JOINT EXTERNAL EVALUATION OF IHR CORE CAPACITIES

of

JAPAN

Mission report:
26 February – 2 March 2018

World Health Organization

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Contents

ACKNOWLEDGEMENTS

Abbreviations

AEFI	Adverse events following immunization
AMR	Antimicrobial resistance
APSED	Asia Pacific Strategy for Emerging Diseases
ASEF	Asia-Europe Foundation
BSE	Bovine spongiform encephalopathy
BSL	Biosafety level
CAA	Consumer Affairs Agency
CRE	Carbapenem-resistant Enterobacteriaceae
DMAT	Disaster Medical Assistance Team
EBS	Event-based surveillance
EOC	Emergency Operations Centre
EQA	External quality assurance
FAO	Food and Agriculture Organization of the United Nations
FETP	Field Epidemiology Training Programme
GISRS	Global Influenza Surveillance and Response System
GLASS	Global Antimicrobial Resistance Surveillance System
GOARN	Global Outbreak Alert and Response Network
HCAI	Healthcare-associated infection
HPAI	Highly pathogenic avian influenza
HSC	Health Science Council
IAEA	International Atomic Energy Agency
IBS	Indicator-based surveillance
IHR	International Health Regulations
IHR NFP	National IHR Focal Point
INFOSAN	International Food Safety Authorities Network
JANIS	Japan Nosocomial Infections Surveillance
JDR	Japan Disaster Relief
JEE	Joint External Evaluation
JICA	Japan International Cooperation Agency
JVARM	Japanese Veterinary Antimicrobial Resistance Monitoring System
LHSC	Livestock Hygiene Service Centre
MAFF	Ministry of Agriculture, Forestry and Fisheries
MERS	Middle East respiratory syndrome
MERS-CoV	Middle East respiratory syndrome coronavirus
MHLW	Ministry of Health, Labour and Welfare
MoE	Ministry of the Environment

NARO	National Agriculture and Food Research Organization
NBC	Nuclear, biological, and chemical
NESID	National Epidemiological Surveillance of Infectious Diseases
NIAH	National Institute of Animal Health
NIID	National Institute of Infectious Diseases
OIE	World Organization for Animal Health
PCR	Polymerase chain reaction
PHEIC	Public health emergency of international concern
PMDA	Pharmaceuticals and Medical Devices Agency
PoE	Points of entry
RT-PCR	Reverse transcription PCR
SAICM	Strategic Approach to International Chemicals Management
SFTS	Severe fever with thrombocytopenia syndrome
SOP	Standard operating procedure
USCDC	United States Centers for Disease Control and Prevention
WHO	World Health Organization
WHO WPRO	World Health Organization Regional Office for the Western Pacific

Executive summary

Background

The International Health Regulations [IHR (2005)] are the legal framework to protect global health security and outline the minimum core capacities that all Member States must develop to detect, assess, report and respond to acute public health events and emergencies. In the Western Pacific Region, the Asia Pacific Strategy for Emerging Diseases (APSED), endorsed by the Regional Committee Meeting (RCM) and currently in its third revision [Asia Pacific Strategy for Emerging Diseases and Public Health Emergencies (APSED III)], has been a key regional framework to guide the Member States to advance IHR (2005) implementation since 2005.

The Joint External Evaluation (JEE) is one of the four components of the updated IHR (2005) monitoring and evaluation framework which includes annual reporting, after action review, simulation exercises, and the JEE. The JEE provides a unique opportunity for both multisectoral teamwork within the country as well as international collaboration in assessing IHR (2005) implementation while promoting transparency, mutual accountability, and international confidence.

Japan continues to meet the IHR (2005) requirements for health security by participating in the voluntary JEE, being among the first group of countries in the WHO Western Pacific Region to participate in this process. Since August 2017, the Ministry of Health, Labour and Welfare (MHLW) has led briefing meetings and preparation workshops among 15 ministries and agencies to conduct a thorough self-evaluation using the JEE tool. The MHLW also coordinated the compilation and translation of a well-documented self-assessment report and approximately 200 supporting documents in preparation for the JEE mission.

This report documents the JEE mission in Tokyo, Japan, from 26 February to 2 March 2018. The JEE team wishes to extend our deepest appreciation to the national team for taking the time to share their knowledge and experiences, as well as the open discussion that has helped to further enhance Japan's highly advanced health security systems.

Findings from the joint external evaluation

Of the 48 indicators in the JEE tool to measure IHR core capacities across 19 technical areas, the JEE team and the national experts jointly assessed and categorized the majority of the indicators as having demonstrated or sustainable capacity. Although Japan has achieved a high level of IHR (2005) core capacity, it is important to maintain vigilant, especially in the absence of a recent major emerging or re-emerging infectious disease outbreak.

The Government of Japan has demonstrated a high level of commitment to implement the IHR (2005), not only at the national level but also at the regional and global level through continued investment in both financial and technical resources to enhance health security. Japan has ensured comprehensive legislation in line with IHR (2005) requirements. Japan also has a system and culture of continuous improvement through learning from real-world events that have led to continued investment in preparedness. Real-world events that have influenced Japan include the 2009 pandemic influenza and the 2014-2015 domestic preparedness and response to the Ebola outbreak in West Africa, where lessons learned were reflected through revisions of relevant plans, guidelines, and manuals. Japan's well-developed surveillance and laboratory systems, combined with universal health coverage and a well-trained health care workforce, also provide a strong foundation for early detection and response to emerging infectious disease threats.

The Middle East respiratory syndrome (MERS) outbreak in the Republic of Korea in 2015 was a clear reminder to the world that all countries regardless of how highly developed their health systems are, can

still be at risk to health security threats. In the full report, the JEE team describes the evaluation findings and jointly identified priority actions for the 19 technical areas in the JEE tool. Here, the JEE team summarizes some key highlights where Japan has opportunities to further invest resources to advance health security:

- Japan may consider further strengthening National IHR Focal Point (IHR NFP) functions, through improving standard operating procedures (SOPs) for event communication with other ministries and agencies, reinforcing the IHR duty officer system which operates on a 24-hour basis, 7 days a week, as well as increasing human resource capacity.

- While recognizing that Japan has a well-established system in place to rapidly activate and scale up an emergency response headquarter during public health emergencies, Japan may benefit from establishing a permanent and appropriately-resourced Emergency Operations Centre (EOC) in MHLW with a dedicated team to coordinate and cover all hazards, including those that may not be covered by individual divisions in the current structure.

- Although Japan has established systems to coordinate between different sectors, both during public health emergencies and for monitoring and evaluations of the IHR (2005) implementation such as the JEE, the existing coordination mechanisms could be further enhanced through documenting and articulating the processes that are already in place. Joint simulation exercises of cross-cutting health hazards such as zoonosis may also further test and refine the multisectoral coordination system.

- Japan may consider conducting a strategic review of the risk communication coordinating mechanisms to enhance existing structures, including ensuring strategic framing and coherence in communication messaging and training of dedicated personnel specialized in risk communication. Stakeholder mapping from the central to the local levels and applying a systematic approach to understand risk perceptions of diverse audiences for targeted communication, may also contribute to better risk communication outcomes.

- While Japan developed a wide range of trained professional workforce for public health emergency preparedness and response, Japan may consider having a nation-wide strategy in further optimizing public health workforce, including those at sub-national institutes and centres. This may include expanding capacity building through Japan's field epidemiology training programme (FETP Japan) especially for those who work at the local level, as well as continue to strengthen support for FETP in low and middle-income countries.

Conclusions

Health security threats are becoming increasingly complex to manage as all countries are vulnerable from both importation and exportation of public health threats of international concern. The international community has a shared responsibility to prevent, detect, and respond to health security threats, through continued investment in preparedness to minimize loss of lives, social disruption, and economic impact. Japan has an important role on the world stage in both demonstrating a high level of capacity by setting a high standard domestically, as well as continuing their commitment and investment in regional and global health security.

The JEE team would like to thank Japan for their extensive preparation for the JEE mission and the warm welcome extended to the team during the mission. The JEE team has appreciated the mutual learning process and looks forward to seeing Japan embrace the opportunities jointly identified by the national and international team to ensure a sustained momentum for health security.

Japan 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 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	5
Antimicrobial resistance	P.3.1 Antimicrobial resistance detection	5
	P.3.2 Surveillance of infections caused by antimicrobial-resistant pathogens	5
	P.3.3 Health care-associated infection (HCAI) prevention and control programmes	5
	P.3.4 Antimicrobial stewardship activities	4
Zoonotic diseases	P.4.1 Surveillance systems in place for priority zoonotic diseases/pathogens	4
	P.4.2 Veterinary or animal health workforce	5
	P.4.3 Mechanisms for responding to infectious and potential zoonotic diseases are established and functional	5
Food safety	P.5.1 Mechanisms for multisectoral collaboration are established to ensure rapid response to food safety emergencies and outbreaks of foodborne diseases	5
Biosafety and biosecurity	P.6.1 Whole-of-government biosafety and biosecurity system is in place for human, animal and agriculture facilities	5
	P.6.2 Biosafety and biosecurity training and practices	4
Immunization	P.7.1 Vaccine coverage (measles) as part of national programme	5
	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	3
Real-time surveillance	D.2.1 Indicator- and event-based surveillance systems	5
	D.2.2 Interoperable, interconnected, electronic real-time reporting system	5
	D.2.3 Integration and analysis of surveillance data	5
	D.2.4 Syndromic surveillance systems	5
Reporting	D.3.1 System for efficient reporting to FAO, OIE and WHO	4
	D.3.2 Reporting network and protocols in country	5
Workforce development	D.4.1 Human resources available to implement IHR core capacity requirements	4
	D.4.2 FETP[1] or other applied epidemiology training programme in place	5
	D.4.3 Workforce strategy	4

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1 FETP: Field epidemiology training programme

Technical areas	Indicators	Score
Preparedness	R.1.1 National multi-hazard 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 EOC operating procedures and plans	4
	R.2.3 Emergency operations programme	5
	R.2.4 Case management procedures implemented for IHR relevant hazards.	5
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 in place for sending and receiving medical countermeasures during a public health emergency	5
	R.4.2 System in place for sending and receiving health personnel during a public health emergency	4
Risk communication	R.5.1 Risk communication systems (plans, mechanisms, etc.)	3
	R.5.2 Internal and partner communication and coordination	4
	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	PoE.1 Routine capacities established at points of entry	5
	PoE.2 Effective public health response at points of entry	5
Chemical events	CE.1 Mechanisms established and functioning for detecting and responding to chemical events or emergencies	5
	CE.2 Enabling environment in place for management of chemical events	4
Radiation emergencies	RE.1 Mechanisms established and functioning for detecting and responding to radiological and nuclear emergencies	5
	RE.2 Enabling environment in place for management of radiation emergencies	5

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 (IHR) (2005) provide obligations and rights for States Parties. In some States Parties, implementation of the IHR (2005) may require new or modified legislation. Even if a 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 in a more effective manner. Implementing legislation could serve to institutionalize and strengthen the role of IHR (2005) and operations within the State Party. It can also facilitate coordination among the different entities involved in their implementation. See detailed guidance on IHR (2005) implementation in national legislation at http://www.who.int/ihr/legal_issues/legislation/en/index.html. In addition, policies that identify national structures and responsibilities as well as the allocation of adequate financial resources are also important.

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). New or modified legislation in some States Parties for implementation of the IHR (2005). Where new or revised legislation may not be specifically required under the State Party's legal system, States may revise some legislation, regulations or other instruments in order to facilitate their implementation and maintenance in a more efficient, effective or beneficial manner. States Parties ensure provision of adequate funding for IHR implementation through the national budget or other mechanism.

Japan level of capabilities

Implementation of the IHR in Japan is based on a variety of laws and national policies and a comprehensive health security framework that is implemented by the national, prefectural, and local governments. While there are no specific references to the IHR in law, the Japanese government's commitment to comply with IHR requirements is evident in explicit plans, policies, and programs that reinforce IHR-related monitoring and evaluation, and reporting.

Formal review of Japan's public health systems in 2007 and 2009 resulted in legislative and policies changes that ensured compliance with the IHR. In 2008, the Quarantine Act was modified to comply with the IHR, which states that medical costs for quarantine must be borne by the State. In 2012, Japan revised the Regulation for Enforcement of the Quarantine Act and the Guidelines for Issuance of Ship Sanitation Certificates to specify the use of the appropriate ship sanitation certificates and conveyance inspection process. Furthermore, in 2013, the Ministry of Health, Labour and Welfare (MHLW) also revised the Implementation Manual for Health Risk and Crisis Management Pertaining to Infectious Diseases to describe the procedures to assess and report potential public health emergency of international concern (PHEIC) to WHO through the National IHR Focal Point (IHR NFP).

Essential public health capacities for surveillance, laboratory testing, disease control activities, and emergency response are also clearly mandated through legislation, regulation, and public policy; and operationalized through national guideline documents and national action plans that are mirrored at the prefectural level. The Act on Prevention of Infectious Diseases and Medical Care for Patients with Infectious

Diseases (the Infectious Diseases Control Act), the Quarantine Act, and the Law Concerning Measures to Protect the People in a Situation of Armed Attack (the Civil Protection Act) form the basis for national public health emergency preparedness and response, with additional laws and acts that provide specific direction for protection of the food supply, drinking water, pharmaceuticals, air quality, and nuclear power plants. The Office of Public Health Emergency and Disaster Preparedness and Response under the Health Sciences Division of MHLW is currently serving as the IHR NFP of Japan and coordinates with agencies, institutions, and bureaus of MHLW through the Health Risk and Crisis Management Coordination Meeting. When needed, the Office of Public Health Emergency and Disaster Preparedness and Response coordinates with other Ministries through the emergency management function of the Cabinet Secretariat.

Recommendations for priority actions

- Enhance the ability of the Office of Public Health Emergency and Disaster Preparedness and Response to develop and coordinate operational plans for all health threats in collaboration with the technical agencies in other ministries, through formalizing coordination mechanisms under the existing policy infrastructure.

- Continue to review and streamline government's efforts to ensure a strong framework for emergency preparedness, including implementation of IHR (2005).

Indicators and scores

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

Strengths/ best practices

- The essential elements of public health security are well established in law and the broader legal framework, supported by policies at the national and subnational levels, and a variety of operational plans based on real-world experiences and considerable national expertise.

- Japan has developed a National Action Plan for Strengthening Measures on Emerging Infectious Diseases to enhance the implementation of IHR core capacities.

- Japan continues to be a strong regional and global advocate for implementation of the IHR, including providing technical support and health security coordination through a number of international arrangements.

Areas that need strengthening/ challenges

- Continue to raise awareness of global health security challenges and the requirements established by the IHR within the national government.

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

- Japan undertook a formal review of national regulations and policies to identify inconsistencies between the IHR and Japanese law, and subsequently made revisions to align with IHR requirements.

- MHLW developed special guidelines within an existing, broadly-scoped public health doctrine and committed additional resources to install and maintain the IHR NFP.

- Japan updated national guidelines and operational plans as well as developed others in line with the IHR, institutionalizing the IHR as an element of Japanese health security.

Areas that need strengthening/ challenges

- Japan may wish to further strengthen existing coordination framework of public health emergency preparedness among relevant ministries and documenting this in policies, considering the complicated nature of global health threats and the potential need to support multiple responses simultaneously.

- Consider the option to expand current policies to ensure consistent and routine IHR-specific monitoring and evaluation, including IHR annual reviews, after action reviews, simulation exercises, and potentially future follow-up to the 2018 JEE.

PREVENT

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

Multisectoral/multidisciplinary approaches through national partnerships that allow efficient, alert and responsive systems for effective implementation of the IHR (2005). Coordinate nationwide resources, including sustainable functioning of a national IHR focal point – a national centre for IHR (2005) communications which is a key requisite for IHR (2005) implementation – that is accessible at all times. States Parties provide WHO with contact details of national IHR focal points, continuously update and annually confirm them.

Japan level of capabilities

Japan has established functional IHR (2005) coordination, communication, and advocacy mechanisms. The Ministry of Health (then) first formulated the Basic Guidelines for Health Risk and Crisis Management in 1997 to establish a comprehensive mechanism to integrate health risk and crisis information from the responsible departments into the Health Sciences Division at MHLW. The implementation manuals under these guidelines have subsequently been revised to align with the IHR (2005) reporting requirements through the IHR NFP. Currently, the Office of Public Health Emergency and Disaster Preparedness and Response, under the Health Sciences Division, serves as the IHR NFP and coordinates various stakeholders within MHLW in accordance with the Basic Guidelines for Health Risk and Crisis Management and its implementation manuals. In addition, the office also hosts MHLW's bi-monthly Health Risk and Crisis Management Coordination Meeting. The Health Risk and Crisis Management Committee, which consists of multidisciplinary experts was established under the Health Sciences Council in February 2005 with an aim to provide expert advice to the emergency response.

The IHR NFP also plays liaison roles and coordinates the information sharing with the Government Cabinet Secretariat and other ministries. In large-scale public health emergencies related to emerging infectious diseases or pandemic influenza, the Cabinet Secretariat is responsible for inter-ministerial communication and coordination. Recent examples of close cooperation of related ministries and agencies include the pandemic influenza A (H1N1) in 2009 and the identification of a suspected case of Ebola virus diseases in 2014. The MHLW, which is responsible for public health, the Ministry of Agriculture, Forestry and Fisheries (MAFF), which is responsible for animal health, and the Ministry of the Environment (MoE), which is responsible for wildlife, work together on various policies collaboratively by conducting liaison meetings with other departments in charge. In addition, the IHR NFP and the World Organisation for Animal Health (OIE) Delegate also regularly exchange information with each other. Such multi-sectoral coordination can be further enhanced by having standard operating procedures (SOPs) for information sharing and coordinated risk assessment among health and non-health sectors.

Recommendations for priority actions

- Consider strengthening and upgrading IHR NFP functions through improving SOPs for event communications with other ministries/agencies based on lessons from simulation exercises and after-action review of real-world events, reinforcing the 24/7 IHR duty officer system, as well as increasing human resource capacity.

- Further enhance the existing intersectoral coordination mechanisms, especially those related to the IHR monitoring and evaluations, which includes annual reporting, JEE, simulation exercise and after-action review), as well as public health emergency preparedness and response including linkage with the national disaster management system, through documenting the processes that are already in place.

Indicators and scores

P.2.1 A functional mechanism established for the coordination and integration of relevant sectors in the implementation of IHR – Score 5

Strengths/ best practices

- The Government of Japan has shown a high level of commitment to implement IHR (2005) in Japan, regionally and globally as evidenced by the continuing investment in financial and technical resources over the past years.

- The MHLW has established the information sharing and coordination mechanisms for different divisions within MHLW, as outlined in the Basic Guidelines for Health Risk and Crisis Management for public health events. For national crisis, systems are also in place for the coordination between/among the Cabinet Secretariat and various ministries/agencies.

- For large-scale public health emergencies such as an influenza pandemic, Japan has coordination mechanisms in place to facilitate IHR implementation within the health sector and with other relevant ministries and agencies through the established MHLW Health Risk and Crisis Management Coordination Meeting, Health Risk and Crisis Management Committee, and the Cabinet Secretariat.

- Japan has a robust framework in place for whole-of-government multi-sectoral cooperation for public health emergencies and emerging diseases such as pandemic influenza, based on the Special Measures Act on Pandemic Influenza and New Infectious Diseases.

- Japan tests and regularly updates its multisectoral coordination mechanism through simulation exercises and after-action reviews such as the 2009 pandemic influenza A (H1N1) and the 2014-2015 domestic preparedness and response to the Ebola outbreak in West Africa.

Areas that need strengthening/ challenges

- It may be necessary to further address challenges for adopting a multisectoral approach for coordination, communications, and advocacy such as information sharing and coordinated risk assessments with other ministries and agencies.

- While the Basic Guidelines for Health Risk and Crisis Management provides the mechanism for information sharing among different divisions within MHLW for public health events and emergencies, Japan can further enhance information sharing with other Ministries and with prefectural government through documenting and articulating existing processes already in place in SOPs.

- There are opportunities for the Japan IHR NFP to play a more active role in applying the IHR monitoring and evaluation framework, especially in engaging multi-sectoral stakeholders to participate in after-action reviews and simulation exercises.

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, the 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 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). Each country has: (i) its own national comprehensive plan to combat antimicrobial resistance; (ii) strengthened surveillance and laboratory capacity at the national and international levels following international standards developed as per 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, including systems to preserve new antibiotics.

Japan level of capabilities

Japan has a long history of monitoring antimicrobial resistance (AMR) in both the human and animal health sectors and has been a key international advocate in promoting engagement in AMR and the adoption of the Global Action Plan on AMR by the World Health Assembly in 2015.

In 2016, Japan developed the National Action Plan on AMR 2016-2020 in line with the WHO Global Action Plan on AMR. Prime Minister Abe also chaired a multisectoral Ministerial Meeting on Measures on Emerging Infectious Diseases, to determine AMR cooperation and implementation strategies across ministries/agencies based on the One Health approach. The Nation Action Plan on AMR 2016-2020 consists of six areas with associated goals and strategies, which includes: public awareness and education; surveillance and monitoring; infection prevention and control; appropriate use of antimicrobials; research and development; and international cooperation. Performance indicators with targets to reduce AMR in both the human and animal health sectors by 2020 have also been determined.

In Japan, specific surveillance systems have been established to monitor AMR trends in the human and animal health sectors. In the human health sector, the Japan Nosocomial Infections Surveillance (JANIS) was established nationwide in 2000 and currently receives data on all AMR priority pathogens from approximately 2000 medium-sized and large hospitals and reports on selected priority pathogens to the Global Antimicrobial Resistance Surveillance System (GLASS). In the animal health sector, the Japanese Veterinary Antimicrobial Resistance Monitoring System (JVARM) was established in 1999 and receives AMR data from both healthy and diseased livestock. Antimicrobial susceptibility testing is also conducted in livestock for priority pathogens including Escherichia coli, Enterococcus faecium, Enterococcus faecalis, Salmonella spp., Campylobacter spp, Staphylococcus aureus, Erysipelothrix rhusiopathiae, and Actinobacillus pleuropneumoniae. However, the range of pathogens tested in the human and animal health sectors and the testing methodologies are not the same.

Since 1948, nosocomial infection control has been enshrined in law under the Medical Care Act. The law was further amended in 2006 and amendments enforced in 2007, following the increase in AMR pathogens, and in response to the increased importance of medical safety including infection prevention and control. All medical institutions are now required to maintain a system for nosocomial infection prevention and control which should encompass the development of guidelines, formation of nosocomial infection committees, establishment of appropriate surveillance, and training of personnel.

Recommendations for priority actions

- Consider conducting a comprehensive survey of antimicrobial stewardship encompassing small medical facilities, outpatient clinics, and specialist nursing facilities.

- Consider establishing a comprehensive network of nosocomial infection prevention and control specialists to facilitate operational research and technical support to enhance infection prevention and control practice.

- Consider enhancing the current surveillance systems to include data from hospitals with <200 beds, outpatient clinics, and specialist nursing facilities.

- Consider enhancing harmonization of the pathogens and laboratory testing methods to promote the comparison of AMR trends in human and agricultural sectors.

Indicators and scores

P.3.1 Antimicrobial resistance detection – Score 5

Strengths/ best practices

- Japan has implemented AMR surveillance in both the human and animal health sectors for nearly 20 years, with a system for quality assurance established.

- Many public and private university hospitals have established a system to cooperate with other medical institutions, the Prefectural and Municipal Public Health Institutes and the National Institute of Infectious Diseases (NIID) for the testing of AMR pathogen.

- The National Action Plan on AMR 2016-2020 has included the review of JANIS to further improve the testing system for detecting bacteria required in the WHO's GLASS such as Salmonella spp. and Shigella spp. as well as specific bacterial genes (e.g., extended-spectrum beta-lactamase, AmpC beta-lactamase, Carbapenemase-producing Enterobacteriaceae, and its related genes).

Areas that need strengthening/ challenges

- There may be a need to integrate regulations to facilitate a centralized system to collect, analyse and aggregate the bacterial species for Carbapenemase-producing Enterobacteriaceae and its related genes.

- There may be a need to further strengthen monitoring of AMR by region in addition to the current hospital-based monitoring, in anticipation of future need.

- Although AMR surveillance in small-scale hospitals has started since 2014, and the participation rate has been increasing, it is still low at 6.6% among small-scale hospitals with fewer than 200 beds.

- Currently, there is no AMR surveillance implemented for rehabilitation facilities and special nursing homes for the elderly. However, a point prevalence survey has been planned based on the National Action Plan on AMR 2016-2020.

PREVENT

P.3.2 Surveillance of infections caused by antimicrobial-resistant pathogens – Score 5

Strengths/ best practices

- The National Epidemiological Surveillance of Infectious Diseases (NESID) which has been conducted since 1999 under the Infectious Diseases Control Act, is flexible and has been able to include additional conditions under surveillance including AMR. This system also allows for corrections of errors when needed.

- In addition to NESID, JANIS also implements AMR surveillance in approximately 2000 hospitals nationwide.

Areas that need strengthening/ challenges

- Future analysis may need to take into account possible bias due to the increase of registered facilities in JANIS.

- There may be a need to further strengthen the surveillance for antibiotic-resistant Helicobacter pylori.

P.3.3 Health care-associated infection (HCAI) prevention and control programmes – Score 5

Strengths/ best practices

- Since 1991, Japan has issued the notification for the Prevention of Nosocomial Infections in Medical Facilities to encourage efforts to implement nosocomial infection control measures nationwide.

- Since 2004, Japan has implemented the regional nosocomial infection support network project, which has enabled prefectures to receive regional nosocomial infection control support.

- JANIS which was started by MHLW in 2000 has been useful for the evaluation of nosocomial infection control measures. In addition, platform-based surveillance has been trialled in 2017 to publish national benchmark data and is scheduled to become publicly accessible in 2018.

Areas that need strengthening/ challenges

- Current nosocomial infection control is mainly intended for the inpatient departments of medical institutions. There may be a need to further strengthen coverage at outpatient departments and nursing care facilities.

- There may be a need to establish a network to support a comprehensive regional nosocomial infection control.

- There are opportunities to further promote research in the field of infection prevention and control, such as the generation and use of automated medical data analysis.

- It may be useful to promote the use of existing relevant framework such as medical care quality evaluation to ensure safe clinical practice to prevent nosocomial infections.

P.3.4 Antimicrobial stewardship activities – Score 4

Strengths/ best practices

Human health

- In September 2017, MHLW issued the Guidance for Antimicrobial Stewardship.

- In 2017, Japan has trialled a platform-based surveillance system, with regional infection control support, which allows real-time monitoring of antimicrobial usage pattern while accounting for regional characteristics and hospital size.

- Monetary incentives have been provided to medical institutions to ensure the implementation of measures against nosocomial infection such as establishing a system of monitoring antimicrobial stewardship in the institution.

Animal health

- In 2013, MAFF developed and published the Basic Concepts concerning the Prudent Use of Veterinary Antibiotics in Livestock Production targeting veterinarians and livestock producers.

- In 1999, the JVARM started as an AMR surveillance system in the field of livestock. In addition, antibiotic consumption has been continuously monitored, including estimated consumption by animal species, administration route, and dosage.

Areas that need strengthening/ challenges

- A detailed survey on antimicrobial stewardship has not yet been conducted. However, with the new Guidance for Antimicrobial Stewardship published in 2017, a questionnaire survey will soon be conducted on a continuous basis.

- Survey on antimicrobial stewardship has not yet been conducted at facilities for outpatient care, for the elderly, and for special nursing care. However, a point prevalence survey is scheduled to be conducted in accordance with the National Action Plan on AMR 2016-2020.

- There is a need to monitor antimicrobial consumption at facilities for the elderly and special nursing care facilities. Plans have been made to conduct continuous monitoring using the National Database for Prescription and National Health Check-ups and the information management system data (nationwide marketing statistical data).

- There may be opportunities to further involve pharmacists in antimicrobial stewardship.

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 its transmission. Approximately 75% of recently emerging infectious diseases affecting humans is of animal origin; and approximately 60% of all human pathogens are zoonotic.

Target

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

Japan level of capabilities

Over the past two decades, Japan has enacted and revised various laws and legislation for the prevention and control of zoonotic diseases. The Infectious Diseases Control Act and the Act on Domestic Animal Infectious Diseases Control contain provisions for surveillance and notification as well as specific measures against the introduction and spread of zoonotic diseases. Japan has established surveillance systems for an extensive list of zoonotic diseases under the current laws, with high priority zoonotic diseases identified such as avian influenza, pandemic influenza, rabies, as well as emerging and re-emerging infectious diseases such as Zika virus disease and severe fever with thrombocytopenia syndrome (SFTS). Japan has successfully controlled and eliminated a number of zoonotic diseases including rabies. The Rabies Prevention Act requires dog owners to register their dogs and to ensure that they receive annual anti-rabies vaccinations. The act also provides guidance on quarantine measures for the importation of dogs, cats, racoons, foxes, and skunks to prevent the re-introduction of rabies into Japan.

While no patients with avian influenza has yet been reported in Japan, the National Action Plan for Pandemic Influenza and New Infectious Diseases and the Guidelines for Countermeasures against Pandemic Influenza and New Infectious Diseases have been established. Information concerning influenza viruses that infect poultry, wild birds and pigs are also gathered. As for avian influenza events at poultry farms, a testing system has been established at poultry hygiene service centres, the National Institute of Animal Health (NIAH) of the National Agriculture and Food Research Organization (NARO). In addition, a nationwide central reporting system has been established by MAFF.

Since 2015, the MHLW has promoted the 'One Health' approach. The revised Act on Domestic Animal Infectious Diseases Control has defined the relationship among MHLW, MAFF, and MoE for the implementation of outbreak prevention measures for zoonotic diseases and to prevent the spread of domestic animal infectious diseases. Currently, in Japan, the One Health approach is predominantly used for highly pathogenic avian influenza (HPAI) and pandemic influenza and could be further expanded to include other zoonotic diseases.

Recommendations for priority actions

- Enhance coordination on surveillance and timely sharing of information and specimen on agreed/ prioritized zoonotic diseases between MHLW and MAFF (NIID and NIAH, respectively).

- Develop a continuing professional development plan and joint training on zoonotic diseases for veterinarians in human health and animal health sectors at all levels.

- Build on prevention and control measures against avian/pandemic influenza and rabies, and consider expanding them against other emerging zoonosis such as SFTS through 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 Infectious Diseases Control Act which covers human diseases also requires veterinarians to report certain zoonotic diseases in animals.

- The cooperation between public health and animal health has been reinforced, particularly concerning the preparedness and response to avian and pandemic influenza.

- The MHLW has been providing 50 percent grant subsidies to local governments who are conducting projects to develop systems for the prevention and control of zoonotic diseases.

Areas that need strengthening/ challenges

- There is currently no process for regular information sharing for zoonotic diseases other than avian influenza. However, information can be shared ad-hoc upon identification or suspicion of a zoonotic disease of significant public health concern.

- Since Japan has successfully eliminated rabies, rabies testing in animals is not currently conducted systemically with some local governments having no structural framework to conduct rabies testing themselves. There is a need to further strengthen rabies surveillance and response across human, domestic animals and wildlife sectors in the event of re-introduction of the disease to Japan.

- It may be necessary to enhance the involvement of the MoE in the surveillance of zoonotic diseases in wildlife especially in view of emerging diseases such as SFTS, as well as ensuring the personal safety of individuals who may be involved in wildlife sample collection or others who may handle wildlife such as hunters.

- There is an opportunity to further enhance information exchange, in particular, specimen exchange for zoonotic diseases between laboratories under different ministries.

- Competing priorities and limitations in human and financial resources often challenge the establishment of surveillance and control systems for zoonotic diseases in many countries including Japan. It is important to continue strengthening legal frameworks, develop and test coordinating mechanisms, and allocate human resources needed in MHLW, MAFF, and MoE to address endemic, emerging, and re-emerging zoonotic diseases.

P.4.2 Veterinary or animal health workforce – Score 5

Strengths/ best practices

- There is a stable animal health workforce with a large number of veterinarians working at various levels within the public health system.

- Efforts have been made to improve the skills of animal health workforce by regularly organizing training seminars.

- Local governments are trained in rabies testing techniques through a practical skills training programme which includes the use of real animal samples in the session.

Areas that need strengthening/ challenges

- It may be necessary to further strengthen veterinary and animal health workforce through an agreed continuing professional development programme to provide a structured capacity development training plan for their career development.

- It is important to increase participation of animal health workforce across relevant ministries in various simulation exercises conducted.

- There is an opportunity to enhance field epidemiological skills among veterinarians by increasing the participation of veterinarians in the field epidemiology training programme (FETP).

- Japan may consider further formalizing exchanges or placements of veterinary staff between MHLW, MAFF, and MoE to strengthen collaboration and streamline communication in the spirit of One Health.

P.4.3 Mechanisms for responding to infectious and potential zoonotic diseases established and functional – Score 5

Strengths/ best practices

- Measures to address avian influenza, pandemic influenza and rabies have been developed, with active cooperation in the response especially to avian and pandemic influenza, implemented under the National Action Plan for Pandemic Influenza and New Infectious Diseases.

- An information sharing system has been established upon detection of a suspected case of HPAI in poultry and wild birds, where MAFF and MoE share information of HPAI in poultry and dead wild birds, respectively, with relevant ministries and agencies.

- All past HPAI outbreaks have been responded to in a timely manner.

- Under the Infectious Diseases Control Act, local governments may conduct an inspection of animals which may cause human infection.

Areas that need strengthening/ challenges

- There is a need to regularly collect and share information concerning influenza viruses infecting birds and pigs between relevant ministries and agencies. The data should be analysed and evaluated by the NIID to monitor the emergence of pandemic influenza.

- Japan may consider establishing inter-disciplinary committees/working groups for specific zoonosis to address diseases such as SFTS.

- It may be necessary to further ensure the implementation of surveillance and timely response capacity with clear procedures for emerging zoonosis, through capacity development and establishing procedures in the relevant sectors, such as those already in place for avian and pandemic influenza.

- It is recommended to continue conducting regular simulation exercises including desktop exercises to test coordination mechanism for joint outbreak response to zoonotic diseases between the relevant ministries in the human and animal health sectors.

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 the source of an outbreak and its containment is critical for control. Risk management capacity with regard to control throughout the food chain continuum must be developed. If epidemiological analysis identifies food as the source of an event, based on a risk assessment, suitable risk management options that ensure the prevention of human cases (or further cases) need to be put in place.

Target

Surveillance and response capacity among States Parties for food- and water-borne disease risks or events by strengthening effective communication and collaboration among the sectors responsible for food safety, and safe water and sanitation.

Japan level of capabilities

Japan maintains a high level of food safety. Since the occurrence of bovine spongiform encephalopathy (BSE) in 2001, the Food Sanitation Act was revised, and a risk analysis framework was established under the Food Safety Basic Act. Under this framework, the Food Safety Commission was established under the Cabinet Office and conducts risk assessments on food items that may be hazardous to human health. Following risk assessments, relevant ministries such as MHLW, MAFF, and Consumer Affairs Agency (CAA) then implement necessary measures for risk management. Finally, risk communication is central in this framework to ensure information is conveyed to all stakeholders including consumers and food business operators.

Under the Guidelines for Handling Food Poisoning, Food Sanitation Synthetic Information Processing System are effectively utilized by MHLW, prefectural governments, research institutions and others for responding to food poisonings and the rapid sharing of relevant information. There are 481 public health centres in 144 prefectural governments nationwide that conduct food poisoning surveys. If food poisoning is occurring in a wide area, the headquarters of the prefecture asks the related prefectural governments to conduct necessary surveys as needed. In addition, if the attributable food is an agricultural or livestock product, agricultural and livestock control departments of the prefecture will also be involved in the investigations. In case the situation surpasses the capacities at the prefecture level, or the outbreak encompasses multiple prefectures, the central government may also be requested for support.

In Japan, there are currently approximately 1,000 food poisoning incidents reported annually affecting 20,000 individuals. Within the Implementation Manual for Emergency Response in Food Poisoning for Food Safety Related Ministries, focal points are identified to respond to emergencies associated with food, and a mechanism is also established for rapid information sharing between MHLW and relevant ministries and agencies such as MAFF and CAA.

Due to the globalization of food trade and diversification of consumer needs, there has been a rapid increase in the importation of foods and ingredients into Japan. To manage food safety risks associated with the increasing volume and variety of imported foods, Japan implements risk-based inspection and measures in the exporting countries, at the time of import (point of entry) and during domestic distribution. "Food Safety Officers" are also positioned in Japanese embassies of major food exporting countries including

China and Canada as well as international organizations responsible for food safety such as FAO and WHO. Japan participates in the International Food Safety Authorities Network (INFOSAN) and has assigned the Office of International Food Safety in the Policy Planning Division under MHLW as the Contact Point of the FAO/WHO's INFOSAN, which has reported food safety incidents to INFOSAN in recent years.

Recommendations for priority actions

- Continue strengthening collaboration on joint/coordinated response and trace-back between Public Health and agriculture or animal health departments during outbreaks of foodborne diseases and contaminants through agreed protocols.

- Continue strengthening linkages among local public health and animal health authorities and private sector operators (farmers/ production operators, processors, and retailers of food products) through stakeholder consultation and regular information exchange.

- Strengthen risk communication to contribute to public trust in managing food safety incidents and emergencies.

Indicators and scores

P.5.1 Mechanisms for multisectoral collaboration established to ensure rapid response to food safety emergencies and outbreaks of food-borne diseases – Score 5

Strengths/ best practices

- Expertise at prefecture and public health centre and the collaboration between food safety and disease control personnel enable rapid and efficient response to outbreaks of food poisoning. The application of the risk analysis framework also allows close cooperation and coordination among relevant administrative agencies, food business operators as well as consumers. These mechanisms further contribute to ensuring the rapid response to food safety emergencies and outbreaks of foodborne diseases.

- The Imported Foods Monitoring and Guidance Plan is revised annually for efficient and effective monitoring and guidance on imported foods. Under this Plan, measures and inspections are conducted in the exporting countries, at points of entry (PoE) and within Japan.

Areas that need strengthening/ challenges

- There is a need to further strengthen wide-area coordination with all relevant stakeholders during inter-regional food poisoning outbreaks that expand over two or more administrative areas, to ensure rapid detection for timely response to prevent additional cases during an outbreak as well as new clusters from occurring (e.g. training and exercises).

- Japan may consider including the cooperation between prefectural governments and other relevant institutions during food poisoning outbreaks in the Food Sanitation Act.

- Japan may consider further enhancing a trace-back and recall framework for identification of incriminated food items and production/processing flaws to prevent spreads of the diseases.

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 have raised concerns regarding 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 with especially dangerous pathogens identified, held, secured and monitored in a minimal number of facilities according to best practices; biological risk management training and educational outreach 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 in place as appropriate.

Japan level of capabilities

Japan has established legislation on biosafety and biosecurity for biorisk management including the Infectious Diseases Control Act and the Act on Domestic Animal Infectious Diseases Control. Under these legal mandates, Japan regulates the possession of pathogens, conducts laboratory inspections in facilities that possess class I/II/III pathogens or pathogens of domestic animal infectious diseases, and ensure provision of biosafety and biosecurity training courses annually in facilities that possess class I/II pathogens or pathogens of domestic animal infectious diseases .

The Infectious Diseases Control Act classifies pathogens with biosecurity or biosafety risk into classes I-IV. In Japan, in accordance with the Infectious Diseases Control Act, there is a licensing system for laboratories handling Class I/II pathogens in line with WHO's quality standard. Japan regulates the number of facilities that can possess high-risk pathogens to minimize risk. While possession of class I pathogens is prohibited, possession of class II pathogens is possible but subject to permission from MHLW. Laboratories do not need permission to possess Class III/IV pathogens but are required to either notify the MHLW or adopt the prescribed technical standard under the law. In the animal health sector, laboratories which possess pathogens of domestic animal infectious diseases are also required to adopt technical standards and fulfil requirements as stated under the Act on Domestic Animal Infectious Diseases Control. This act also requires permission to possess pathogens whose spread would have a significant impact on the livestock industry. For high-risk pathogens, diagnostic procedures which do not involve culture such as genetic or immunological testing are also utilized when possible to minimize opportunities to handle them.

Under the respective laws, annual training programmes are required and provided independently by each facility that possesses class I/II pathogens or pathogens of domestic animal infectious diseases. National research organizations and private organizations also provide training seminars related to biosafety.

An annual training programme on biosecurity is also provided to local government staff members involved in animal health or quarantine. The Science Council of Japan has issued a Code of Conduct for Scientists with the most recent revision in January 2013, which included the topic of dual-use research. However, no mechanisms currently exist for oversight of dual-use research.

Recommendations for priority actions

- Strengthen biosafety and biosecurity for facilities possessing class IV pathogens, including conducting laboratory inspection of facilities containing class IV pathogens such as poliovirus.
- Establish a requirement for training and curriculum standards for all laboratories which possess class III and IV pathogens and ensure its implementation.
- Consider establishing an oversight mechanism for dual-use pathogen research.

Indicators and scores

P.6.1 Whole-of-government biosafety and biosecurity system in place for human, animal and agriculture facilities – Score 5

Strengths/ best practices

- In Japan, a legal framework is available to regulate possession of infectious pathogens, laboratory inspections for facilities possessing class I/II/III pathogens, and biosafety and biosecurity training courses for facilities possessing class I/II pathogens. Similar legal requirement is also available for the animal health laboratories possessing pathogens of domestic animal infectious diseases.
- Article 56-38 under the Infectious Diseases Control Act provides the legal basis to ensure collaboration with the National Police Agency for biosecurity issues related to pathogen control.
- On-site inspection to ensure laboratory compliance with the law from both biosafety and biosecurity aspects is conducted twice a year for facilities possessing class I pathogens, and once every three years for facilities possessing class II and III pathogens. Recommendations for improvements may be issued as needed after on-site inspections.
- The necessary budget for maintenance of facilities and equipment in these laboratories is secured.

Areas that need strengthening/ challenges

- Japan could further strengthen biosafety and biosecurity requirement also to include laboratory inspection for facilities possessing class IV pathogens.
- Japan may consider establishing an oversight mechanism on dual-use research of concern.

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

Strengths/ best practices

- In Japan, there are legal requirements in place for annual training for facilities with class I/II pathogens, which includes training on the content of the Infectious Diseases Control Act, handling and management of pathogens, and prevention of infectious disease outbreaks. Similar annual training are also mandatory by law and provided to facilities possessing pathogens of domestic animal infectious diseases.

Areas that need strengthening/ challenges

- There are currently no legal requirement and curriculum standards on biosafety training for facilities with class III/IV pathogens.
- There may be a need to address the shortage of biosafety and biosecurity experts in Japan.

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 cost-effective ways to save lives and prevent disease.

Target

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

Japan level of capabilities

In Japan, the Routine Vaccination Program started with the establishment of the Immunization Act in 1948. Currently, routine vaccination is provided to every child at the stipulated age for 13 diseases, including measles, rubella, varicella, tetanus, diphtheria, pertussis, poliomyelitis, hepatitis B, tuberculosis, pneumococcal disease, Haemophilus influenzae type b infection, Japanese encephalitis, and human papillomavirus infection.

Under the Immunization Act, all 1,741 municipalities in Japan are to implement routine vaccination at assigned local medical facilities and public health centres. Currently, almost all municipalities provide routine vaccination free of charge, with the governments subsidizing for approximately 90% of the expenses. Vaccination coverage is monitored at the MHLW through reports sent by the local governments annually when the results are then evaluated by the Health Science Council (HSC). HSC also reviews the national immunization strategies and implementation of the National Immunization Plan through the annual Plan-Do-Check-Act (PDCA) cycle, as well as during major reviews which are conducted at least every five years to recommend amendment as needed.

All adverse events following immunization (AEFI) including suspected cases should be reported by doctors to the MHLW in accordance with the Immunization Act. The reports of suspected cases of AEFI are compiled by the Pharmaceuticals and Medical Devices Agency (PMDA) and are evaluated regularly by the HSC which then propose recommendations to the MHLW. A compensation scheme for AEFI related to routine vaccination has been in place since 1976 under the Immunization Act. The Examination Committee for Certification of Sickness and Disability evaluate each case of AEFI for compensation, which is provided unless there is evidence for another cause of the adverse reaction.

Vaccine supply is closely monitored, and vaccine manufacturers forecast the supply of and demand for vaccines and inform the MHLW as needed. Measures are in place in case vaccine shortage is anticipated. However, to date, there have been no reports of vaccine stock out of routine immunization from the 1,741 municipalities throughout Japan.

Routine vaccination for measles was first introduced in 1978 based on the Immunization Act, and in 2006, the second dose of measles vaccine was introduced in children 5-6 years of age in addition to the first dose at 1 year of age using the Measles and Rubella Vaccine (MR vaccine). In 2007, the National Plan for measles elimination was established based on the Infectious Diseases Control Act and Immunization Act with the goal of achieving 95% of coverage for measles vaccination. Since 2010, the national vaccination coverage for measles at one year of age has been maintained at ≥95%. In 2016, the national vaccination coverage was 97.2%, with all 47 prefectures achieving ≥90% coverage and only four prefectures not meeting the goal of 95% coverage.

Recommendation for priority action

- Continue to improve vaccination coverage for all routine immunization at all municipalities (with special attention on areas with lower uptake) including minority population groups such as foreign residents.

- Implement a system for regular monitoring of the data quality of vaccine coverage.

- Consider introducing an immunization registry for real-time monitoring of vaccine uptake at the national level.

Indicators and scores

P.7.1 Vaccine coverage (measles) as part of national programme – Score 5

Strengths/ best practices

- All 1,741 municipalities in Japan are implementing routine vaccination at assigned local medical facilities and public health centres under the Immunization Act and have achieved a high level of vaccination coverage.

- Almost all municipalities provide routine vaccination free of charge.

- Japan is monitoring the measles immunization coverage through the bi-annual reports from municipalities and evaluating the changes needed to improve the coverage.

- Since 2010, the national vaccination coverage for measles at one year of age has been maintained at 95% or higher.

- The WHO Western Pacific Regional Verification Commission for Measles Elimination verified Japan as having achieved "measles elimination" status in March 2015, and this status has been maintained to date.

Areas that need strengthening/ challenges

- There is a need to raise vaccination coverage in some municipalities where the measles vaccination coverage remained around 90% by working closely with relevant local governments to achieve the target coverage of 95%.

- The coverage of the second dose of measles vaccination at 5 to 6 years of age was 93.1% in 2016. Continuous efforts to achieve the target coverage of >95% should be made for both 1st and 2nd doses of measles-containing vaccine.

- Analysis of biannual reports on vaccination conducted by municipalities showed some inaccuracies such as vaccination coverages that were over 100%, which could indicate denominator issues for calculating vaccination coverages or multiple counting of administrations.

P.7.2 National vaccine access and delivery – Score 5

Strengths/ best practices

- The entire process from the manufacturing of vaccines to the supply of vaccines to medical facilities is managed under the Pharmaceuticals and Medical Devices Law, which defines relevant licences and authorizations for manufacturing, supplying, and setting quality/safety management standards, including the maintenance of cold chain during vaccine shipment and storage.

Areas that need strengthening/ challenges

- In emergency situations such as infectious disease epidemics, vaccine products for routine vaccination may run short as voluntary vaccination increase. It may be necessary to consider increasing the "circulation stockpile" to enable rapid response in the event of a sudden increase in vaccine demand.

DETECT

National laboratory system

Introduction

Public health laboratories provide essential services including disease and outbreak detection, emergency response, environmental monitoring and disease surveillance. State and local public health laboratories can serve as a focal point for a national system, through their core functions for human, veterinary and food safety including disease prevention, control and surveillance; integrated data management; reference and specialized testing; 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.*

Japan level of capabilities

Japan has established a high quality and well-functioning nationwide laboratory network. Japanese citizens and residents have access to diagnostic tests for notifiable diseases including 10 core tests for priority diseases of major national public health concern. These tests include Middle East respiratory syndrome coronavirus (MERS-CoV) polymerase chain reaction (PCR), Measles PCR, SFTS PCR, Influenza PCR, Carbapenem-resistant Enterobacteriaceae (CRE) PCR, tuberculosis microscopy, poliovirus culture, human immunodeficiency virus (HIV) serology, Salmonella species culture, and Plasmodium species rapid diagnostic tests (RDT). The NIID serves as the national reference laboratory and provides technical support to local public health institutes. The NIID also has two WHO Collaborating Centres and one biosafety level 4 (BSL-4) facility and has been accredited as a global network laboratory for diseases such as measles, rubella, and Japanese encephalitis to contribute to both the Western Pacific Region and globally. Local public health institutions are placed in each of the 47 prefectures, all 20 ordinance-designated cities, 11 core cities, and 5 special wards in Tokyo; and are all capable of conducting tests such as PCR, loop-mediated isothermal amplification (LAMP) assay, and genome sequencing.

All local public health institutes conduct real-time reverse transcription PCR (RT-PCR) for influenza and measles virus detection. To support pathogen testing, the Infectious Diseases Control Act has provision for a 50% subsidy for the maintenance costs of these activities, in accordance with the Guidelines for Treasury Subsidization of Infectious Diseases Prevention Programs. Under the Infectious Diseases Control Act, the External Quality Assurance (EQA) programmes for influenza virus and Escherichia coli (E.coli) have also started in public health laboratories since 2016 and 2017, respectively.

At healthcare institutions, if clinicians suspect an infectious disease, in addition to point-of-care testing at the outpatient unit, they also have access to different laboratory tests such as Gram stain, culture, and PCR through the hospital's clinical laboratory or other private laboratories. Clinical laboratories are required by law to undergo external evaluation and must receive prefectural or other appropriate external evaluation. Japan's national health insurance system covers expenses for clinical diagnostic tests.

In the animal health sector, NIAH conducts research activities related to domestic animal health as well as diagnosis of infectious diseases in domestic animals. Some laboratories in NIAH have been designated as OIE reference laboratories for diseases such as BSE, classical swine fever, and swine influenza. Under the Livestock Hygiene Service Centres Act, NIAH also coordinates nationwide prefectural livestock hygiene service centres (LHSCs), which conduct clinical inspections of suspected diseased animals and diagnosis of animal infectious diseases. If LHSCs require more advanced testing or testing of unknown diseases, the Department of Animal Disease Control and Prevention under NARO conducts disease differentiation for disease diagnosis as needed. NARO has been accredited for compliance with ISO/IEC 17025:2005 for hemagglutinin (HA) subtyping of influenza A and BSE testing. Among the NIAH, NARO and prefectural LHSCs, a pilot programme for the verification of external and internal quality management has been carried out for avian influenza testing, with quality control guidelines and SOPs being implemented.

Recommendations for priority actions

- Prepare and ensure implementation of a comprehensive national laboratory quality standard manual and establish a system of oversight to coordinate and manage the nationwide laboratory network.

- Establish and introduce a comprehensive EQA system for infectious pathogens in public health laboratories.

- Ensure the implementation of national laboratory quality standard for all public health laboratories from the central to the local level

Indicators and scores

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

Strengths/ best practices

- Japan has well-established public health laboratory and animal health laboratory networks capable of conducting core tests and molecular diagnostic tests in accordance with the Pathogen Detection Manual.

- All citizens have access to laboratory services for priority diseases under the Japan public health system.

Areas that need strengthening/ challenges

- Japan may consider further strengthening the implementation of the Pathogen Detection Manual and increasing the number of pathogens covered by the National EQA Programme.

- It may be useful to consider establishing an institute or division at the national level with authority to oversee nationwide laboratory testing for pathogen detection.

D.1.2 Specimen referral and transport system – Score 5

Strengths/ best practices

- The NIID is currently serving as the national reference laboratory for public health laboratories in Japan and is one of the WHO Global Specialized Laboratories/WHO Collaborating Centres for specimen referral for designated infectious diseases.

- The specimen transportation system is funded by the national budget under the Manual for Safe Transport of Specified Pathogens in line with the WHO's Guidance on regulations for the transport of infectious substances.

Areas that need strengthening/ challenges

- There are opportunities to further strengthen implementation of biosafety measures for sample transportation to comply with the biosafety regulations.

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

Strengths/ best practices

- There is widespread use of point-of-care tests for infectious diseases in clinical settings.

- Molecular diagnostics and serologic tests are available for all priority diseases in Japan.

- Procurement of equipment and reagents for diagnosis is available within the country.

Areas that need strengthening/ challenges

- Japan may consider further advancing research and development in modern point-of-care technology and other tools.

D.1.4 Laboratory quality system – Score 3

Strengths/ best practices

- In Japan, clinical laboratories are registered under the Act on Clinical Laboratory Technicians with requirements for external evaluation by prefectural governments.

- EQA programme for prefectural laboratories initiated for influenza viruses and E.coli from 2016 and 2017, respectively under the Infectious Diseases Control Act.

Areas that need strengthening/ challenges

- Japan may consider further expanding EQA Programme for all priority pathogens.

- Japan may consider introducing external evaluation of laboratories' quality control.

- There may be a need to ensure the national laboratory quality standard is implemented at all public health laboratories.

DETECT

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 indicator- 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 sub-national, national and international levels of authority regarding surveillance of events of public health significance; improved country and intermediate level regional capacity to analyse and link data from and between strengthened, real-time surveillance systems, including interoperable, interconnected electronic reporting systems. This would include 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 the IHR and OIE standards.

Japan level of capabilities

Japan has an extensive infectious disease surveillance system that includes indicator-based surveillance (IBS), event-based surveillance (EBS), sentinel surveillance, syndromic surveillance, and dedicated surveillance for emergency events or special circumstances. The NESID Program was established in 1999 under the Infectious Diseases Control Act and currently collects data on the occurrence of 114 diseases (Categories I-V). Data are reported by all 47 prefectures and are compiled and reported by the NIID. EBS of informal data sources such as media, local non-governmental organizations, as well as WHO notifications are conducted by the NIID daily. There is an extensive network of sentinel surveillance sites that collect data about diseases in Category V. There is a requirement to report certain syndromes that may indicate infection due to diseases in categories II-V. Specialized surveillance systems also exist for specific types of conditions, such as the JANIS system for nosocomial infections. Surveillance information is exchanged both vertically (local-prefecture-national) and horizontally (among prefectures). On a daily basis, all surveillance data are reviewed by the surveillance team at the NIID, and when necessary, risk assessments are conducted for certain situations.

Japan also has the capacity to establish emergency or enhanced surveillance systems for situations such as mass gatherings (e.g., G7 Summit), at evacuation centres following disasters (e.g., "JSPEED," Kumamoto earthquake), and for emerging and re-emerging infectious diseases (e.g., post-enterovirus D68 detection). Other non-health data are also used for public health surveillance such as school absentee data and ambulance dispatch data.

Japan participates in international surveillance data sharing initiatives such as weekly seasonal influenza data sharing through Global Influenza Surveillance and Response System (GISRS).

Japan International Cooperation Agency (JICA) is supporting Ghana to establish their surveillance system as part of the Science and Technology Research Partnership for Sustainable Development (SATREPS) programme and is considering providing support in other countries such as Indonesia, Nigeria, and the Democratic Republic of the Congo.

Recommendations for priority actions

- Strengthen cooperation between NIID and research institutes to ensure routine surveillance and risk assessment functions are not compromised during a prolonged response to a public health emergency.

- Consider further enhancing the analytic capacity and data visualization function of the NESID surveillance system.

- Consider strengthening risk assessment methods and protocols to ensure optimal situational awareness and decision making for public health leadership.

- Consider evaluating and reviewing the objectives of the syndromic surveillance system in Japan considering the strong laboratory diagnostic capacity of the NESID surveillance system.

Indicators and scores

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

Strengths/ best practices

- Japan has a sustainable and stable surveillance system that is based on the national law and is implemented by the national and local governments under the national budget. The ongoing IBS and EBS operations since the implementation of the NESID program are illustrative of the sustained capacity.

- In Japan, a nationwide uniform notification system is in place to ensure standardization of surveillance reporting to enable monitoring of disease trends and distributions across the country. Minimum data requirement on the notification form is determined by the national government while also allowing local governments to collect additional data if desired.

- The Infectious Disease Subcommittee discusses and adjusts the notifiable disease list as needed as well as any changes to the type or amount of information collected, based on surveillance evaluations and the epidemiologic situation.

- Japan has a highly advanced laboratory diagnostic system where most notifiable diseases are laboratory-confirmed by either healthcare facilities or public health institutes in situations where tests are not covered by insurance or if the tests cannot be done elsewhere.

- There are strong local and subnational capacities in surveillance and response for early warning and rapid action, with public health centres providing the primary response supported by the prefectural and the national levels.

- Surveillance and response procedures are defined in SOPs including the roles of local and national governments for different types and severity of public health events; SOPs are regularly updated based on the epidemiologic situation and risk assessment.

Areas that need strengthening/ challenges

- There may be a need to strengthen EBS guidance documentation to ensure robust EBS implementation at all prefectures and municipalities. Some case studies and pilot evaluations are currently ongoing to further build local/subnational-level capacities.

- Currently, local capacity varies depending on financial and human resources. While disease control at the local level is supported by the national government, each local government decides its own policy. Periodic staff reassignment may also hinder efficiency and institutional memory for surveillance-related activities.

- There are opportunities for improvement in the area of detection of emerging and re-emerging infectious diseases. Reliance on external experts may be necessary at times such as the detection of SFTS in partnership with academic researchers.

- Japan has successfully detected and swiftly confirmed negative test results for many suspected Middle East respiratory syndrome (MERS) and Ebola virus disease cases, indicating a sensitive and operational EBS system. However, given Japan has not experienced a major emerging infectious disease outbreak in recent years, continued vigilance and ongoing preparedness, maintenance of SOPs, and training are critical.

- There may be a need to reassess and clarify roles and responsibilities for information collection at the national and local governments during disease outbreaks and public health events; this may help prevent delays in response activities under the current ad-hoc system initiated by issuance of government circulars.

D.2.2 Interoperable, interconnected, electronic real-time reporting system – Score 5

Strengths/ best practices

- Japan has an electronic NESID system that has been well functioning since 2006, with linkage of epidemiological and laboratory data from the local, prefectural and national levels. Although linkage between the patient and laboratory-based surveillance systems have been possible since 2012, Japan is currently pursuing greater integration of clinical and laboratory data.

- Surveillance data is maintained in a secure, independent line, where there is system independence and restricted access via the Intranet and Internet.

Areas that need strengthening/ challenges

- It may be necessary to develop a mechanism for information sharing between local governments through the current NESID interface, to facilitate timely coordination of response to disease outbreaks and public health events that affect multiple jurisdictions.

- There are opportunities to further improve data analysis and visualization in the electronic surveillance system possibly through integrating a dashboard function with data analytic tool, to promote information management and communication of surveillance data.

- Japan may consider incorporating a feedback mechanism to different stakeholders such as local and sub-national public health workers who enter the surveillance data, healthcare practitioners who report the data and the general public; this may be done through the official MHLW website or other means of information dissemination.

- Although the surveillance system is resilient and stable during peacetime, there may be a need to consider special requirements in the case of a large-scale outbreak. These considerations may include identifying human resource surge capacity to perform data entry, ensuring a well-functioning information technology system to handle the increased usage and data volume, and assessing the need for a flexible system which can enable additional data to be collected.

- Japan may consider gradually developing an option for a web-based reporting system at healthcare facilities to support timely reporting of notifiable diseases and public health events.

D.2.3 Integration and analysis of surveillance data – Score 5

Strengths/ best practices

- The FETP Japan trainees regularly conduct surveillance evaluation for the NESID system as part of an ongoing activity and share the findings with MHLW and other relevant stakeholders. The system is updated periodically based on the evaluation findings, with plans to further advance this activity throughout the PDCA cycle.

Areas that need strengthening/ challenges

- Japan may wish to explore how to feasibly collect specific demographic information which may be useful for epidemiological analysis such as nationality and occupation data while taking into consideration privacy issues and balancing reporting burden on physicians.

- There may be a need to further enhance clinicians' knowledge, awareness, and motivation regarding reporting to minimize potential under-reporting, as well as using other data sources to help interpret surveillance data.

- There are opportunities to further improve monitoring of trends through laboratory-based surveillance, including monitoring indicators such as total specimens tested and the positivity rate while accounting for changes in testing practices.

D.2.4 Syndromic surveillance systems – Score 5

Strengths/ best practices

- In Japan, there are multiple systems available to detect clusters of syndromes, including surveillance of notifiable diseases of certain syndromes without a confirmed diagnosis; sentinel surveillance for monitoring trends and distributions for syndromes such as gastroenteritis and meningitis; syndromic surveillance based on non-medical "proxy" data; a dedicated syndromic surveillance system for acute respiratory and acute fever and rash syndromes; and "drop-in" syndromic surveillance systems during events such as mass-gatherings and post-disaster shelter surveillance.

Areas that need strengthening/ challenges

- There are opportunities to further enhance utilization and interpretation of the syndromic surveillance data collected, and how it can complement other existing surveillance systems, to provide multiple sources of information for risk assessments and decision-making.

DETECT

Reporting

Introduction

Health threats at the human–animal–ecosystem interface have increased over the past decades, as pathogens continue to 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 diseases at the interfaces between them.

Target

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

Japan level of capabilities

Japan has established the "Health Risk and Crisis Management" mechanism since 1997 which later formed the basis of the IHR NFP function. In 2005, Japan designated the Health Science Division in the MHLW as the IHR NFP where the Office for Public Health Emergency and Disaster Preparedness and Response manages the day-to-day function on a 24 hours basis, 7 days a week.

The Basic Guidelines for Health Risk and Crisis Management and its implementation manuals developed by the MHLW guide the collection, assessment, and reporting of health hazard information. Under this guideline and its implementation manuals which cover public health hazards including infectious disease, food safety, drinking water, and pharmaceuticals, each division is responsible for the collection and monitoring of surveillance data. Upon detection of a potential public health threat, the Health Science Division hosts the Health Risk and Crisis Management Coordination Meeting, in consultation with the Health Risk and Crisis Management committee which consists of multisectoral experts to assess available data as needed, coordinate multisectoral response as required, and decide on the requirement to report to WHO. The procedures for reporting to WHO about public health hazards are also described in the Information gathering and communication under the IHR (2005). In addition, critical information provided by WHO to the IHR NFP are also shared with relevant ministries/agencies and other stakeholders such as MHLW local branch offices, prefectures, public health centres, public health institutes, and the National Hospital Organization as needed.

Japan's IHR NFP is functioning well and is able to report potential PHEIC within 24 hours after evaluation. So far, Japan has reported five potential PHEICs to WHO including the pandemic Influenza A/H1N1 in 2009, and the nuclear power plant disaster following the Great East Japan Earthquake. To ensure sustained capacity for the IHR NFP, Japan participates in regular online training and tabletop exercises including the annual regional IHR Exercise "Crystal" organized by WHO WPRO.

For the animal health sector, the Animal Health Division at MAFF has been designated as the OIE Delegate and has notified OIE of animal diseases within the required timeframes through the World Animal Health Information System (WAHIS). For food safety events, the Office of International Food Safety in the Policy Planning Division under MHLW has also been assigned as the INFOSAN Contact Point. A communication and information sharing mechanism among Japan's IHR NFP, OIE Delegate, and INFOSAN Contact Point has been established and operational under the One Health principle. In addition, an information sharing mechanism among Japan, China and the Republic of Korea has also been established since 2014 to improve the preparedness and response for emerging and re-emerging infectious disease including pandemic influenza.

DETECT

Recommendations for priority actions

- Further strengthen the existing mechanisms for information collection, analysis, and reporting that addresses all-hazards public health events and emergencies.

- Continue to conduct regular exercises to test information sharing mechanisms for emerging infectious diseases including pandemic influenza, as well as other public health events and emergencies.

Indicators and scores

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

Strengths/ best practices

- MHLW has established a functional framework to consolidate, share, and evaluate information on health risk and crisis during the Health Risk and Crisis Management Coordination Meeting.

- Japan has established an information sharing framework with China and the Republic of Korea on emerging and re-emerging infectious diseases.

Areas that need strengthening/ challenges

- There may be a need to further strengthen simulation exercises to incorporate scenario-based information assessment and reporting.

D.3.2 Reporting network and protocols in country – Score 5

Strengths/ best practices

- Japan has a functional framework for information sharing and coordination among relevant ministries and agencies to respond to public health events and emergencies.

- Japan has demonstrated the capability to report all health hazards under the IHR through the IHR NFP as evidenced by the reporting of the potential public health threat following the release of radioactive substances following the nuclear power accident in 2011.

- The IHR NFP of Japan has reported potential PHEICs to WHO within 24 hours after evaluation. The OIE Delegate and INFOSAN Contact Point have also reported events to OIE and INFOSAN as needed within the required timeframe in recent years.

Areas that need strengthening/ challenges

- It may be necessary to further reinforce the information gathering and analysis capacity using IT technologies as well as further invest in human resources.

- It may be necessary to further promote awareness and understanding of IHR and the IHR NFP function outside the MHLW.

DETECT

Workforce development

Introduction

Workforce development is important in order to develop a sustainable public health system over time by developing and maintaining a highly qualified public health workforce with appropriate technical training, scientific skills and subject matter expertise.

Target

States Parties with 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).

Japan level of capabilities

Japan has a well-established system for training medical, scientific and public health professionals. There are sufficiently trained and competent public health professionals of multidisciplinary backgrounds who are engaged in public health services at various levels from community public health centres across the whole country to the National Institutes under the MHLW. The public health workforce has demonstrated a high level of capacity to manage domestic and global public health events and emergencies effectively.

Japan has enacted various laws, regulations, and guidelines to ensure the continual development of a skilled workforce to manage public health threats, including the Infectious Diseases Control Act, the Community Health Act and the Basic Guidelines for the Promotion of Community Health Measures. These documents clearly stipulate the role of local governments at all levels to support public health personnel training and professional development to ensure sufficient human resources for surveillance, risk assessment, epidemiological investigations, and other public health tasks.

The NIID established the two-year national field epidemiology training programme (FETP Japan) in 1999, with 70 graduates trained to date. Many trainees and graduates have played an active role at all levels of the government. Besides the two-year program, one-month intermediate and two-day basic applied epidemiology training programs have also been conducted at NIID to train public health staff at the local level. In addition, FETP Japan graduates, along with FETP trainees, are at times deployed to local governments to conduct trainings in epidemiology, including for local government.

For general public health training as well as training on specific public health topics, the National Institute of Public Health (NIPH) also organizes various training programs for professionals working in the area of public health service, environmental hygiene, and social welfare services. In 2016, the MHLW established the Infectious Diseases Emergency Specialist (IDES) training program to train infectious disease risk management specialists to assume leadership roles both in and outside the country. So far, nine participants are placed in international organizations such as WHO, United States Centers for Disease Control and Prevention (USCDC) and Public Health England as part of the training. For the animal health workforce, MAFF also conducts annual training on control of zoonotic diseases as well as veterinary epidemiology for local governmental veterinary staff and animal quarantine officers, with more than 500 staff trained to date.

Recommendations for priority actions

- Expand capacity building through Japan's FETP including increasing the numbers of trainees especially for those who work at the local level, as well as continue to strengthen support for FETP in low and middle-income countries.

- Promote implementing the nationwide strategy covering the training of all public health specialists such as FETP Japan, including deployment strategy to support international efforts.

Indicators and scores

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

Strengths/ best practices

- Public health specialists in Japan are from a multidisciplinary professional background, including physicians, veterinarians, pharmacists, clinical laboratory technicians, and public health nurse.

Areas that need strengthening/ challenges

- There is a shortage of specialists in some areas such as risk communication specialists and social scientists.

- Japan is facing challenges with a decrease in the human resources in the near future due to population decline.

D.4.2 FETP or other applied epidemiology training programme in place – Score 5

Strengths/ best practices

- FETP Japan has provided the opportunity for interaction between trainees from different backgrounds including the local governments and specialists from hospitals and has created a synergistic effect.

- Through the different short and long-term epidemiology training programs, high-quality field epidemiology investigations are being conducted with the results of these investigations reflected in government policies. This was also made possible through the strengthening of the cooperative relationship between central and local governments, as well as with relevant laboratory units at the NIID.

- FETP Japan has included multi-disciplinary trainees in the program, including trainees with veterinary and animal health backgrounds.

Areas that need strengthening/ challenges

- Japan may consider different approaches to further increase capacity at the local governments both through recruiting new graduates to work at the local governments, as well as increasing the number of trainees sent by local governments for national training programs such as FETP Japan. Offering placement in local governments during the FETP training period and proactively recommending work placement in local governments after completing FETP training may strengthen the capacity at the local government level; such placements would also provide further opportunities for regular interaction between trainees and graduates from both central and local governments. There may also be a need for continuing education/refreshment training for FETP graduates to maintain and/or update their skillsets and capacities.

- FETP Japan may further increase its domestic and international visibility and reach through creating a mechanism to enable FETP trainees to engage in domestic and international projects. Possible approaches may include building stronger partnerships with local governments, international organizations such as USCDC, as well as further collaboration with FETPs from other countries.

DETECT

D.4.3 Workforce strategy – Score 4

Strengths/ best practices

- Japan has laws and regulations in place such as the Community Health Act which tasks the local governments with the responsibility to ensure sufficient human resources and their professional development for public health practice.

- The speciality for public health doctors through the Board Certification System of Physicians for Public Health and Social Medicine has been established in Japan.

Areas that need strengthening/ challenges

- It is a challenge to develop and retain government officials in a technical area due to periodic personnel rotation.

- There are limited budget and human resources in some local governments which restricts the number of staff that can be dispatched for training.

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.

Japan level of capabilities

Japan has well-established all-hazards public health emergency preparedness and response plans at the national, prefecture and local government levels to prepare for and respond to emergencies from multiple hazards. The MHLW Disaster Management Operation Plan describes emergency measures for disasters at national, prefectural, and municipal levels; provides the means to establish a national emergency response headquarters; outlines methods to collect health-related information and support human and physical resources; and sets requirements for training and education on disaster prevention. The Action Plan for Strengthening Measures on Emerging Infectious Diseases is a 5-year plan aimed at strengthening Japan's domestic and global capacity to respond to emerging diseases in line with IHR (2005). Japan has also developed other emergency response plans to address other hazards such as chemical, nuclear and radiation events. The plans also take into consideration for surge capacity and define assistance among municipalities and from the national government to municipalities. Various guidelines have also been developed, with the Basic Guidelines for Health Risk and Crisis Management being the central all-hazards document on which additional disease and hazard-specific guidelines are based. This guideline also has provisions for an emergency response to novel or unidentified threats.

In MHLW, the Office of Public Health Emergency and Disaster Preparedness and Response is the central coordinator for all public health security functions, relying on specific offices and bureaus to provide technical expertise and regulatory authority as needed through the Health Risk and Crisis Management Coordination Meeting. The Health Risk and Crisis Management Coordination Meeting is chaired by the Director of the Health Science Division, and meetings are held bi-monthly or as needed during emergencies. The function and daily operation of the IHR NFP, which is currently served by the Office of Public Health Emergency and Disaster Preparedness and Response, is supported by several guidelines and manuals, including the Basic Guidelines for Health Risk and Crisis Management, the Implementation Manual for Health Risk and Crisis Management Pertaining to Infectious Diseases, the Basic Guideline for Promoting the Prevention of Infectious Diseases and the Action Plan for Strengthening Measures on Emerging Infectious Diseases.

To plan and prepare for public health emergencies, Japan has conducted risk assessments and identified resource needs for a range of emergencies. Stockpiles of equipment, vaccines, medication, and other supplies are currently stored at the national and prefecture levels with distribution plans in place. Japan also regularly tests the plans in whole-of-government exercises which have included senior government levels. The plans are regularly revised after exercises as well as after implementing them in real-world events such as after the Great East Japan Earthquake in 2011 and the influenza pandemic in 2009.

Recommendations for priority actions

- Consider collating a national public health risk profile which is regularly updated, with mapped resources, for priority and emerging threats, built on existing risk assessments.

- Continue to update emergency response plans through a program of development, exercise, review, and revision.

- Consider adopting a whole-of-society approach, including the public and the private sector, for selected emergency response exercises.

Indicators and scores

R.1.1 National multi-hazard public health emergency preparedness and response plan developed and implemented – Score 5

Strengths/ best practices

- Japan's Action Plan for Strengthening Measures on Emerging Infectious Diseases focuses on not only the continuous improvement of domestic emergency preparedness and response, but also strengthening preparedness in developing countries and promoting infectious diseases research.

- The Special Measures Act for Pandemic Influenza and New Infectious Diseases outlines the response required for not only pandemic influenza, but also other emerging and re-emerging diseases.

- A framework exists for the mobilization of resources from the national to the prefecture and local levels.

Areas that need strengthening/ challenges

- Japan can further enhance preparedness through a continued effort to implement, exercise, review, and update existing plans.

- Japan may benefit from maintaining a register to track lessons learned from after action reviews, exercises, and audits, to enable monitoring of their incorporation into plans and procedures.

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

Strengths/ best practices

- Japan has conducted intensive planning and preparedness activities for pandemic influenza and emerging and re-emerging infectious diseases in accordance with the Special Measures Act for Pandemic Influenza and New Infectious Diseases.

- Stockpiles of necessary supplies for disaster prevention for biological, chemical, radiological and other emergencies are available at both national and prefecture levels.

- Business continuity plans for pandemic flu have been developed for the public sector and exist in key identified private firms.

Areas that need strengthening/ challenges

- Japan may benefit through collating risk assessments conducted in individual sectors into a national profile that covers all hazards, and to allow for identification of current and potential future resource needs.

- There may be a need to explore ways to facilitate mid to long-term strategic planning under the current single-year budgeting system in Japan.

- There are opportunities to further develop and update SOPs through testing the shipping and distribution mechanism for stockpile items during exercises.

- It may be useful to consider the use of mathematical modelling of resources as well as the development of IT technologies for planning, to further strengthen the effectiveness and efficiency of resource allocation.

- Japan can continue identifying and prioritizing additional private sector partners to develop business continuity plans to further develop emergency preparedness.

Emergency response operations

Introduction

A public health emergency operations centre 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 a response to an emergency or emergency exercise. They also provide other essential functions to support decision-making and implementation, coordination and collaboration.

Target

Country with public health emergency operations centre (EOC) functioning according to minimum common standards; maintaining trained, functioning, multisectoral rapid response teams and "real-time" biosurveillance laboratory networks and information systems; as well as trained EOC staff capable of activating a coordinated emergency response within 120 minutes of the identification of a public health emergency.

Japan level of capabilities

In Japan, a well-developed governance structure exists for emergency response at the whole-of-government level. For public health emergencies such as infectious disease, food poisoning, pharmaceutical accidents, and poisonous substance accidents, the Health Science Division of the Minister's Secretariat, particularly the Office of Public Health Emergency and Disaster Preparedness and Response takes the lead and initiate the primary response from the MHLW. Activation of the public health emergency operations follows guidelines and procedures such as the MHLW Basic Guidelines for Health Risk and Crisis Management. For emergencies outside this scope, the Deputy Chief Cabinet Secretary for Crisis Management convenes the emergency response team which consists of relevant governmental agencies to the Cabinet Crisis Management Centre, to allow centralization of information and collaboration.

Although Japan does not have a permanent public health EOC at the national level, emergency response headquarters can be activated as required. When an emergency response headquarters is established, terms of reference for different types of crises are available, which specify the relevant organizational structures and the respective roles and responsibilities. During peacetime, there are 9 fully-dedicated members in the Office of Public Health Emergency and Disaster Preparedness and Response. However, during an emergency response, MHLW can draw approximately 30 personnel from the Health Science Division, with an additional approximate 25 members available from other divisions if required. There are also provisions for additional surge staff on standby, which can be called into the emergency response headquarters as needed. The Cabinet Crisis Management Centre and the Health Science Division in MHLW operates 24/7, enabling the rapid assembly of emergency response teams. The MHLW also designates on-call staff who can come to the office within 30 minutes. Emergency response communications equipment has a back-up in case phone lines are interrupted, and private power generators are installed in case of a power outage. At the prefectural level, EOCs do exist with staff available 24/7. The Cabinet Crisis Management Centre, the MHLW, and the prefectures have SOPs for emergency response operations.

Japan conducts a range of emergency response training at both the national and the prefecture level, including on-the-job training and drills. Some training are provided by the National Disaster Emergency Management teams. The National Institute of Public Health also recently started providing Public Health Emergency Response training. Both the Prime Minister's Official Residence and MHLW implement exercises

at least twice per year. Emergency assembly drills are conducted, and tabletop exercises are held for pandemic influenza to train decision making and are attended by all Cabinet Ministers including the Prime Minister. SOPs are revised based on the outcomes of these exercises.

Case management guidelines are available for several diseases such as smallpox, pandemic influenza, and Ebola virus disease. These have been tested in previous real-world events such as when a suspected case of Ebola virus disease was detected in 2014. SOPs for patient referral are also available for cases exposed to nuclear, chemical, animal-derived, and food-safety substances.

Recommendations for priority actions

- Consider establishing a permanent and appropriately-resourced EOC in MHLW with a dedicated team to coordinate and cover all hazards including the concept of incident management system.

- Describe scaled levels of response, the resources required for each level, and procedures for acquiring additional resources when necessary, in key operational plans.

- Implement a system for the development, regular review, and updating of case management guidelines.

Indicators and scores

R.2.1 Capacity to activate emergency operations – Score 5

Strengths/ best practices

- Japan has established a whole-of-government, all-hazards crisis management system built on the lessons from disasters and responses.

- There are documented procedures in place for setting up the emergency response headquarters for response activities at all levels of the government, and these are tested during exercises.

- Japan has a system in place to rapidly establish an operational large-scale emergency response headquarters as demonstrated in major events such as the Great East Japan Earthquake in 2011.

- There are staff working or on call 24/7 at all levels of the government for emergency response.

- The National Institute of Public Health and the National Disaster Emergency Management Team conducts public health emergency response and general disaster emergency response training to prefecture emergency operations staff.

Areas that need strengthening/ challenges

- In the absence of a permanent public health EOC in the MHLW, there may be a need to explore how to train and familiarize staff on the systems and processes used in the temporary facilities set up for each event, especially given these are not necessarily those used in daily work.

- Japan may benefit from establishing an Information Management System both at the national and prefecture level to enable effective logging of all incidents.

- Japan's emergency response plan may be strengthened by better defining and articulating the coordination between MHLW and the local governments during a public health crisis.

RESPOND

R.2.2 EOC operating procedures and plans – Score 4

Strengths/ best practices

- Japan has well-documented first response mechanisms for crises such as natural disasters and influenza pandemics that have been tested in exercises and real-world events such as during the Great East Japan Earthquake in 2011.

- The MHLW Disaster Management Operation Plan and bylaws describe the organization of the MHLW disaster response headquarters; information to be collected by individual bureaus; basic incident management team structures and their roles; and the escalation and de-escalation in response operations over time.

- Japan has developed SOPs and plans which stipulate the incident manager for different types of crisis and the level of the response (at local or national level).

- There are systems and templates in place for collecting and sharing information with relevant stakeholders during an emergency, as outlined in the Examples of communication procedures for first response in health risk and crisis management.

- There is an official process in place for secondment of surge staff through letters of concurrent appointment to emergency response headquarters prior to an event.

Areas that need strengthening/ challenges

- Although there is no deficiency in the current emergency response, it may be necessary to develop a structured training program for staff who may work in MHLW's public health emergency response headquarters to ensure consistent and comprehensive emergency management training are provided to all staff, which can also complement the exercises and drill currently conducted.

- It may be useful to develop operational plans which describe scaled levels of response and the resources required for each level to facilitate the forward planning of resources.

- Japan may benefit from having an ongoing development and reviewing program to promote the continuous improvement of EOC SOPs and plans.

R.2.3 Emergency operations programme – Score 5

Strengths/ best practices

- Japan has demonstrated the capacity to rapidly establish a large-scale emergency response headquarters in past emergencies, with response headquarters able to be established immediately in the Prime Minister's office and at the MHLW.

- There is a high level of commitment from senior-level officials to participate in a range of exercises and drills, including the pandemic influenza desktop exercise which was led by the Prime Minister and attended by Cabinet Ministers.

- Japan regularly updates plans and SOPs based on outcomes of evaluations of major emergency response activations and Cabinet Crisis Management Centre exercises.

Areas that need strengthening/ challenges

- Japan may benefit from developing a system for recording lessons learned from exercises, responses and audits, and monitoring the progress of their implementation, which can promote the continuous improvement of plans and operations.

R.2.4 Case management procedures implemented for IHR relevant hazards – Score 5

Strengths/ best practices

- Japan has developed case management guidelines for critical diseases as well as emerging and re-emerging infectious diseases such as MERS, SFTS, avian influenza A (H7N9), and Ebola virus disease.

- There are guidelines in place for the transportation of potentially infectious patients at the local level, including for areas where land transportation is difficult, and at PoE.

- There are SOPs in place for patient referral during nuclear, chemical, animal-derived illness and food-safety events.

Areas that need strengthening/ challenges

- It may be necessary to conduct continuous review and update of case management guidelines to maintain their relevance.

- It may be essential to continue supporting ongoing research to build scientific evidence to guide the development of case management guidelines.

Linking public health and security authorities

Introduction

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

Japan level of capabilities

Japan has established a comprehensive set of laws and systems to ensure a unified government response to nuclear, biological, and chemical (NBC) terrorism and other public health events and emergencies that may require cooperation between public health and security authorities. This legal framework was further strengthened after real-world events such as the 9-11 terrorist attack in the United States in 2001, and PHEICs such as pandemic influenza in 2009 and Ebola virus disease outbreak in 2014. The Civil Protection Law stipulates the protection measures during emergencies such as bioterrorism, where special provisions of the Infectious Diseases Control Act, the Immunization Act, and the Quarantine Act will take effect and form the primary legal basis of the response. Under the Quarantine Act, individuals with suspected and confirmed infection of quarantinable infectious diseases can be isolated and retained.

At the national level, various guidelines, memorandum of understanding (MOU) and agreements are in place to define roles and responsibilities of relevant ministries and agencies including those responsible for public health, animal health, and security agencies, for coordination of response during a bioterrorist attack. These include the Countermeasures to NBC and Other Massively Destructive Terrorism and Manuals for Responding to Biological Terrorism by Relevant Ministries and Agencies. A similar agreement is also in place for coordination of response at the local level that involves local multisectoral stakeholders such as the prefectural police and public health centres.

Japan has established various mechanisms to enable early detection of a bioterrorist attack. These include syndromic surveillance of respiratory and skin diseases of unknown cause at sentinel sites, and for local governments to provide information on critically ill patients under unusual circumstance based on the directive Countermeasures on the Response to Domestic Terrorism Incidents. Preventive biosafety and biosecurity measures are also in place to restrict the possession and deliberate release of high-risk pathogens.

Although there are no regularly scheduled information exchanges among government agencies, if biological terrorism is suspected, mechanisms are in place for MHLW to promptly report information to the Situation Centre of the Cabinet under the Cabinet Intelligence and Research Office, which will then rapidly disseminate the information to the relevant government agencies such as the National Police Agency and the Fire and Disaster Management Agency. Under the Implementation Manual for Health Risk and Crisis Management Pertaining to Food Poisoning, suspected intentional food poisoning is also required to be promptly communicated to the Community Safety Bureau and the First Investigation Division, Criminal Affairs Bureau of the National Police Agency.

Japan conducts annual whole-of-government exercises to test the multisectoral coordination and response during public health emergencies. In 2017, Prime Minister Abe chaired the National Countermeasures Headquarters Meeting Exercise for Pandemic Influenza. In addition, exercises on biological terrorism response were held twice in 2017 as a part of the Civil Protection Exercise which included partipants fromboth public health agencies and security authorities.

Recommendations for priority actions

- Consider strengthening MHLW liaison and exchange of information with security authorities.

- Consider exploring an information sharing mechanism for classified information so that MHLW can be a regular recipient and contributor to government intelligence briefing documents.

Indicators and scores

R.3.1 Public health and security authorities (e.g. law enforcement, border control, customs) linked during a suspect or confirmed biological event – Score 4

Strengths/ best practices

- There is a clear framework for cooperation among national and local government agencies for managing bioterrorism events described in the Response to the NBC Terrorism and Other Massively Destructive Terrorism and the Model of Collaboration for responding to the NBC Terrorism and Other Massively Destructive Terrorism Together with Relevant Local Organizations, respectively.

- Japan conducts exercises on response to biological terrorism annually as a part of the Civil Protection Exercise.

- A whole-of-government action plan has been established to respond to influenza pandemic where roles and responsibility for security agencies have been defined as part of the outbreak response in cooperation with public health agencies.

Areas that need strengthening/ challenges

- Detailed operational plans may need to be reviewed and improved through table-top exercises for response to biological events.

- There may be opportunities to further promote information sharing between public health and law enforcement agencies through joint exercises in response to man-made biological events.

RESPOND

Medical countermeasures and personnel deployment

Introduction

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

Target

National framework for transferring (sending and receiving) medical countermeasures, and public health and medical personnel from international partners during public health emergencies.

Japan level of capabilities

Japan has established laws, regulations, plans, and guidelines for sending and receiving medical countermeasures during public health emergencies, both in and outside the country. Japan also has the legal basis for deploying and receiving healthcare workers including medical personnel for public health emergencies in and out of the country, as stipulated in the MHLW Disaster Management Operation Plan. In the coming years, Japan anticipates to further expand its role in international response through the deployment of trained health personnel, including public health experts.

Japan has a national stockpile of medical countermeasures including vaccines, anti-toxins, and medication, which are stored in nine locations across Japan to facilitate timely supply when required. Under the National Action Plan for Pandemic Influenza and New Infectious Diseases, antiviral for influenza and influenza vaccine are stored both at the national and local governments. Japan has conducted exercises for sending or receiving medication and medical devices within the country such as mass influenza vaccination exercises that have been conducted in some prefectures. During public health emergencies, the MHLW Disaster Management Operation Plan has a provision for the importation of medications that are available only outside the country. The Law on Securing Quality, Efficacy and Safety of Products Including Pharmaceuticals and Medical devices also allows the MHLW to grant conditional approval in exceptional circumstances for selling or manufacturing unregistered products in the context of a public health emergency.

The systems for sending and receiving medical countermeasures have a legal basis as stipulated in the MHLW Disaster Management Operation Plan, the National Action Plan for Pandemic Influenza and New Infectious Diseases and the MHLW Civil Protection Plan. Japan has provided ongoing regional support to stockpile antiviral medications for influenza and personal protective equipment (PPE) as part of a regional partnership, with medical countermeasures successfully delivered to other countries in the past year. In 2016, Japan shipped oseltamivir to Fiji and in 2017 to Mongolia through an international framework under the Asia-Europe Foundation (ASEF). During the 2014-2015 Ebola outbreak in West Africa, Japan also sent favipiravir, an anti-influenza drug which showed efficacy against Ebola virus in an animal model. Based on lessons learned from the Ebola outbreak, the Government of Japan has established the Basic Guidelines and Standard Procedures for Supplying Unapproved Drugs to Developing Countries in Case of Emergency in 2017 to further facilitate this process in the future.

Japan has a high capacity and a track record of dispatching workforce during international public health emergencies through bilateral and multilateral agreements. Since the Japan Disaster Relief Team Law (JDR Law) was enacted in 1987, Japan has dispatched 146 Japan Disaster Relief (JDR) teams to 45 countries and territories and has provided emergency relief goods. In 2014-2015, Japan also dispatched a total of 20 experts to Liberia and Sierra Leone as part of the Ebola outbreak response through the Global Outbreak Alert and Response Network (GOARN). Conversely, following the Great East-Japan Earthquake in 2011, Japan has also received a substantial amount of international support including medical relief teams and supplies from 23 countries and territories, United Nations (UN) teams, non-governmental organizations, and other private entities. Based on these experiences, Japan has further enhanced its legal framework to not only dispatch personnel but also to facilitate the process of receiving foreign medical teams.

Recommendations for priority actions

- Continue to strengthen existing national framework, plans and coordination mechanisms for sending and receiving medical countermeasures, and public health and medical personnel.

- Enhance international deployment of trained public health personnel to support regional and global response to outbreaks and emergencies, by conducting simulation exercise to test the newly developed protocols for receiving emergency medical teams and public health personnel.

Indicators and scores

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

Strengths/ best practices

- In Japan, the national stockpile of vaccines and anti-toxins for rare diseases is stored in nine locations across the country for timely supply when required. In compliance with the National Action Plan for Pandemic Influenza and New Infectious Diseases, local governments have stockpiles of essential medical countermeasures including antivirals for influenza that can be rapidly distributed in the event of an infectious disease outbreak or other public health emergencies.

- There is a legal basis for conditional approval in exceptional circumstances for selling or manufacturing unregistered products in the event of a public health emergency.

- Japan has a system in place to dispatch relief supplies for emergencies overseas and has provided support to other countries through ASEF.

Areas that need strengthening/ challenges

- Japan may benefit from developing a plan and guidelines for sending and receiving medical countermeasures that can address different types of large-scale public health emergencies beyond the scope of natural disasters and disease pandemics.

- There may be opportunities for Japan to further document and articulate the procedures to receive pharmaceuticals during public health emergencies as well as testing these through simulation exercises.

- Japan may explore further opportunities to support the development of international partnerships to provide pharmaceuticals or medical devices for disease outbreak and public health emergencies.

RESPOND

R.4.2 System in place for sending and receiving health personnel during a public health emergency – Score 4

Strengths/ best practices

- Japan has shown commitment to global outbreak response and initiated the 5-year Project for Developing and Dispatch Human Resources for a global infectious disease outbreak response under the Action Plan for Strengthening Measures on Emerging Infectious Diseases.

- Japan conducts personnel dispatch training including practical exercises for members of the Disaster Medical Assistance Team (DMAT) at least once a year. In addition, the JDR Team also conducts drills and exercises and implements personnel dispatch plans.

- There are many trained professionals in Japan who can be dispatched for disaster medical relief, including the JDR Teams which can be deployed overseas upon the request of the government of the affected country.

- Japan has recently established the JDR Infectious Diseases Response Team in 2015 following the Ebola outbreak in West Africa, with its first mission to respond to the yellow fever outbreak in the Democratic Republic of the Congo in 2016.

Areas that need strengthening/ challenges

- Although Japan has the capacity to manage most public health emergencies, Japan may still benefit from further testing and optimizing newly developed guidelines for receiving medical and public health personnel from abroad in the event of a major public health emergency.

- There are opportunities to further build on existing efforts to expand the number and variety of medical and public health professionals to be trained and deployed to respond to infectious diseases outbreaks overseas.

Risk communication

Introduction

Risk communications should be a multilevel and multifaceted process which aims at helping 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 the dissemination of information to the public about health risks and events, such as disease outbreaks. For any communication about risk caused by a specific event to be effective, the social, religious, cultural, political and economic aspects associated with the event should be taken into account, including the voice of the affected population.

Communications of this kind promote the establishment of appropriate prevention and control action through community-based interventions at individual, family and community levels. Disseminating the information through appropriate channels is essential. Communication partners and stakeholders in the country 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

State Parties use multilevel and multifaceted risk communication capacity. Real-time exchange of information, advice and opinions between experts and officials or people who face a threat or hazard (health or economic or social wellbeing) to their survival, so that informed decisions can be made to mitigate the effects of the threat or hazard and protective and preventive action can be taken. This includes a mix of communication and engagement strategies, such as media and social media communications, mass awareness campaigns, health promotion, social mobilization, stakeholder engagement and community engagement.

Japan level of capabilities

In Japan, risk communication is recognized as an important element in emergency response plans. It is included in various government-wide plans for public health emergencies, such as the Disaster Management Basic Plan and the National Action Plan for Pandemic Influenza and New Infectious Diseases. Although risk communication is only covered on a part-time basis by staff who perform other tasks during peacetime, full-time risk communication staff are assigned during emergencies. Based on experiences of large-scale public health emergencies, such as the Great East Japan Earthquake, Japan has demonstrated the capacity to scale up risk communication for multi-hazard situations. The involvement of top political leadership in risk communication is also apparent in their spokesperson roles, especially during emergencies. The annual exercises involving different government agencies also help to refine risk communication plans.

Outbreak control and communication come under the purview of the MHLW and depending on the nature and scale of the emergency, with a clear delineation of roles and responsibilities to dedicated divisions. There is a system to share health risk information across government ministries and agencies as necessary. In the event of pandemic influenza or other public health emergencies, a national emergency response headquarters in the Cabinet Secretariat, which is responsible for national coordination of risk communication, can be established and quickly provide information to relevant ministries and agencies.

RESPOND

In Japan, there is a decentralised system of social mobilisation and listening to allow for greater content customisation at the local levels. Local governments (prefectures and municipalities) play a major role in social mobilization, health promotion, and community engagement with guidance from MHLW. There are also efforts to be inclusive in stakeholder management, as various partners (e.g., health care workers, civil society organizations, the private sector and non-state actors) are engaged to support ground communication efforts.

The standard public relations functions which involve the production of publicity materials, media monitoring, media relations and online social media platforms are well established to disseminate information to the public. Local information desks are also set up at the prefecture level to address local concerns during emergencies.

One particular area for further development is to adopt a systematic approach to proactively address rumours, misinformation, and online falsehoods.

Recommendations for priority actions

- Conduct a strategic review of the risk communication coordination mechanisms to enhance existing structures, ensure strategic framing and coherence in communication messaging, as well as training of dedicated personnel specialized in risk communication.

- Establish stakeholder mapping from the central to the local levels to build more robust and scalable community mobilisation, and apply a systematic approach to understand risk perception of diverse audiences.

- Improve and build a proactive system of listening to assess and analyse ground sentiments to plug communications gaps and address rumour, misinformation and fake news.

Indicators and scores

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

Strengths/ best practices

- There are standard public relations procedures in place.

- An existing system is in place for information sharing and exchange among relevant government ministries and agencies during health emergencies.

- The Cabinet Secretariat and MHLW have issued basic public relations guidelines and risk communication guidelines for implementation by prefectures and municipalities.

- For pandemic influenza preparedness, annual exercises are conducted to test the establishment of emergency response headquarters and information exchange and sharing among relevant government ministries. Lessons learned from these exercises are incorporated into the National Action Plan for Pandemic Influenza and New Infectious Diseases, and Guidelines for Countermeasures against Pandemic Influenza and New Infectious Diseases when appropriate.

- The roles and responsibilities of spokespersons are defined in the National Action Plan for Pandemic Influenza and New Infectious Diseases.

Areas that need strengthening/ challenges

- Japan may consider how to more clearly define the strategic role of risk communication in framing central narrative, developing messaging guidance and execution of communication initiatives according to good risk communication principles such as transparency, timeliness and consistency to support national response plans.

- Besides information coordination, there may be a need to formalize the decision making process and mechanisms in determining communication strategies, tactics and tools to address possible scenarios such as pre-warning, containment and mitigation phases, with clear partners identified for effective execution.

- There is a need to further invest in financial and human resources to develop a sustainable capacity and capability in risk communication professionals. In the event of health emergencies, the role and responsibilities of the risk communication officer are not defined in the national system except for pandemic influenza.

R.5.2 Internal and partner communication and coordination – Score 4

Strengths/ best practices

- There is an existing framework in place to share information within the government sector, medical institutions and non-state partners. In the case of pandemic influenza, national emergency response headquarters is established which coordinates relevant ministries and agencies. In addition, a system is established to receive opinions from the Advisory Committee on Basic Action Policies, including non-state healthcare worker upon determining and modifying basic action policies.

- Japan utilises multiple platforms to disseminate Information to ensure accessibility to different audiences.

- There are systems in place to cascade information to local levels as well as external partners.

Areas that need strengthening/ challenges

- There is currently no framework of communication coordination with civil society organizations during an emergency. Besides public agencies, it is also essential to involve external partners during exercises to test out coordinating mechanisms and to address gaps to ensure a functioning system during a crisis.

- There may be a need for the provision of a budget for regular communication coordination with external partners and exercises to build a network of supporters and advocates on a sustained basis.

R.5.3 Public communication – Score 4

Strengths/ best practices

- There are established communications channels utilising both traditional and social media such as newspapers, radio, websites, Twitter, YouTube and Facebook.

- There is a routine system of media monitoring and analysis in place.

- During public health events, there is timely information sharing through regular press conferences/ releases, especially for natural disasters.

- A system is in place to train and assign spokespersons to support major emergencies and can involve senior political leadership when necessary.

Areas that need strengthening/ challenges

- There are opportunities for outcome-based communications with the strengthening of evaluation of communications activities as part of after action reviews.

- Japan may consider building a community of practice consisting of Public Relations Officers across agencies to share best practices, experiences and findings from after-action reviews on communication efforts for wider adoption across whole-of-government.

RESPOND

R.5.4 Communication engagement with affected communities – Score 3

Strengths/ best practices

- Decentralization of social mobilisation has yielded benefits of customisation of content and nimbleness in risk communication at ground level for greater relevance and resonance.

- Japan has leveraged risk communication education materials developed by research groups for swift information dissemination to disaster-stricken areas.

Areas that need strengthening/ challenges

- A more systematic feedback mechanism may help sharpen communication effectiveness as data are collected and analysed to identify perception gaps and for message resonance.

- Stakeholder mapping can be more inclusive to allow for greater collaboration with opinion shapers and communities to bring about joint ownership of problems.

- Japan may consider conducting communication research to enable inputs from listening and feedback mechanisms to be translated into communication initiatives to bring about behavioural changes, especially in a crisis.

R.5.5 Dynamic listening and rumour management – Score 3

Strengths/ best practices

- Media scanning of information reported on television, newspapers and the internet is conducted every day to check facts presented by the media, especially relating to natural disasters and the situation on the ground.

- Japan is proactively monitoring the domestic and international situation on pandemic influenza in accordance with the National Action Plan for Pandemic Influenza and New Infectious Diseases.

Areas that need strengthening/ challenges

- There may be a need to develop a sustainable communication strategy/structure and resources to address rumours and online falsehoods.

- Japan may consider building factual platforms to address falsehoods and allow the public to check facts directly, possibly through a one-stop portal.

OTHER IHR-RELATED HAZARDS AND POINTS OF ENTRY

Points of entry (PoE)

Introduction

All core capacities and potential hazards apply to "points of entry" and thus enable the effective application of health measures to prevent 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 designate ground crossings), which will implement specific public health measures required 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, a State Party may designate ground crossings) that implement specific public health measures required to manage a variety of public health risks.*

Japan level of capabilities

Japan has made a commendable effort to meet the core capacity requirements for points of entry (PoE) under the IHR (2005), with activities at PoE operating under the Quarantine Act and the Infectious Diseases Control Act. The purpose of the Quarantine Act is to prevent infectious disease-causing pathogens that are not native to Japan from entering the country via vessels or aircraft, and to ensure that necessary measures are taken to prevent and control the spread of other infectious diseases involving vessels or aircraft. Under the Quarantine Act, quarantinable diseases consist of Category I infectious diseases specified by the Infectious Diseases Control Act, and includes pandemic influenza, Zika virus infection, chikungunya fever, MERS, dengue fever, avian influenza (H5N1 and H7N9), and malaria.

Japan has a total of 110 quarantine stations across the country, consisting of 13 main stations (11 seaports and 2 airports), 14 branch offices (7 seaports and 7 airports) and 83 sub-branch offices (62 seaports and 21 airports). There are approximately 1000 quarantine staff with around half of these being medically trained quarantine officers who are situated at quarantine stations. Health consultation rooms are established at designated airports and at some designated seaports to confirm the health status of travellers from abroad. In addition, some airports have clinics available for community members and travellers. Rapid diagnosis of quarantinable infectious diseases is also possible through the existence of laboratories at 14 PoE, with Class 1 quarantinable infectious diseases tested at the NIID. Stockpiles of protective equipment to manage ill travellers and telephone interpreters are available. A list of contact information of the designated medical institutions with the necessary equipment to handle infectious diseases is also available. If a suspected patient with class I infectious disease or pandemic influenza is identified, a system is in place to transport the patient promptly to the designated hospitals either using quarantine station vehicles or vehicles organized through the quarantine office headquarters. Biosafety equipment to prevent the spread of infections during patient transportation is available, and their use has been tested during exercises.

A safe environment for tourists who use facilities at PoE is assured through compliance with water quality standards based on the Water Supply Act; monitoring of eating and drinking establishments by prefectural

sanitation departments based on the Food Sanitation Act; management of public toilets; and management of waste disposal under the Waste Management and Public Cleansing Act. Inspections are also conducted to assure compliance with standards and guidelines.

Periodic surveys of vectors such as rodents and mosquitoes are also conducted at defined areas at PoE to identify species of captured hosts and vectors, and test for pathogens in accordance with available manuals. Upon identification of a non-native species or pathogen-carrying vector or host, the quarantine stations will then implement control measures as needed and publish findings on the official website as well as share reports with other quarantine stations. Annual training and periodic seminars are also held to develop human resources at PoE.

Ship sanitation inspections are conducted at all seaports, with a new training program introduced in 2017. Inspection and issuance of ship sanitation certificate are successfully conducted in accordance with IHR (2005).

Recommendations for priority actions

- Continue to conduct scientific evaluations of the effectiveness of measures at PoE.
- Consider opportunities to streamline human resources at PoE.
- Consider a new role of PoE in health security in a highly-connected world, including the role of traveller exit measures when required.

Indicators and scores

PoE.1 Routine capacities established at points of entry – Score 5

Strengths/ best practices
- Quarantine stations have been established at 80 seaports and 30 airports across the country with comprehensive facilities installed and measures implemented at PoE to ensure the necessary response to the importation of infectious diseases.
- The surveillance and control of vectors and hosts are implemented around PoE.
- A new training program has been introduced for ship sanitation inspections, and graduates of the training will be placed at 15 locations of the 18 designated PoE at seaports.

Areas that need strengthening/ challenges
- Japan may face human resources challenges at PoE given the number of airports and seaports, and the increasing quarantine activities at PoE as the number of travellers to Japan increases.

PoE.2 Effective public health response at points of entry – Score 5

Strengths/ best practices
- Prevention and response activities at PoE are included in emergency plans such as plans based on the Act on Special Measures for Pandemic Influenza and New Infectious Diseases preparedness and response.
- A system for the transfer of potentially infectious patients from PoE has been established, and relevant training and exercises have been conducted.

Areas that need strengthening/ challenges
- Ongoing scientific evaluation of the effectiveness of measures implemented at PoE using advanced methodology such as mathematical modelling, will be essential to ensure measures are meeting health security objectives.

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

Japan level of capabilities

Japan maintains a comprehensive chemical regulatory framework and coordination mechanisms among the many agencies that are responsible for surveillance, emergency preparedness, and response. The national legal framework for chemical safety aims to minimize impacts on humans, animals, and the environment through workplace and consumer protections; control of the use, disposal, and emission of hazardous substances; and integration of chemical event detection and response into the national emergency response systems. While a multitude of ministries and agencies are responsible for the array of chemical safety programs, responsible ministries coordinate regular interagency meetings and councils to evaluate chemical safety systems and hazard mitigation, including harmonization with international protocols such as the Strategic Approach to International Chemicals Management (SAICM). Japan has also ratified and implemented other international chemical conventions and agreements such as the Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals in International Trade. However, other conventions such as the International Labour Organization Convention 174 on Prevention of Major Industrial Accidents have not yet been ratified.

Chemical substance surveillance covers air, water, soil, household products, food, and the workplace, with testing conducted at the 83 Public Health Institutes throughout the country. Japan has also integrated chemical contamination investigative laboratories into the prefecture police headquarters, and there are a number of local environmental testing laboratories located around the country. The National Institute of Health Science, National Institute of Public Health, and National Institute of Environmental Studies provide national oversight and set standards for laboratory training and testing.

The national police, fire service, and self-defence forces coordinate chemical emergency response plans through the Cabinet Secretariat during large-scale chemical accidents; these agencies collectively assess hazards and coordinate national emergency responses in accordance with the Disaster Management Basic Plan. In the event of chemical terrorism, the Civil Protection Act is also in place to guide national response. When potential hazards are reported or detected through surveillance, prefectural and local police, fire service, and self-defence force outposts work together with the Public Health Institutes and Centres to intervene. The model of collaboration for responding to NBC terrorism and other massively destructive terrorism together with relevant local organization (discussed in more detail in the section on Emergency Response Operations) helps to organize the local response to the event of chemical terrorism.

The national government maintains numerous online information resources aimed at informing communities and private industries. The Japan Poison Information Centre provides a 24/7 hotline for the public and

government responders with a comprehensive database of toxicological information, medical treatment guidelines, and intervention guidelines for poisonings. The Centre maintains statistics on incoming calls and collects detailed clinical information on acute poisoning from medical institutions using a unified format.

Recommendations for priority actions

- Review the effectiveness of current operational plans and interagency coordination through national simulation exercises and consider ways to formalize national and subnational coordination of chemical emergency response.

- Develop exercises that involve prefecture and local responders to improve the overall effectiveness of immediate event assessment and response functions to limit the spread of contamination.

- Consider ways to review the Japan Poison Information Centre to determine resource needs to enhance utilization and modernization of information systems, as well as to plan for access to additional resources during a prolonged and/or large-scale chemical response.

Indicators and scores

CE.1 Mechanisms established and functioning for detecting and responding to chemical events or emergencies – Score 5

Strengths/ best practices

- Chemical surveillance activities are widespread throughout the country with appropriate mechanisms to detect and report potential events.

- Strong national and local systems are in place to respond to a chemical event.

- The principles for responding to a chemical event are derived from the existing all-hazards plan.

Areas that need strengthening/ challenges

- Continue to strengthen the systems at the Japan Poison Information Centre to ensure the maintenance of up-to-date information and promote an expanded role for health information collection and communication with affected communities during a large-scale or prolonged chemical event response.

CE.2 Enabling environment in place for management of chemical events – Score 4

Strengths/ best practices

- Japan has a comprehensive and integrated system of laws, regulations, and practices involving multiple levels of government to support management of chemical events.

- Japan has maintained strong occupational health and industrial standards, with resources available for community-based safety programs.

Areas that need strengthening/ challenges

- National systems and coordination mechanisms may need to be regularly tested and evaluated through simulation exercises given the rare nature of large-scale, real-world events.

- Consider formally delineating the roles and responsibilities of various agencies during a large-scale chemical event response, including appointing particular agencies to a lead-role immediately upon notification of an event.

Radiation emergencies

Introduction

To counter radiological and nuclear emergencies, timely detection and an effective response towards potential radiological and nuclear hazards/events/emergencies are required in collaboration with sectors responsible for radiation emergency management.

Target

States Parties with surveillance and response capacity for radiological and nuclear hazards/events/ emergencies. This requires effective communication and collaboration among the sectors responsible for radiological and nuclear emergency management.

Japan level of capabilities

Since the 2011 Great East Japan earthquake and the ensuing Fukushima Daiichi Nuclear Power Plant accident, the Government of Japan has focused considerable effort on strengthening national radiation and nuclear safety systems. The Nuclear Regulation Authority was established in 2012 to enhance overall nuclear safety and radiation preparedness by acting on lessons learned, strengthen whole-of-government planning, and ensure regulatory oversight of the industry. For nuclear power and other uses of radioactive material, the Nuclear Regulation Authority is the national regulatory authority and sets standards for preparedness and response that are coordinated with the Ministries. The Basic Act on Disaster Control Measures, the Act on the Regulation of Nuclear Source Material, Nuclear Fuel Material and Reactors, the Act on Prevention of Radiation Hazards due to Radioisotopes, and the Act on Special Measures Concerning Nuclear Emergency Preparedness establish systems for surveillance, detection, assessment, and response to radiation emergencies, as well as licensing for the use of radioisotopes. The Nuclear Regulation Authority is also responsible for licence and oversight of nuclear waste and other radioactive material storage and disposal.

The Nuclear Regulation Authority is required to coordinate with relevant stakeholders, including MHLW. Since 2014, the Nuclear Disaster Management Bureau, Cabinet Office, has functioned as the secretariat for the Nuclear Disaster Management Council as well as the Nuclear Emergency Response Headquarters in the Cabinet Office during a response. The Nuclear Regulation Authority's Guide for Emergency Preparedness and Response further describes the national emergency response systems and elements that are required at the prefectural level, including the provision of a network of designated medical facilities. There are currently five "high-level" medical centres capable of handling the most complex cases, and 32 "base hospitals" (among the 24 prefectures in Emergency Planning Zone) that have at minimum a decontamination room and radiation measuring devices. Based on internal and external expert consultation, as well as lessons learned from annual exercises, the national radiation emergency response plan is periodically revised, most recently in 2015 to establish a "Local Nuclear Disaster Management Council" to enhance community involvement in radiation safety.

Surveillance for radiation hazards is widespread across the country and in many media. Air, ground and drinking water, food, agricultural land, fisheries, and samples of flora are all regularly analysed for radioactive concentration.

OTHER

Recommendations for priority actions

- Continue to expand and strengthen the existing nuclear and radiation safety programs to ensure maximal community involvement.

- Consider incentives and/or stronger requirements for all prefectures to identify radiation "base hospitals" to ensure consistent medical preparedness around all nuclear power plants.

Indicators and scores

RE.1 Mechanisms established and functioning for detecting and responding to radiological and nuclear emergencies – Score 5

Strengths/ best practices

- Following experience from the Fukushima incident, Japan has further enhanced existing systems and now has well-resourced national emergency preparedness and emergency planning systems, including comprehensive surveillance for radiation hazards.

- Japan maintains appropriate stockpiles of medical countermeasures at multiple locations throughout the country.

- Japan has developed adequate occupational protection measures, including protection for first responders.

- Annual exercises are conducted that involve all levels of government with documentation and follow-up of lessons learned.

Areas that need strengthening/ challenges

- Continue to strengthen and refine the existing emergency response systems, and consider conducting periodic exercises of non-nuclear radiation emergencies such as accidents involving radioisotopes used in industry or acts of terrorism.

RE.2 Enabling environment in place for management of radiation emergencies – Score 5

Strengths/ best practices

- Specific laws and regulations have been established and revised following real-world events such as the nuclear accident in Fukushima, to support national nuclear and radiation safety, with clear and comprehensive national coordination across all levels of government.

- Incidents are assessed and reported quickly to the IHR NFP and the International Atomic Energy Agency (IAEA) as required.

- A strong network of healthcare facilities with special services to handle patients contaminated by radiation is coordinated by the Nuclear Regulation Authority.

Areas that need strengthening/ challenges

- Consider developing stronger incentive systems and stricter requirements for designation of "base hospitals" to ensure that there is at least one facility in each prefecture where nuclear facilities are located.

Appendix 1: JEE background

Mission place and dates

Tokyo, Japan: 26 February – 2 March 2018

Chiba, Japan: 27 February 2018

Mission team members:

- Dr. Mark Salter, United Kingdom, Public Health England (International team leader)
- Dr. Christopher Perdue, United States of America, US Department of Health and Human Services
- Ms. Karen Tan, Singapore, Ministry of Communications and Information
- Ms. Rhonda Owen, Australia, Australian Government Department of Health
- Dr. Zhang Yanping, China, Chinese Center for Disease Control and Prevention
- Dr. Youngmee Jee, Republic of Korea, Korea Centers for Disease Control and Prevention
- Dr. Katinka De Balogh, Food and Agriculture Organization of the United Nations
- Dr. Li Ailan, WHO Regional Office for the Western Pacific
- Dr. Oliver Morgan, WHO Headquarters
- Dr. Nemia Sucaldito, Philippines, Department of Health (Observer)
- Dr. Ok Park, Republic of Korea, Korea Centers for Disease Control and Prevention (Observer)
- Dr. Hirofumi Kugita, OIE Regional Representation for Asia and the Pacific (Observer)
- Dr. Maho Urabe, OIE Regional Representation for Asia and the Pacific (Observer)
- Dr. Masaya Kato, WHO Regional Office for the Western Pacific (Report writer)
- Dr. Cindy Chiu, Japan, Tohoku University (Report writer)

Objective

To assess Japan's capacities and capabilities relevant to the 19 technical areas of the JEE tool for providing baseline data to support Japan'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

Japan officially started the JEE process in August 2017 after voluntarily requesting a JEE to the WHO Regional Office for the Western Pacific. The Ministry of Health, Labour and Welfare took the lead and coordinated with various health and non-health ministries, agencies and entities to conduct a comprehensive review of the IHR (2005) core capacities using the JEE tool. The process was also conducted in consultation with both in-country and international JEE technical advisors, as well as the WHO Regional Office for the Western Pacific. The JEE self-evaluation report outlining the current capacities of the 19 technical areas in the JEE tool was prepared, translated, and shared with the international experts of the JEE team two weeks prior to the JEE mission in Japan. Two teleconferences were also held with the international team members of the JEE team on 8 and 9 February 2018 to brief the team on the objectives of the mission, clarify roles and responsibilities, and explain the process and logistics during the JEE mission.

A briefing was conducted on 25 February 2018 between representatives of the JEE national team and international experts of the JEE team before the mission officially began on 26 February 2018. The session was opened by the Parliamentary Vice-Minister of Health, Labour and Welfare, Honourable Ms. Mizuho Onuma, on 26 February 2018. Between 26 February and 1 March 2018, national and international experts jointly reviewed national capacities in the 19 technical areas of the JEE tool. Field visits were conducted on 27 February 2018 to provide an opportunity for more in-depth discussions and verification of capacities. Field sites included NIID, National Centre for Global Health and Medicine, the Tokyo Metropolitan Institute of Public Health, the Disaster Crisis Management Centre and food safety laboratory at the Public Health Institute of Chiba Prefecture, the Health and Welfare Centre in the Inba District, and the Narita International Airport. On 28 February 2018, the JEE team also visited the office areas at the MHLW that are designated for an EOC as needed. The mission concluded with a joint review and consensus of JEE scores, when the results of the assessment and observations of Japan's preparedness presented to Dr. Chieko Ikeda, Senior Assistant Minister for Global Health, Minister's Secretariat, Ministry of Health, Labour and Welfare on 2 March 2018.

Limitations and assumptions

- The evaluation was limited to one week, which limited the amount and depth of information that could be managed.

- It is assumed that the results of this evaluation will be publically available.

- The in-person evaluation was not an audit but part of a peer-to-peer process. As such, the information provided by the Government of Japan was not independently verified, and the capacity levels were mutually agreed to by Japan's program leaders and the evaluation team.

Key Japan participants and institutions

Japan lead representatives:

- » Ms. Mizuho Onuma, Parliamentary Vice-Minister of Health, Labour and Welfare
- » Dr. Yasuhiro Suzuki, Chief Medical and Global Health Officer, Vice-Minister for Health
- » Dr. Chieko Ikeda, Senior Assistant Minister for Global Health, Minister's Secretariat
- » Mr. Kazuhisa Takahashi, Deputy Assistant Minister for International Policy Planning, International Affairs Division, Minister's Secretariat
- » Dr. Kazunari Asanuma, Director, Health Sciences Division, Minister's Secretariat (Country technical lead)
- » Dr. Hiroyuki Hori, Senior Coordinator for Global Health, International Affairs Division, Minister's Secretariat (Country point of contact)

» Dr. Hiroyuki Noda, Director of Global Infectious Disease Control Office, Tuberculosis and Infectious Diseases Control Division, Health Service Bureau

» Dr. Tatsuhiro Isogai, Director of Infectious disease information surveillance office, Tuberculosis and Infectious Diseases Control Divisions, Health Service Bureau

» Dr. Takashi Ichikawa, Deputy Director, Health Sciences Division, Minister's Secretariat (IHR NFP)

» Dr. Hiroshi Matsumura, Deputy Director, International Affairs Division, Minister's Secretariat

» Dr. Mayuyo Mori, Deputy Director, International Affairs Division, Minister's Secretariat

» Dr. Tomoo Itou, Deputy Director, International Affairs Division, Minister's Secretariat

» Dr. Takuma Kato, Deputy Director, International Affairs Division, Minister's Secretariat

» Dr. Nanao Ishibashi, Section Chief, International Affairs Division, Minister's Secretariat

» Dr. Tomoya Saito, Chief Senior Researcher, Department of Health Crisis Management, National Institute of Public Health

» Dr. Tamano Matsui, Chief, Intelligence and Policy Planning Division (Division 1), Infectious Disease Surveillance Centre

Participating institutions:

Health sector

- Ministry of Health, Labour and Welfare

  » Personnel Division, Minister's Secretariat

  » General Coordination Division, Minister's Secretariat

  » Accounts Division, Minister's Secretariat

  » International Affairs Division, Minister's Secretariat

  » Health Sciences Division, Minister's Secretariat

  » Health Policy Bureau

  » Health Service Bureau

  » Pharmaceutical Safety and Environmental Health Bureau

  » Labour Standards Bureau

  » Child and Family Policy Bureau

  » Social Welfare and War Victims' Relief Bureau

  » Health Insurance Bureau

  » Director-General for Statistics and Information Policy

Other ministries, agencies or entities

- Cabinet Secretariat
- Cabinet Office
- Ministry of Internal Affairs and Communications
- Ministry of Justice
- Ministry of Foreign Affairs
- Ministry of Finance
- Ministry of Education, Culture, Sports, Science and Technology
- Ministry of Agriculture, Forestry and Fisheries

- Ministry of Economy, Trade and Industry

- Ministry of Land, Infrastructure, Transport, and Tourism

- Ministry of the Environment

- Ministry of Defence

- National Police Agency

- Financial Services Agency

- Consumer Affairs Agency

- Fire and Disaster Management Agency

- Japan Coast Guard

- Secretariat of the Nuclear Regulation Authority

Supporting documentation provided by Japan

National legislation, policy and financing

- The Law on Securing Quality, Efficacy and Safety of Products Including Pharmaceuticals and Medical devices

- Act on Special Measures for Pandemic Influenza and New Infectious Diseases Preparedness and Response

- MHLW Basic Guidelines for Health Risk and Crisis Management

- Implementation Manual for Health Risk and Crisis Management Pertaining to Pharmaceuticals, etc.

- Implementation Manual for Health Risk and Crisis Management Pertaining to Drinking Water

- Implementation Manual for Health Risk and Crisis Management Pertaining to Infectious Diseases

- Implementation Manual for Health Risk and Crisis Management Pertaining to Food Poisoning

- Reference Table for IHR Domestic Implementation

- Memorandum of Cooperation among the Ministry of Health, Labour and Welfare of Japan, the Ministry of Health and Welfare of the Republic of Korea and the National Health and Family Planning Commission of the People's Republic of China on a Joint Response against Pandemic Influenza and Emerging/Re-emerging Infectious Diseases of Common Concern

- Joint Action Plan among the Ministry of Health, Labour and Welfare of Japan, the Ministry of Health and Welfare of the Republic of Korea and the National Health and Family Planning Commission of the People's Republic of China on Preparedness and Response against Pandemic Influenza and Emerging/Re-emerging Infectious Diseases of Common Concern

- Act on the Prevention of Infectious Diseases and Medical Care for Patients with Infectious Diseases (Infectious Diseases Control Act)

- The Basic Guideline for Promoting the Prevention of Infectious Diseases

- Implementation manual for the National Epidemiologic Surveillance of Infectious Disease Program

- Quarantine Act

- Ordinance for Enforcement of the Quarantine Act

- Food Sanitation Act

- The Japan-China Food Safety Promotion Initiative

- The Law Concerning Measures to Protect the People in a Situation of Armed Attack (Civil Protection act)

- Water Pollution Prevention Act

- Water Supply Act

- Air Pollution Control Act

- Act on Special Measures Concerning Nuclear Emergency Preparedness

IHR coordination, communication and advocacy

- Detailed Rules of Health Risk and Crisis Management Committee

- Act on Special Measures for Pandemic Influenza and New Infectious Diseases Preparedness and Response

- MHLW Basic Guidelines for Health Risk and Crisis Management

- Implementation Manual for Health Risk and Crisis Management Pertaining to Pharmaceuticals, etc.

- Implementation Manual for Health Risk and Crisis Management Pertaining to Drinking Water

- Implementation Manual for Health Risk and Crisis Management Pertaining to Infectious Diseases

- Implementation Manual for Health Risk and Crisis Management Pertaining to Food Poisoning

- Guidelines for Health Risk and Crisis Management at a Local Level

- Implementation Manual for Health Risk and Crisis Management of the Regional (Branch) Bureaus of Health and Welfare

- National Action Plan for Pandemic Influenza and New Infectious Diseases

- Guidelines for Countermeasures against Pandemic Influenza and New Infectious Diseases

Antimicrobial resistance

- National Action Plan on Antimicrobial Resistance 2016-2020

- Nippon AMR One Health Report (NAOR)

- Manual for Antimicrobial Stewardship, first version (Tuberculosis and Infectious Diseases Control Division, Health Service Bureau, Ministry of Health, Labour and Welfare, June 1, 2017)

- Guidance for Implementing an Antimicrobial Stewardship Program in Japan (Eight-Academic Conference Antimicrobial Stewardship Promotion Joint Committee, September 26, 2017)

- Assessment Guidelines of the Effect of Food on Human Health regarding Antimicrobial-Resistant Bacteria selected by Antimicrobial Use in Food-Producing Animals (Food Safety Commission of the Cabinet Office, September 30, 2004)

- Ranking of the Importance of Antimicrobials against Bacteria that Affect Human Health through Food (Food Safety Commission of the Cabinet Office, April 13, 2006)

- Basic Concepts concerning the Prudent Use of Veterinary Antibiotics in Livestock Production (Ministry of Agriculture, Forestry and Fisheries, December 27, 2013)

Zoonotic diseases

- Act on Special Measures for Pandemic Influenza and New Infectious Diseases Preparedness and Response

- Act on the Prevention of Infectious Diseases and Medical Care for Patients with Infectious Diseases (Infectious Diseases Control Act)

- Act on Domestic Animal Infectious Diseases Control

- Rabies Prevention Act

- Protection and Control of Wild Birds and Mammals and Hunting Management Law

- National Action Plan for Pandemic Influenza and New Infectious Diseases

- Guidelines for Countermeasures against Pandemic Influenza and New Infectious Diseases

- Guidelines for Rabies Control in Japan 2001

- Guidelines for Rabies Control in Japan 2013

- Guidelines for Monitoring Animal Rabies

- Specific Domestic Animal Infectious Disease Quarantine Guidelines for Highly and Low Pathogenic Avian Influenza

- Epidemiological Inspection Report on Outbreaks of Highly Pathogenic Avian Influenza in FY2016

Food Safety

- Guidelines for Health Risk and Crisis Management at a Local Level

- Food Safety Basic Act

- Food Sanitation Act

- Regulations for comprehensive import bans

- Act on Safety Assurance and Quality Improvement of Feeds

- Act on Special Measures concerning the Management and Relay of Information for Individual Identification of Cattle (The Beef Traceability Act)

- Imported Foods Monitoring and Guidance Plan

- The Guidelines for Handling Food Poisoning

- Manual for Food Poisoning Survey

- Methods for creating statistics on food poisoning

- Implementation Manual for Emergency Response in Food Poisoning etc. for Food Safety Related Ministries

- The Japan-China Food Safety Promotion Initiative

- Standard Procedure for Risk Management on Food Safety and priority lists in MHLW; Standard Procedure for Risk Management on Food Safety and priority lists in MAF

- Report of the Investigative Review Committee on BSE Problem

- Measures to Ensure Food Safety (Department of Environmental Health and Food Safety, Pharmaceutical Safety and Environmental Health Bureau, MHLW)

- MHLW's website on food http://www.mhlw.go.jp/english/policy/health-medical/food/index.html

- Community Health Act
- Health Promotion Act

Biosafety and biosecurity

- Foreign Exchange and Foreign Trade Act
- Act on the Prevention of Infectious Diseases and Medical Care for Patients with Infectious Diseases (Infectious Diseases Control Act)
- Act on the Conservation and Sustainable Use of Biological Diversity through Regulations on the Use of Living Modified Organisms
- Act on Implementing the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on Their Destruction and the Other Conventions
- Act on Domestic Animal Infectious Diseases Control
- Industrial Safety and Health Act
- Code of Conduct for Scientists -Revised Version-

Immunization

- The Law on Securing Quality, Efficacy and Safety of Products Including Pharmaceuticals and Medical devices
- Immunization Act
- Basic Plan for vaccination (National Immunization Plan)

National laboratory system

- The Law on Securing Quality, Efficacy and Safety of Products Including Pharmaceuticals and Medical devices
- Act on the Prevention of Infectious Diseases and Medical Care for Patients with Infectious Diseases (Infectious Diseases Control Act)
- Ordinance for Enforcement of the Act on the Prevention of Infectious Diseases and Medical Care for Patients with Infectious Diseases (Infectious Diseases Control Act)
- Act on Clinical Laboratory Technicians
- Specific Domestic Animal Infectious Disease Quarantine Guidelines
- Disease Differentiation Manual
- Guidelines for Treasury Subsidization of Infectious Diseases Prevention Programs
- Operations Control Manual for Pathogen Testing at Laboratories (HSB/TIDCD Notification No. 1117-2 of 2015)
- Pathogen Detection Manual
- FY 2017 Guidelines for Implementation of the External Quality Control Program
- Manual for Safe Transport of Specified Pathogens, etc.
- FY 2016 Report on the External Quality Control Program
- Procedure for Manufacturing and Marketing of In Vitro Diagnostics

Real-time surveillance

- Act on the Prevention of Infectious Diseases and Medical Care for Patients with Infectious Diseases (Infectious Diseases Control Act)

- Guidelines for improving the notifications under the NESID Program

- Implementation manual for the National Epidemiologic Surveillance of Infectious Disease Program

- Infectious Agents Surveillance Report (IASR)

- Infectious Diseases Weekly Report (IDWR)

- Call for attention to medical institutions concerning recently reported measles patients

- Infectious Disease Surveillance System in Japan

- Operation of event-based surveillance (EBS) for infectious diseases at the National Institute of Infectious Diseases, Japan

- Clinical Features of Acute Flaccid Myelitis Temporally Associated with an Enterovirus D68 Outbreak: Results of a Nationwide Survey of Acute Flaccid Paralysis in Japan, August–December 2015

- Risk assessment and management of cases of human infection with H7N9 virus in China (as of May 1, 2013)

- Summary and evaluation of infectious disease surveillance information
  https://www.niid.go.jp/niid/ja/surveillance-data.html

Reporting

- Detailed Rules of Health Risk and Crisis Management Committee

- MHLW Basic Guidelines for Health Risk and Crisis Management

- Implementation Manual for Health Risk and Crisis Management Pertaining to Pharmaceuticals, etc.

- Implementation Manual for Health Risk and Crisis Management Pertaining to Drinking Water

- Implementation Manual for Health Risk and Crisis Management Pertaining to Infectious Diseases

- Implementation Manual for Health Risk and Crisis Management Pertaining to Food Poisoning

- Guidelines for Health Risk and Crisis Management at a Local Level

- Information gathering and communication under the revised IHR (2005) (Document 3-2 for the 2nd Meeting of the Health Risk and Crisis Management Committee, Health Science Council, June 5, 2007)

- Transaction Manuals for Health and Labour Science Grants

- Implementation Manual for Health Risk and Crisis Management of the Regional (Branch) Bureaus of Health and Welfare

Workforce development

- Act on the Prevention of Infectious Diseases and Medical Care for Patients with Infectious Diseases (Infectious Diseases Control Act)

- The Basic Guideline for Promoting the Prevention of Infectious Diseases

- Implementation manual for the National Epidemiologic Surveillance of Infectious Disease Program

- FETP-J (Field Epidemiology Training Program – Japan) NIID NDSC, 2017

- Basic Guideline to Promote Community Health Measures

- Overview of the 2014 Survey of Physicians, Dentists, and Pharmacists

- Overview of the 2015 Report on Regional Public Health Services and Health Promotion Services

- Survey of Physicians, Dentists, and Pharmacists

- Case Examples of Ensuring Public Health Physicians

- Japan Board of Public Health and Social Medicine http://shakai-senmon-i.umin.jp/profile.html

- National Institute of Public Health

Preparedness

- Act on Special Measures for Pandemic Influenza and New Infectious Diseases Preparedness and Response

- MHLW Basic Guidelines for Health Risk and Crisis Management

- Implementation Manual for Health Risk and Crisis Management Pertaining to Pharmaceuticals, etc.

- Implementation Manual for Health Risk and Crisis Management Pertaining to Drinking Water

- Implementation Manual for Health Risk and Crisis Management Pertaining to Infectious Diseases

- Implementation Manual for Health Risk and Crisis Management Pertaining to Food Poisoning

- Guidelines for Health Risk and Crisis Management at a Local Level

- Reporting System in the event of emergency of the MHLW (Notification)

- Implementation Manual for Health Risk and Crisis Management of the Regional (Branch) Bureaus of Health and Welfare

- The Basic Guideline for Promoting the Prevention of Infectious Diseases

- Guidelines for Measures for Smallpox (5th edition)

- Basic Guidelines for Strengthening Measures on Emerging Infectious Diseases

- Action Plan for Strengthening on Emerging Infectious Diseases - Japanese actions challenging continuous threats of infectious diseases - Ministerial Meeting on Measures on Emerging Infectious Diseases. February 9, 2016.

- National Action Plan for Pandemic Influenza and New Infectious Diseases

- Basic Act on Disaster Control Measures

- The Law Concerning Measures to Protect the People in a Situation of Armed Attack (Civil Protection act)

- Disaster Management Basic Plan

- MHLW Disaster management operation plan

- The Basic Guidelines for Protection of the People

- MHLW Civil Protection Plan

- Governmental First Response to Emergency Situation

- Implementation Details of Governmental First Response to Emergency Situation

- Recommendations concerning Preparedness against Chemical Terrorist Attacks (Health Risk and Crisis Management Committee, Health Science Council, July 10, 2014)

Emergency response operations

- Act on Special Measures for Pandemic Influenza and New Infectious Diseases Preparedness and Response

- MHLW Basic Guidelines for Health Risk and Crisis Management

- Templates for Communication in First Response in Health Risk and Crisis Management

- Reporting System in the event of emergency of the MHLW (Notification)

- Act on the Prevention of Infectious Diseases and Medical Care for Patients with Infectious Diseases (Infectious Diseases Control Act)

- A Guideline for Response of Local Governments to Viral Haemorrhagic Fever Patients, Version 2

- Guidelines for Measures for Smallpox (5th edition)

- National Action Plan for Pandemic Influenza and New Infectious Diseases

- Guidelines for Countermeasures against Pandemic Influenza and New Infectious Diseases

- Guidelines for the Transfer of Patients with Infectious Diseases

- Establishment Guide for a National Countermeasures Headquarters for Pandemic Influenza and New Infectious Diseases

- TORs of MHLW Pandemic Influenza and New Infectious Diseases Control Headquarters

- TORs of MHLW Avian Influenza Infection Control Headquarters

- MHLW Disaster management operation plan

- the Bylaws concerning the Organization of MHLW Disaster Response Headquarters

- MHLW Civil Protection Plan

- Handbook for Members of the MHLW Disaster Response Headquarters - Response Manual for Natural Disasters-

- Governmental First Response to Emergency Situation

- Implementation Details of Governmental First Response to Emergency Situation

Linking Public Health and Security Authorities

- Act on Special Measures for Pandemic Influenza and New Infectious Diseases Preparedness and Response

- Implementation Manual for Health Risk and Crisis Management Pertaining to Food Poisoning

- Act on the Prevention of Infectious Diseases and Medical Care for Patients with Infectious Diseases (Infectious Diseases Control Act)

- Immunization Act

- Guidelines for Measures for Smallpox (5th edition)

- National Action Plan for Pandemic Influenza and New Infectious Diseases

- National Public Safety Commission/National Police Department Action Plan for Pandemic Influenza and New Infectious Diseases

- Ministry of Defence Plan for Pandemic Influenza and New Infectious Diseases

- (Notification) (Cooperation Request) Transport of patients and clinical samples pertaining to Category 1 infectious diseases

- Quarantine Act

- (Notification) Confirmation of travel history to endemic countries within 21days for all immigrants on the border measures for Ebola Haemorrhagic Fever

- (Notification) Border measures on Ebola Haemorrhagic Fever in West Africa

- The Law Concerning Measures to Protect the People in a Situation of Armed Attack (Civil Protection act)

- The Basic Guidelines for Protection of the People

- MHLW Civil Protection Plan

- The Government Basic Principles for Measures Against Biological and Chemical Terrorism

- Implementation of Countermeasures against Biological and Chemical Terrorism (October 26th, 2001)

- Countermeasures to NBC and other Massively Destructive Terrorism

- Model of Collaboration for responding to the NBC Terrorism and Other Massively Destructive Terrorism Together with Relevant Local Organizations

- Manuals for Responding to Biological Terrorism by Relevant Ministries and Agencies

- Notice on "the Response to Terrorist Attacks in the Country" in December 2003.

Medical countermeasures and personnel deployment

- The Law on Securing Quality, Efficacy and Safety of Products Including Pharmaceuticals and Medical devices

- Act on Special Measures for Pandemic Influenza and New Infectious Diseases Preparedness and Response

- Act on the Prevention of Infectious Diseases and Medical Care for Patients with Infectious Diseases (Infectious Diseases Control Act)

- Basic Guidelines for Strengthening Measures on Emerging Infectious Diseases

- Action Plan for Strengthening on Emerging Infectious Diseases - Japanese actions challenging continuous threats of infectious diseases - Ministerial Meeting on Measures on Emerging Infectious Diseases. February 9, 2016.

- National Action Plan for Pandemic Influenza and New Infectious Diseases

- Guidelines for Countermeasures against Pandemic Influenza and New Infectious Diseases

- Basic Guidelines and Standard Procedures for Supplying Unapproved Drugs to Developing Counties in Case of Emergency

- Supply Procedures for National Vaccine Stockpiles, the Notification No. 357 of August 6, 1951.

- Basic Act on Disaster Control Measures

- The Law Concerning Measures to Protect the People in a Situation of Armed Attack (Civil Protection act)

- Disaster Management Basic Plan

- MHLW Disaster management operation plan

- The Basic Guidelines for Protection of the People

- MHLW Civil Protection Plan
- Standards of Japan DMAT Operation
- Standards of DPAT Operation
- Manuals for DPAT Operation
- Overview of the Infectious Diseases Response Team, JDR

Risk communication

- Act on Special Measures for Pandemic Influenza and New Infectious Diseases Preparedness and Response
- MHLW Basic Guidelines for Health Risk and Crisis Management
- Implementation Manual for Health Risk and Crisis Management Pertaining to Pharmaceuticals, etc.
- Implementation Manual for Health Risk and Crisis Management Pertaining to Drinking Water
- Implementation Manual for Health Risk and Crisis Management Pertaining to Infectious Diseases
- Implementation Manual for Health Risk and Crisis Management Pertaining to Food Poisoning
- Guidelines for Health Risk and Crisis Management at a Local Level
- Templates for Communication in First Response in Health Risk and Crisis Management
- Reporting System in the event of emergency of the MHLW (Notification)
- Implementation Manual for Health Risk and Crisis Management of the Regional (Branch) Bureaus of Health and Welfare
- A Guideline for Response of Local Governments to Viral Hemorrhagic Fever Patients, Version 2
- Guidelines for Measures for Smallpox (5th edition)
- National Action Plan for Pandemic Influenza and New Infectious Diseases
- Guidelines for Countermeasures against Pandemic Influenza and New Infectious Diseases
- the Business Continuity Guidelines for Central Governmental Agencies in Response to Pandemic Influenza and New Infectious Diseases
- Establishment Guide for a National Countermeasures Headquarters for Pandemic Influenza and New Infectious Diseases
- The guidelines for initial response to the outbreak of pandemic influenza and new infectious diseases (October 17, 2016)
- TORs of MHLW Pandemic Influenza and New Infectious Diseases Control Headquarters
- TORs of MHLW Avian Influenza Infection Control Headquarters
- MHLW Disaster management operation plan
- MHLW Business Continuity Plan - Pandemic Influenza Management
- MHLW Basic Guidelines for Public Relations

Points of entry

- MHLW Basic Guidelines for Health Risk and Crisis Management
- National Public Safety Commission/National Police Department Action Plan for Pandemic Influenza and New Infectious Diseases

- Pandemic Influenza (A / H1N1) - Correspondence and Challenges of the Future in Japan (in Japanese)

- Report of the Review Meeting on Measures against Pandemic Influenza (A/H1N1). June 10, 2010.

- Response to Ebola virus disease outbreak in West Africa by the Ministry of Health, Labour and Welfare of Japan in 2014-2015

- Quarantine Act

- Ordinance for Enforcement of the Quarantine Act

- Manuals for Quarantine Operation, 1st edition

- (Notification) Outsourcing agreement on admission of quarantinable disease patients

- Guidelines for Issuance of Certificate of Ship Hygiene Management (exemption)

- Food Sanitation Act

- Water Supply Act

- Waste Management and Public Cleansing Act

Chemical events

- Model of collaboration for responding to the NBC terrorism and other massively destructive terrorism together with relevant local organizations

- Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc.

- Poisonous and Deleterious Substances Control Act

- Industrial Safety and Health Act

- Water Pollution Prevention Act

- Water Supply Act

- Air Pollution Control Act

- Waste Management and Public Cleansing Act

- Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof (Law concerning Pollutant Release and Transfer Register / PRTR Law)

- Act on Control of Export, Import and Others of Specified Hazardous Wastes and Other Wastes

- Act on Special Measures against Dioxins

- Soil Contamination Countermeasures Act

- Offensive Odour Control Law

- Act to Prevent Soil Contamination on Agricultural Land

- Agricultural Chemicals Control Act

- Act on Special Measures concerning Promotion of Proper Treatment of PCB Wastes

- Act on Preventing Environmental Pollution of Mercury

- Building Standards Act

- Act on Maintenance of Sanitation in Buildings

- Consumer Product Safety Act

- Railway Operation Act

- Household Goods Quality Labelling Act

- Act on Control of Household Products Containing Harmful Substances

- Fire Service Act

- Act on the Prevention of Disaster in Petroleum Industrial Complexes and Other Petroleum Facilities

- High Pressure Gas Safety Act

- The Fourth Basic Environmental Plan

- SAICM National Implementation Plan of Japan

- A hospital monitors' report on household products-related health damages

- Guidelines for formulating manuals to respond to accidents related to chemical substances at local governmental environmental departments

- Continuous Monitoring of Hazardous Air Pollutants

- The exposure to chemical compounds in the Japanese People -Survey on the accumulation of dioxins and other chemical compounds in humans (2002-2010) and Survey of the exposure to chemical compounds in human (2011-)

- Japan Environment and Children's Study (JECS)

- Environmental health surveillance for Air Pollution

- Establishment of the standards for transportation and receiving of injured persons (Notification)

- National Profile on Chemicals Management

- Dioxins (2012)

Radiation emergencies

- The Medical Care Act

- Food Sanitation Act

- Basic Act on Disaster Control Measures

- Industrial Safety and Health Act

- Water Pollution Prevention Act

- Air Pollution Control Act

- Act for Establishment of the Nuclear Regulation Authority

- Atomic Energy Basic Act

- Act on Special Measures Concerning Nuclear Emergency Preparedness

- Act on the Regulation of Nuclear Source Material, Nuclear Fuel Material and Reactors

- Act on Prevention of Radiation Hazards due to Radioisotopes, etc.

- Regulation on Prevention of Ionizing Radiation Hazards

- Ordinance on Prevention of Ionizing Radiation Hazards at Works to Decontaminate Soil and Waste Contaminated by Radioactive Materials Resulting from the Great East Japan Earthquake and Related Works

- Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management

- Comprehensive Nuclear-Test-Ban Treaty

- Act on Special Measures for Dealing with Environmental Pollution Due to Radioactive Materials Discharged as a Result of the Nuclear Power Plant Accident Accompanying the Great East Japan Earthquake on March 11, 2011

- Nuclear Emergency Response Guidelines

- Disaster Management Basic Plan (Volume on Nuclear Emergency Response)

- Nuclear disaster management in the Regional Disaster Management Plans of the 47 prefectures

- White Paper: Disaster Management in Japan 2015

- White Paper: Disaster Management in Japan 2017

- Concepts of the Designation and Cancellation of Items and Areas for Inspection Plan, Shipment Restriction, etc. (established by the Nuclear Emergency Response Headquarters on April 4, 2011 (final revised on March 24, 2017))

- Purpose, Method and Structure of Emergency Monitoring - Supplemental document for Nuclear Emergency Response Guidelines

Presentations

- Presentation on overview of Japan's health system and JEE self-assessment
- Presentations on each of the 19 JEE technical areas