimicrobial treatment. http://www.szpz.info/content/statut_szpz.pdf
- Fuerst J, Čižman M, Mrak J, Kos D, Campbell S, Coenen S, et al. The influence of a sustained multifaceted approach to improve antibiotic prescribing in Slovenia during the past decade: findings and implications. *Expert Rev Anti Infect Ther* 2015;13:279–89.

Zoonotic diseases

- Act on Communicable Diseases (Official Gazette 33/2006): <http://www.nijz.si/sl/zakon-o-nalezljivih-bolezni-znb>
- Global One Health Day; 3 November 2016: <http://www.nijz.si/sl/dogodki/strokovni-posvet-ob-mednarodnem-dnevu-eno-zdravje>
- The scenarios of exercises in 2015 and 2016 are available on file, with contextual questions and answers for zoonotic diseases.
- The National Programme on Monitoring of Zoonoses is available on the AFSVPP web page and on file, with contextual questions and answers for zoonotic diseases.
- Monthly reports on communicable diseases in humans: http://www.nijz.si/www.nijz.si/files/uploaded/enboz_marec_2017.pdf
- Monthly reports of communicable diseases in animals: http://www.AFSVSPP.gov.si/si/delovna_podrocja/zdravje_zivali/spremljanje_pojavov_bolezni/spremljanje_pojavov_bolezni_v_rs/2017/
- Annual epidemiological reports on communicable diseases: <http://www.nijz.si/sl/epidemiolosko-spremljanje-nalezljivih-bolezni-letna-in-cetrletna-porocila>
- Annual reports on monitoring of zoonoses in animals are available on the AFSVSPP web page: http://www.AFSVSPP.gov.si/si/delovna_podrocja/zivila/zoonoze/

- Guidelines for carriers working in food industry (Smernice za obravnavo klicenoscev pri delu z živili): <http://www.nijz.si/sl/publikacije/smernice-za-obravnavo-klicenoscev-pri-delu-z-zivili>
- National guidelines for outbreak investigation: http://www.nijz.si/sites/www.nijz.si/files/datoteke/preiskava_izbruha.pdf

Food safety

- AFSVPP website: http://www.uvhvvr.gov.si/si/delovna_podrocja/zivila/
- HIRS website:
http://www.mz.gov.si/si/delovna_podrocja_in_prioritete/javno_zdravje/varnost_zivil_in_hrane/
http://www.zi.gov.si/si/delovna_podrocja/
- Decree co-ordinating the operation of ministries and bodies under their responsibility with competences in the fields of food and feed safety, animal health and welfare, and plant health (Ur.l.RS, št.82/2010)
- National contingency plan for the management of unusual events associated with food or feed (draft in its final phase)
- Algorithm of action and communication in outbreaks of infectious diseases transmissible by foodstuff
- *Final report of an EU DG-SANCO fact-finding mission carried out in Slovenia from 19 to 27 March 2014 to gather information on the emergency preparedness arrangements in the event of a food/feed crisis, in particular those concerning contingency plans for food and feed:* http://ec.europa.eu/food/fvo/act_getPDF.cfm?PDF_ID=11562

Biosafety and biosecurity

- Rules on Requirements to be Met by Laboratories Performing Laboratory Medicine Tests (Official Gazette RS, no. 64/04)
- *Biosafety in microbiological laboratories manual*, CDC 2009
- Occupational Health and Safety Act
- Act on Performing Statement of Safety with Risk Assessment (Official Gazette RS, no. 30/00)
- Act on Workers Protection Against Risk of Biological Factors Exposure Related To Work (Official Gazette RS, no. 04/02)
- Law on Control of Strategic Goods of Particular Significance to Safety/Security and Health (Official Gazette RS, No. 29/06, 8/10)
- Decree on Setting the List of Strategic Goods and Related Control Regimes (Official Gazette RS, No. 4/11)
- Council Regulation (EC) No. 428/2009 setting up a community regime for the control of exports, transfer, brokering and transit of dual-use items, with all amendments

Immunization

- Law on Communicable Diseases (Official Gazette RS 33/2006)
- Bylaw on the Certificates, Vaccination Records and Provision of Vaccination Data and Data on Adverse Events Following Immunization and Medical Vaccination Errors. Official Gazette RS 24/2017
- Annual Programme on Immuno and Chemo Prophylaxis (Official Gazette RS 24/2017)

- Guidelines - Immuno and Chemo Prophylaxis: http://www.nijz.si/sites/www.nijz.si/files/uploaded/navodila_za_izvajanje_ip_2017.pdf
- Medicines Act (Official Gazette RS 2014)
- Annual Decree on the Systematic Monitoring of Animal Health Status, Disease Eradication Programmes and Vaccinations
- Draft National Vaccination Programme 2015-2020 - Vaccinations in Slovenia - Programme for All Ages. NIPH, 2015.

National laboratory system

- Law on Communicable Diseases: <https://www.uradni-list.si/glasilo-uradni-list-rs/vsebina/72546>
- Rules for reporting of communicable diseases and specific measures for their prevention and control: <http://www.pisrs.si/Pis.web/pregledPredpisa?id=PRAV765>
- Law on data collection (databases) in the area of health protection: <http://www.pisrs.si/Pis.web/pregledPredpisa?id=ZAKO1419>
- Communicable diseases: http://www.nijz.si/sites/www.nijz.si/files/uploaded/document_1.pdf
- HIV/AIDS: http://www.nijz.si/sites/www.nijz.si/files/uploaded/hiv_prijavnica_20151215_soglasje.pdf
- Sexually transmitted diseases: http://www.nijz.si/sites/www.nijz.si/files/uploaded/prijavnica_spo.pdf
- Case definitions of reportable communicable diseases for epidemiological surveillance: http://www.nijz.si/sites/www.nijz.si/files/uploaded/definicija_prijavljivih_nb_za_namene_epi_spremljanja.pdf
- Kustec T et al. Under-reporting of sexually transmitted infection with chlamydia trachomatis - a revision of surveillance system is required: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5031066/>
- Socan M. Evaluation of mandatory case-based reporting system for varicella in the prevaccine era: <http://apps.szu.cz/svi/cejph/archiv/2010-2-07-full.pdf>
- Communicable diseases notification in Slovenia – instructions for medical doctors: http://www.nijz.si/sites/www.nijz.si/files/uploaded/document_1.pdf
- Weekly report on sentinel surveillance of influenza and other acute respiratory infections: <http://www.nijz.si/sl/tedensko-spremljanje-gripe-in-drugih-akutnih-okuzb-dihal-v-sezoni-20162017>
- Monthly report on surveillance of communicable diseases: <http://www.nijz.si/sl/e-nboz-0>
- Quarterly and yearly reports on surveillance of sexually transmitted diseases and HIV/AIDS: <http://www.nijz.si/sl/epidemiolosko-spremljanje-nalezljivih-bolezni-letna-in-cetrletna-porocila>
- Yearly reports on surveillance on communicable diseases in Slovenia: <http://www.nijz.si/sl/epidemiolosko-spremljanje-nalezljivih-bolezni-letna-in-cetrletna-porocila>
- Data on reportable communicable diseases and STDs are available on an NIPH data portal: <https://podatki.nijz.si/pxweb/sl/NIJZ%20podatkovni%20portal/>
- Data on tuberculosis in Slovenia: http://www.klinika-golnik.si/dejavnost-bolnisnice/klinicna-dejavnost/tuberkuloza/register-za-tuberkulozo/tekoci_podatki.php

Reporting

- Law on communicable diseases: <https://www.uradni-list.si/glasilo-uradni-list-rs/vsebina/72546>
- Rules for reporting of communicable diseases and specific measures for their prevention and control: <http://www.pisrs.si/Pis.web/pregledPredpisa?id=PRAV765>

Workforce development

- Slovenia Medical Chamber: <https://www.zdravniskazbornica.si/en/medical-chamber-of-slovenia>
- Slovenia Medical Chamber public powers: <https://www.zdravniskazbornica.si/javna-pooblastila>
- Medical specialization requirements for public health physicians: <https://www.zdravniskazbornica.si/docs/default-source/specialiacije/testna-mapa/javno-zdravje/vsebina-specializacije.pdf?sfvrsn=2>
- 2016 census of healthcare workers: <https://www.zdravniskazbornica.si/docs/default-source/clanstvo/%C4%8Dlanstvo-2016.pdf?sfvrsn=2>

Preparedness

- All civil protection plans are available at: <http://www.sos112.si/slo/page.php?src=os121.htm>
- Threat assessments (civil protection): <https://translate.google.com/translate?hl=sl&sl=sl&tl=en&u=http%3A%2F%2Fwww.sos112.si%2Fslo%2F>
- Decree on the Organization, Equipment and Training of Protection, Rescue and Relief Forces (Official Gazette RS, št. 92/07, 54/09, 23/11 in 27/16): <http://pisrs.si/Pis.web/pregledPredpisa?id=URED3994>
- Act on the Protection against Natural and Other Disasters: http://www.sos112.si/slo/tdocs/zvndn_ang.pdf
- All other relevant legal documents available at: <http://www.sos112.si/slo/page.php?src=sv32.htm>
- Resolution on the National Programme for Protection Against Natural and Other Disasters 2016-2022 (ReNPVNDN 16-22) (Official Gazette RS, no. 75/2016): http://www.mo.gov.si/en/about_the_ministry/organization/administration_of_the_republic_of_slovenia_for_civil_protection_and_disaster_relief/
- Ordinance on the National Security Council (Official Gazette RS, št. 76/14): <http://www.pisrs.si/Pis.web/pregledPredpisa?id=ODLO1815>
- Regulation on the Organization and Functioning of the National Centre for Crisis Management (Official Gazette RS, št. 9/06): <http://www.pisrs.si/Pis.web/pregledPredpisa?id=URED3184>
- Regulation on the Organization and Functioning of Monitoring, Warning And Alarm (Official Gazette RS, št. 105/07): <http://www.pisrs.si/Pis.web/pregledPredpisa?id=URED4341>
- Rules on Information and Reporting in the System of Protection Against Natural and Other Disasters (Official Gazette RS, št. 26/08, 28/12 in 42/12)
- Decision on Establishing the Coordination Group for Communicable Diseases at the MOH
- Mass gatherings plan
- Algorithm of mutual notification/information (NIPH-AFSVSP)
- Contingency plan: unusual events associated with food and/or feed
- MOH report on agreed communication and information flows with different sectors
- Report of the 2015 intersectoral meeting dedicated to IHR implementation strategy
- Ebola plan: http://www.nijz.si/sites/www.nijz.si/files/datoteke/hemoragicna_mrzlica_ebola_pripravljenost_in_odzivanje_v_sloveniji_-_popravki_30.6.2015.pdf
- Zika plan: http://www.nijz.si/sites/www.nijz.si/files/publikacije-datoteke/zika_nacrt_pripravljenosti_za_splet_13_9_2016_final_55555.pdf

- Pandemic influenza plan: http://www.mz.gov.si/si/delovna_podrocja_in_prioritete/arhiv_skrito/pogosta_vprasanja_in_koristne_vsebine/splosna_vprasanja/gripa_in_pticja_gripa/nacionalni_plan_pripravljenosti_v_primeru_pandemije_gripe
- National Protection Programme against Natural and Other Disasters (Official Gazette RS, št. 44/02)
- Guidance on the Record, Deployment and Recruiting of Civil Protection and Other Protection, Rescue and Relief Forces (Official Gazette RS, št.29/96)
- Decree on the Criteria for Organizing and Equipping Civil Protection (Official Gazette RS, št. 15/00, 88/00, 24/01)
- Rules on the Duties of Members of Civil Protection who suffer Increased Risk of Developing a Health Defect
- Rules on Uniforms of Civil Protection of the Republic of Slovenia (Official Gazette RS, št. 93/02)
- Code of Material Technical assets of Civil Protection
- Decree on the Organization, Equipment and Training of Protection, Rescue and Relief Forces (Official Gazette RS, št. 22/99, 99/99, 102/00, 33/02 in 106/02)
- Decree Amending the Regulation on the Organization, Equipment and Training of Protection, Rescue and Relief Forces
- Law on Protection against Natural and Other Disasters (Official Gazette RS, št. 64/94, 33/2000) Odl. US: U-I-313/98, 87/2001)
- Material Duty Act (Official Gazette RS, št. 87/01);
- Decree on the National Security Council (Official Gazette RS, št. 76/14): <http://www.pisrs.si/Pis.web/pregledPredpisa?id=ODLO1815>
- Decree on the Organization and Operation of the National Centre for Crisis Management (Official Gazette RS, št. 9/06): <http://www.pisrs.si/Pis.web/pregledPredpisa?id=URED3184>
- Decree on the Organization and Operation of the Observation, Information and Alarm System (Official Gazette RS, št. 105/07): <http://www.pisrs.si/Pis.web/pregledPredpisa?id=URED4341>
- Operational Communication Centres of the Police are Regulated only by Internal Acts of the Ministry of the Interior and the Police: http://www.policija.si/index.php/delovna_podroja/174_operativno_komunikacijski_centre
- 112 – SOS CENTRE: http://www.sos112.si/slo/tdocs/info_centre.pdf

Emergency response operations

- Guidelines for operation of emergency medical services in case of mass casualty (in Slovenian): http://www.mz.gov.si/fileadmin/mz.gov.si/pageuploads/kakovost/NMP_2013/mnozicne_nesrece/Smernice_NMP_mnozicne_tisk_2.pdf
- The Slovenian framework action plan for the treatment of persons with suspected Ebola (in Slovenian): http://www.mz.gov.si/fileadmin/mz.gov.si/pageuploads/Ebola/KROVNI_NACRT_UKREPANJE_SUM_EVB_2.pdf

Linking public health and security authorities

- State Emergency Response Plans
- Action Response Plans (ARPs) at ministry and regional level:

- Ministry of the Interior (MOI) ARP in case of use of weapons of mass destruction for terrorist purposes or terrorist attack with conventional means
- MOI ARP in case of epidemic or pandemic infectious diseases in humans
- MOI ARP in case of radiological or nuclear emergency
- MOI ARP in cases of other emergencies (e.g. plane crashes, train accidents, disasters at sea, earthquakes, floods, animal diseases, etc.).
- Preparedness and response plan in the event of suspected infectious disease that may pose a risk to public health (document in progress with NIPH)
- Laws, Acts, and Plans of the Republic of Slovenia:
- Law on Protection Against Natural and other Disasters
- Police Tasks and Powers Act
- Organization and Work of the Police Act
- Republic of Slovenia Criminal Code
- Criminal Procedure Act
- Aliens Act
- The State Border Control Act
- The Schengen Borders Code
- Contingency Plan of Republic of Slovenia to provide accommodation and care in the event of increases in the number of applicants for international protection
- Risk assessment in case of Terrorism
- Law on Transport of Dangerous Goods
- Law on control of export of dual-use items
- Act on Ionizing Radiation Protection and Nuclear Safety
- National Preparedness Plan in the event of pandemic influenza
- Act Ratifying the Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on their Destruction

Medical countermeasures and personnel deployment

- None indicated

Risk Communication

- Law on Infectious Diseases; Law on Media; National Disaster Response Plan for the Occurrence of an Epidemic or Pandemic of a Communicable Disease in Humans: http://www.sos112.si/slo/tdocs/epidemija_pandemija.pdf
- Pandemic plan: http://www.mz.gov.si/fileadmin/mz.gov.si/pageuploads/pticja_gripa/pandemski_nact_ver_1.2_15072006.pdf
- Act on the Protection against Natural and Other Disasters: http://www.sos112.si/slo/tdocs/zvndn_ang.pdf

- Ebola plan: http://www.nijz.si/sites/www.nijz.si/files/datoteke/hemoragicna_mrzelica_ebolavirus_pripravljenost_in_odzivanje_v_sloveniji_-_popravki_30.6.2015.pdf
- Zika plan: http://www.nijz.si/sites/www.nijz.si/files/publikacije-datoteke/zika_nacrt_pripravljenosti_za_splet_13_9_2016_final_55555.pdf
- 112 –SOS CENTRE: http://www.sos112.si/slo/tdocs/info_centre.pdf

Points of entry

- Ebola plan: http://www.nijz.si/sites/www.nijz.si/files/datoteke/hemoragicna_mrzelica_ebolavirus_pripravljenost_in_odzivanje_v_sloveniji_-_popravki_30.6.2015.pdf
- Contagious Diseases Act (ZNB): <http://www.pisrs.si/Pis.web/pregledPredpisa?id=ZAKO433>
- Law on Communicable Diseases: <https://www.uradni-list.si/glasilo-uradni-list-rs/vsebina/72546>
- Rules for Reporting of Communicable Diseases and Specific Measures for their Prevention and Control: <http://www.pisrs.si/Pis.web/pregledPredpisa?id=PRAV765>
- Annual NIPH report on communicable diseases: <http://www.nijz.si/sl/e-nboz-0>
- NIPH epidemiological monitoring of infectious diseases - annual and quarterly reports: <http://www.nijz.si/sl/epidemiolosko-spremljanje-nalezljivih-bolezni-letna-in-cetriletna-porocila>

Chemical events

- Guidelines for Urgent Medical Assistance in Chemical Accidents, adopted by the Ministry of Health in 2011: http://www.mz.gov.si/fileadmin/mz.gov.si/pageuploads/krizne_razmere_mnoz_nesrece_epidem/Zdr_smernice_SNMP_kemijske_nesrece_2011.pdf
- Areas of Work of the Chemicals Office of the Republic of Slovenia (Ministry of Health): http://www.uk.gov.si/en/areas_of_work/
- National Requirements for Registration of Plant Protection Products (PPPS) in Slovenia for: Efficacy, Toxicology with Exposure Assessment, Fate and Behaviour in the Environment and Ecotoxicology: http://www.AFSVSPP.gov.si/fileadmin/AFSVSPP.gov.si/pageuploads/DELOVNA_PODROCJA/Fitofarmaceutvska_sredstva/REGISTRACIJA_FFS/SI_National_requirements_posodobitev_julij_2014.doc

Radiation emergencies

- The 2016 Annual Report on Radiation and Nuclear Safety in the Republic of Slovenia, endorsed by the government: <http://www.ursjv.gov.si/en/>
- IRRS Integrated Regulatory Review Service mission: http://www.ursjv.gov.si/fileadmin/ujv.gov.si/pageuploads/si/Porocila/IRRS_Mission_to_SLOVENIA_2011_REPORT_FINAL.pdf
- Annual Reports on Radiation and Nuclear Safety in the Republic of Slovenia: http://www.ursjv.gov.si/fileadmin/ujv.gov.si/pageuploads/Anglesko_LP_2015.pdf
- Bilateral and multilateral agreements:
 - http://www.ursjv.gov.si/404.php/zakonodaja_in_dokumenti/mednarodne_pogodbe/bilateralne/
 - http://www.ursjv.gov.si/si/zakonodaja_in_dokumenti/mednarodne_pogodbe/multilateralne/
- Harmonisation of the reactions in European countries to any distant nuclear or radiological emergency (HERCA):
 - http://www.ursjv.gov.si/fileadmin/ujv.gov.si/pageuploads/si/Zakonodaja/dokumenti/dokumenti_NUID/DrzavniNacrt_an-Version3.pdf

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- http://www.ursjv.gov.si/si/zakonodaja_in_dokumenti/dokumenti/
 - Descriptions of MOH mobile units:
 - http://www.mz.gov.si/si/delovna_podrocja_in_prioritete/zdravstveno_varstvo/katastrofna_medicina/varstvo_pred_naravnimi_in_drugimi_nesrecami/oprema_sluzb_nmp/

