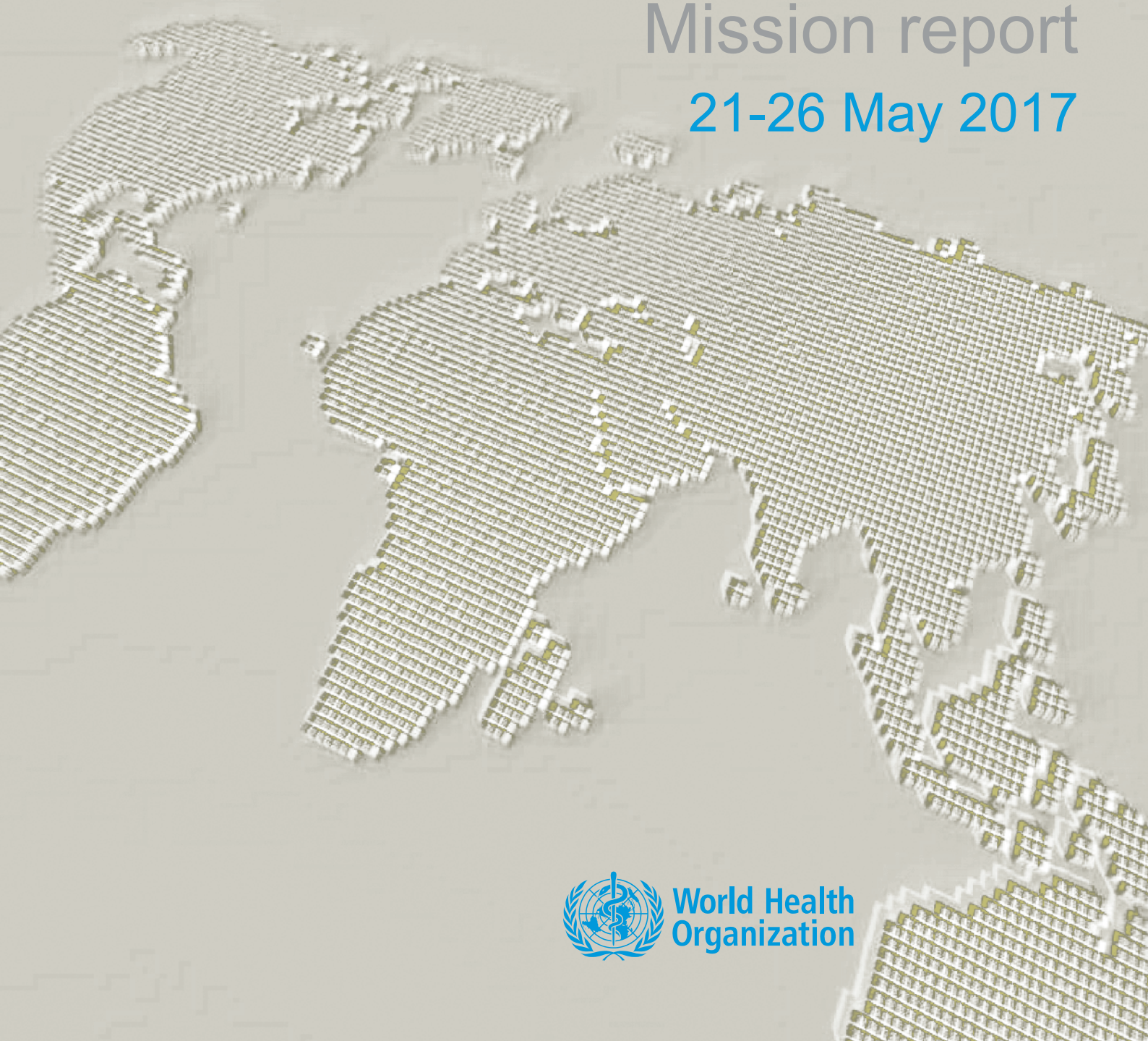
JOINT EXTERNAL EVALUATION OF IHR CORE CAPACITIES

of the

REPUBLIC OF BENIN

Mission report

21-26 May 2017



World Health Organization

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WHO/WHE/CPI/REP/2017.48

Suggested citation. Joint External Evaluation of IHR Core Capacities of the Republic of Benin. Geneva: World Health Organization; 2018. Licence: CC BY-NC-SA 3.0 IGO.

Cataloguing-in-Publication (CIP) data. CIP data are available at http://apps.who.int/iris.

Typesetting by Michel Schnegg, Geneva.

Contents

Acknowledgements

The Joint External Evaluation (JEE) Secretariat of the World Health Organization (WHO) would like to acknowledge the following, whose support and commitment to the principles of the International Health Regulations (2005) have ensured a successful outcome to this JEE mission.

- The Government and national experts of Benin for their support of, and work in, preparing for the JEE mission.
- The governments of the Islamic Republic of Mauritania and of the Kingdom of Morocco for providing technical experts for the peer-review process.
- The World Organisation for Animal Health (OIE), the Food and Agricultue Organization of the United Nations,the Centers for Disease Control and the United States Department of Agriculture (USDA) for their contribution of experts and expertise.
- The following WHO entities: the WHO Country Offices of Comoros, Mali and Burkina Faso.
- The Global Health Security Agenda Initiative for its collaboration and support.
- The governments of Germany, Finland and the United States of America for their financial support to this mission.

List of abbreviations

ECOWAS	Economic Community of West African States
EOC	Emergency Operations Centre
FAO	Food and Agriculture Organization
FETP	Field Epidemiology Training Programme
HCAI	Health Care-Associated Infection
HPAI	Highly Pathogenic Avian Influenza
IAEA	International Atomic Energy Agency
IDSR	Integrated Disease Surveillance and Response
OIE	World Organisation for Animal Health

Executive summary

Findings from the joint external evaluation

Introduction

The International Health Regulations (2005) (IHR (2005)) were adopted by the World Health Assembly at its Fifty-eighth session on 23 May 2005 and entered into force on 15 June 2007. Their purpose is "to prevent, protect against, control and provide a real-time public health response to the international spread of disease in ways that are commensurate with and restricted to public health risks, and which avoid unnecessary interference with international traffic and trade." They constitute a binding international instrument and impose a twofold obligation on WHO Member States: they must develop minimum core public health capacities and report annually to the World Health Assembly on the status of their implementation.

An IHR core capacity monitoring framework was put in place in 2010. It used a self-assessment questionnaire that enabled States Parties to report to the Health Assembly on the status of implementation of their minimum core public health capacities. In 2014, the IHR Review Committee recommended that countries' capacities be assessed using a new approach that moved from self-assessment to a combination of self-assessment, peer review and external evaluation.

The joint external evaluation (JEE) for Benin was carried out according to the prescribed two-stage process, namely (1) Benin conducted an initial self-assessment using the JEE Tool, and (2) an external team of IHR area-specific experts, working closely with host country experts, then carried out an in-country assessment.

The JEE mission in Benin

The JEE mission took place from 22 to 26 May 2017 and analysed the results of the host country team's self-assessment. The 19 technical areas covered by the JEE Tool were reviewed and discussed on the basis of documents provided to the experts and presentations made by host country representatives on Benin's levels of capacity, which also included recommendations. The internal assessment was based on a SWOT analysis (revealing strengths, weaknesses, opportunities and threats), supplemented by a sociological analysis. It included suggested scores for each indicator under each technical area. One day was spent on site visits, enabling the team to analyse the capacities in certain technical areas in greater depth. For each technical area, the indicator scores were revisited and finalized on the basis of consensus. The priority measures for improving national IHR capacities were discussed at length and validated.

This report reviews the results obtained in accordance with the process requirements of the JEE Tool. Because of the openness and commitment demonstrated by the host country team, the team of experts was able to work with entire transparency and in an environment of mutual trust throughout the process. Overall, the JEE found the scores and priority actions that emerged from the assessment process to be realistic.

Overview of main strengths

Benin resolutely began laying the foundations for implementation of IHR by starting work on developing a legal framework under the leadership of the Ministry of Health, with the support of the WHO country office.

Following events likely to constitute a public health risk or emergency of national or international concern, a coordinating team that brings together the relevant ministries is put into place under the auspices of the Platform for Disaster Risk Reduction and Climate Change Adaptation. Similarly, the National Council on AIDS, Tuberculosis, Malaria and Epidemics, which is coordinated by the highest-level authorities, brings together all sectors in crisis scenarios. Response preparedness standard operating procedures are already in place for Ebola and other haemorrhagic fevers, such as Lassa fever.

To manage antimicrobial resistance, the Minister of Health has prepared an action plan for the prevention and control of nosocomial infections and infections caused by antimicrobial-resistant infectious pathogens, and circulated it to partners. An official list of zoonotic diseases subject to monitoring was drawn up in 2001, and preparedness and response plans are in place for Highly Pathogenic Avian Influenza (HPAI), anthrax, rabies, and haemorrhagic diseases. Overall, despite limited numbers of veterinarians, Benin has thus far been able to protect itself from HPAI and Ebola haemorrhagic fever, which have been rampant in West Africa.

A basic food safety management framework is in place, consisting of a suitably equipped Central Laboratory for Food Safety Control, the Beninese Food Safety Agency and a Food, Nutrition and Health Safety Thematic Group. Training sessions on biosafety and biosecurity have been provided for laboratory staff with support from partners and the West African Network of Biomedical Analysis Laboratories. Benin also has a waste management policy for biomedical waste and waste from the HIV/AIDS serum banks at the AIDS Health Programme reference laboratory and the Hepatitis B and C serum banks at the National Blood Transfusion Agency reference laboratory.

Benin is implementing a national five-year immunization plan that is aligned with the WHO's global vaccine action plan and is receiving strong support from partners. Immunization is mandatory for targets and is approaching 90% coverage. Incentives for field teams are in place, as are culturally appropriate communication programmes to drive forward and extend immunization coverage in the country.

In the area of diagnostic services, the central laboratory—which is also the national reference laboratory—has the capacity to perform the principal tests for HIV, tuberculosis, malaria, measles, dysentery-related conditions, yellow fever, cholera, meningitis and polio. Regionally, laboratories are able to carry out the principal tests for cholera, HIV, malaria and meningitis. The two veterinary laboratories in Parakou and Bohicon carry out most of the common tests needed under the animal disease surveillance programmes (rabies, anthrax and HPAI).

The Integrated Disease Surveillance and Response (IDSR) strategy is used for 47 priority diseases, with real-time surveillance based on indicators or public health emergency-like syndromes (viral haemorrhagic fever, acute flaccid paralysis, meningitis-like syndrome, jaundice with fever). Efforts are also under way to implement an electronic real-time reporting system. A national IHR focal point has been put in place and cross-border meetings are held to discuss the reporting of public health emergencies or events.

On workforce training, Benin has well-organized teams of multidisciplinary specialists able to respond to epidemics without foreign assistance. A training plan incorporating field epidemiology has been set up with support from the Centers for Disease Control and the West African Health Organization.

For public health emergency preparedness, the risks and resources have been mapped at the national level and a public health emergency operations centre (EOC) is under construction. There is a national disaster relief plan to put in place preventive measures and organize relief in the event of accidents, disasters and

catastrophes. In addition, in 2011 Benin established a national platform for disaster risk reduction and climate change adaptation to coordinate the management of risks, threats, disasters and any international public health emergencies. Rapid response teams trained to respond to public health emergencies have been set up at the central, intermediate and local levels and have already been tested during the Lassa fever epidemics in 2014, 2016 and, most recently, February 2017.

Benin has experience of collaboration with partners in receiving medical countermeasures and transferring health personnel. It dispatched civilian and military personnel to support the three countries affected by the Ebola virus disease (EVD) epidemic, namely Guinea, Sierra Leone and Liberia.

The importance of risk communication is well recognized. A hotline is in place for the regular reporting of rumours. There is a subcommittee for communication under the national action plan for viral haemorrhagic fevers (Ebola, Lassa fever, etc.), which has an internal procedure authorizing the dissemination of messages to the public.

Benin has identified 13 points of entry for health monitoring at its borders: the airport, the port of Cotonou and 11 ground crossings. Health workers are stationed at these points of entry and are responsible for carrying out health controls, including verifying the immunization status of arriving passengers. They have participated in a series of training sessions on Ebola and IHR. Officials from the veterinary and plant protection services are also present at the port and airport of Cotonou and at the ground crossings.

In the area of chemical event risk management, Benin has ratified a number of international conventions, including the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal. Procedures to assess chemical risks and industrial chemical accidents are in place and involve three main national laboratories.

The political will to address radiation emergencies has been demonstrated by the designation of an inter-ministerial focal point for radiation events, and a bill on radiation security and nuclear safety has been drafted with assistance from the International Atomic Energy Agency (IAEA). The bill has been submitted to the National Assembly for adoption.

Major challenges

Benin has a comprehensive battery of legislation but no specific health-related legal framework that complies with IHR (2005); no review of legislation and regulations has yet been conducted from this angle. Moreover, the coordination platform for public health emergencies is still barely functional, as sufficient funding is lacking and the standard operating procedures supposed to govern the coordination between the recently created national IHR focal point and the other sectors involved are not yet in place.

A number of technical challenges must also be faced. Benin cannot yet effectively monitor and control antimicrobial resistance. The draft national plan for the detection and reporting of antimicrobial-resistant pathogens and nosocomial infections must be approved and funded before it can enter into force. In addition, no national laboratory has yet been designated for the detection of antimicrobial-resistant pathogens.

The One Health approach has yet to be officially adopted and the animal health and human health epidemiological surveillance networks function separately. There is no real communication between the two surveillance systems or among laboratories regarding zoonotic disease-related emergencies.

Despite the existence of institutions such as the Central Laboratory for Food Safety Control, the Beninese Food Safety Agency and a Food, Nutrition and Health Safety Thematic Group, it must be acknowledged that a multisectoral collaboration mechanism to analyse and manage food safety-related risks and/or guidelines for the prevention and management of foodborne intoxications are lacking.

National capacity to guarantee biosafety and biosecurity remains weak. There is currently no biosafety and biosecurity system that brings together the sectors of human health, animal health and agriculture. Facilities handling hazardous pathogens and toxins do not effectively record them. An effective national immunization plan is in place but struggles to reach all targets because of sociocultural hesitancy and logistical problems, and it does not address national zoonotic diseases. Work still needs to be done on the management of vaccines held by private entities and on immunization coverage data.

National laboratories face a number of difficulties: there is a lack of external-assessment, quality-assurance and equipment-maintenance programmes; the protection of workers against contamination risks is weak; there are logistical problems with the packaging and transport of specimens; stock outs of reagents are commonplace. In addition, there is no collaboration between medical and veterinary laboratories.

There is insufficient surveillance of events likely to threaten public health and attempts at electronic real-time reporting are hindered by the lack of interoperability and interconnectivity between the human health and animal health systems. With regard to the protocols and procedures for reporting, the country has not put standard operating procedures into place for approving and reporting international public health emergencies to WHO. In addition, the national IHR focal point is not yet operational.

In the area of staff development, coverage needs in terms of multidisciplinary specialists and field epidemiologists have not been met. The lack of involvement of other sectors in basic and/or advanced FETP training and the low levels of staff motivation must be rectified.

There is no national multi-hazard preparedness and response plan capable of fulfilling the main required IHR capacities in the event of a public health emergency. Approximately 90% of funding for public health emergency preparedness and response comes from partners. In addition, the budget of the National Public Health Office is insufficient and difficult to mobilize for the management of epidemics. The EOC activation mechanisms, written standard operating procedures and the necessary human and financial resources should be in place ahead of the delivery of the centre, which is now under construction. Legislation on risk communication and the multisectoral coordination of responses to public health emergencies should be prepared and approved. Lastly, Benin lacks a national plan for the transfer of medical countermeasures, deployment of health workers and reception of medical supplies in epidemics or pandemics.

For health surveillance at points of entry, suitable premises, diagnostic tools, sufficient equipment and procedural manuals are still lacking to detect health conditions and treat and/or evacuate patients to a suitable medical facility.

In Benin, the necessary capacities for chemical event surveillance, alert and management are not in place and hospitals are ill-prepared to treat patients exposed to the chemical risks covered under the IHR. Nor is there a national strategy for radiation emergency detection, risk assessment or response. No authority has been established with responsibility for radionuclear matters.

Next steps

At the end of five days of joint external evaluation with the host country experts, the members of the external team prepared the following recommendations for the Republic of Benin on the implementation of priority measures identified under the IHR:

1. Strengthen multisectoral coordination and collaboration among stakeholders under the One Health approach, in line with the commitments of West African states further to the press release issued after the ministerial meeting on public health.
2. Accelerate the updating of laws, regulations and standard operating procedures for the optimal implementation of IHR capacities.
3. Advocate for a sustained political and financial commitment on the part of the government to complement the support from partners and develop sustainable national IHR capacities.
4. Maintain the momentum and multisectoral collaboration generated during the IHR self-assessment and JEE in order to prepare the best national action plan for implementing the results obtained.
5. Become fully proficient in the tools of the new IHR framework (annual reporting, JEE, after-action review, simulation exercise(s)).

Republic of Benin 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)	1
	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)	1
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	1
Antimicrobial resistance	P.3.1 Antimicrobial resistance detection	1
	P.3.2 Surveillance of infections caused by antimicrobial-resistant pathogens	1
	P.3.3 Health care-associated infection (HCAI) prevention and control programmes	1
	P.3.4 Antimicrobial stewardship activities	1
Zoonotic diseases	P.4.1 Surveillance systems in place for priority zoonotic diseases/pathogens	3
	P.4.2 Veterinary or animal health workforce	3
	P.4.3 Mechanisms for responding to infectious and potential zoonotic diseases are established and functional	3
Food safety	P.5.1 Mechanisms for multisectoral collaboration are established to ensure rapid response to food safety emergencies and outbreaks of foodborne diseases	1
Biosafety and biosecurity	P.6.1 Whole-of-government biosafety and biosecurity system is in place for human, animal and agriculture facilities	1
	P.6.2 Biosafety and biosecurity training and practices	1
Immunization	P.7.1 Vaccine coverage (measles) as part of national programme	2
	P.7.2 National vaccine access and delivery	4
National laboratory system	D.1.1 Laboratory testing for detection of priority diseases	3
	D.1.2 Specimen referral and transport system	3
	D.1.3 Effective modern point-of-care and laboratory-based diagnostics	3
	D.1.4 Laboratory quality system	2
Real-time surveillance	D.2.1 Indicator- and event-based surveillance systems	3
	D.2.2 Interoperable, interconnected, electronic real-time reporting system	2
	D.2.3 Integration and analysis of surveillance data	3
	D.2.4 Syndromic surveillance systems	4
Reporting	D.3.1 System for efficient reporting to FAO, OIE and WHO	2
	D.3.2 Reporting network and protocols in country	2
Workforce development	D.4.1 Human resources available to implement IHR core capacity requirements	3
	D.4.2 FETP[1] or other applied epidemiology training programme in place	4
	D.4.3 Workforce strategy	2
Preparedness	R.1.1 National multi-hazard public health emergency preparedness and response plan is developed and implemented	1
	R.1.2 Priority public health risks and resources are mapped and utilized	2

[1] FETP: field epidemiology training programme

Technical areas	Indicators	Score
Emergency response operations	R.2.1 Capacity to activate emergency operations	1
	R.2.2 EOC operating procedures and plans	1
	R.2.3 Emergency operations programme	1
	R.2.4 Case management procedures implemented for IHR relevant hazards	1
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	2
Medical countermeasures and personnel deployment	R.4.1 System in place for sending and receiving medical countermeasures during a public health emergency	1
	R.4.2 System in place for sending and receiving health personnel during a public health emergency	1
Risk communication	R.5.1 Risk communication systems (plans, mechanisms, etc.)	1
	R.5.2 Internal and partner communication and coordination	2
	R.5.3 Public communication	3
	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	1
	PoE.2 Effective public health response at points of entry	1
Chemical events	CE.1 Mechanisms established and functioning for detecting and responding to chemical events or emergencies	1
	CE.2 Enabling environment in place for management of chemical events	1
Radiation emergencies	RE.1 Mechanisms established and functioning for detecting and responding to radiological and nuclear emergencies	1
	RE.2 Enabling environment in place for management of radiation emergencies	1

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

Benin level of capabilities

No review has been conducted of the legislation, regulations, administrative requirements and other government instruments relevant for implementation of IHR (2005). However, given the commitment shown by the health authorities, WHO has expressed its willingness to support Benin in the process of strengthening its legislation. The WHO guidelines on legislation should be followed closely so that Benin's laws and reference documents are aligned with IHR requirements.

Recommendations for priority actions

- Set up an intersectoral committee of technical legal advisers to review domestic laws with a view to identifying the ones that need to be amended to comply with IHR.
- Strengthen the government's capacity to amend domestic legislation, policies and administrative arrangements to align them with IHR (2005) on the basis of the WHO guidelines on strengthening IHR legislation.
- Conduct advocacy in relation to the Government and technical and financial partners to strengthen and implement the relevant legislation.

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 1

Strengths/best practices

- Benin has initiated the process of developing an IHR legal framework, terms of reference having been developed by the Technical Legal Adviser to the Ministry of Health.
- A roadmap adopted in 2013 has resulted in a smaller-scale internal assessment.

Areas that need strengthening/challenges

- Draft and enact IHR-specific legislation or a legal framework and review the relevant statutes.
- Conduct an audit of national laws with a view to enacting substantive provisions to facilitate efforts in the field.

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 1

Strengths/best practices

- The existing IDSR roadmap takes account of IHR.
- A review of veterinary legislation is being conducted. With support from OIE, Benin has for the past year been reviewing its veterinary laws and regulations and harmonizing them with international standards.

Areas that need strengthening/challenges

- Step up resource mobilization to implement the IDSR roadmap.
- Provide financial and material support to ensure compliance with ratified treaties.
- Align and supplement legislation as part of the IHR implementation process.
- Enact a law on health security.

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.

Benin level of capabilities

The mechanism for coordination among IHR-relevant ministries has not yet been formalized, and standard operating procedures have not yet been prepared. An IHR focal point has been chosen in each of those ministries, but the process of setting up a national focal point, which would normally be responsible for coordination, has not been completed.

Recommendations for priority actions

- Officially designate a national IHR focal point.
- Prepare standard operating procedures for coordination between the national IHR focal point and the various sectors.
- Guarantee sustainable funding for national IHR focal point activities.
- Set up an operational exchange platform in order to institutionalize the One Health approach at the different levels of the health system.

Indicators and scores

P.2.1 A functional mechanism established for the coordination and integration of relevant sectors in the implementation of IHR – Score 1

Strengths/best practices

- The Platform for Disaster Risk Reduction and Climate Change Adaptation, whose executive secretariat is drawn from the National Civil Protection Agency, provides a forum for coordination among the relevant ministries during events likely to constitute a public health risk or emergency of national or international concern.
- The National Civil Protection Agency and the ministries have sound crisis response practices. During the 2014 Lassa epidemic, the Ministry of Health activated the platform mentioned above, which led to the creation of a crisis committee and the development of crisis management strategies.
- The National Council on AIDS, Tuberculosis, Malaria and Epidemics, which is coordinated by the President of the Republic, widened its area of competence to include tuberculosis and epidemics. As the Council is more a strategic body than an operational one, it can play an important role in stepping up and institutionalizing collaboration among stakeholders and in establishing procedures.

Areas that need strengthening/challenges

- Make the national IHR focal point an official institution.
- Ensure funding for coordination platform activities.
- Establish standard operating procedures or guidelines for coordination between the national IHR focal point and the other sectors involved.
- Strengthen the national IHR focal point's coordination with technical and financial partners.
- Designate a focal point at the Ministry of Infrastructure and Transportation to assist in emergency health interventions at points of entry.
- Strengthen systems for the systematic and timely exchange of information among surveillance units, animal health and human health laboratories, and other sectors involved in zoonotic emergencies.

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.

Benin level of capabilities

Benin's capacities to limit and manage antimicrobial resistance are either not yet in place or are practically inexistent. Data on antimicrobial resistance are not collected and no national laboratory has been designated for antimicrobial-resistant pathogens.

It should, however, be noted that a national action plan for the prevention and control of health care-associated infection (HCAI) has been prepared by the Ministry of Health and is awaiting approval and funding. The plan addresses three indicators: detection of antimicrobial resistance, surveillance of infections caused by antimicrobial-resistant pathogens, and an HCAI prevention and control programme. There have been a number of initiatives on antimicrobial resistance—including training sessions on infection prevention and control and the creation of infection prevention committees in hospitals—and a project to monitor HCAI is being rolled out in three hospitals, namely the Boko regional hospital, the Papané regional hospital, and the HKM National University Hospital Centre. However, there are currently no animal health initiatives.

Recommendations for priority actions

- Address animal health and the environment, in addition to infection prevention and control, in the national plan for the surveillance of antimicrobial-resistant pathogens.
- Prepare an antimicrobial stewardship plan.
- Strengthen the antimicrobial resistance detection capacity of the national human and animal health reference laboratories.

Indicators and scores

P.3.1 Antimicrobial resistance detection – Score 1

Strengths/best practices

- A national plan is in place to detect antimicrobial-resistant priority pathogens in humans.
- Nine laboratories are able to detect and report pathogens or prepare antibiograms, namely the national laboratory, the Hospital of the Mother and Child, the HKM National University Hospital Centre, five departmental university hospital centres, and the National Tuberculosis Programme laboratory.
- Testing for a number of human pathogens is possible, namely Enterobacteriaceae and gram-positive and gram-negative cocci.

Areas that need strengthening/challenges

- Set up a comprehensive national plan for detecting and reporting antimicrobial-resistant priority pathogens in humans and animals.
- Designate a national reference laboratory for antibiotic resistance in humans and animals.

P.3.2 Surveillance of infections caused by antimicrobial-resistant pathogens – Score 1

Strengths/best practices

- A project to monitor the relevant infections is being set up in three hospitals, namely the Boko regional hospital, the Papané regional hospital, and the HKM National University Hospital Centre.

Areas that need strengthening/challenges

- Put into operation the draft national plan for the surveillance of infections caused by antimicrobial-resistant pathogens (which refers, among other things, to sentinel sites).

P.3.3 Health care-associated infection (HCAI) prevention and control programmes – Score 1

Strengths/best practices

- A public hygiene code, a framework law on the environment and a decree on the sound management of biomedical waste are in place.
- The Government of Benin has signed and delivered to WHO an instrument expressing its commitment to controlling HCAI.
- Around 30 Beninese hospitals are involved in the WHO global programme Save Lives: Clean Your Hands.
- World Hand Hygiene Day is celebrated every 5 May in Benin.

Areas that need strengthening/challenges

- Raise awareness of HCAI.
- Develop a system to assess the effectiveness of HCAI-control measures.

P.3.4 Antimicrobial stewardship activities – Score 1

Strengths/best practices

- There are national guidelines on the proper use of antibiotics.

Areas that need strengthening/challenges

- Formulate a national plan on antimicrobial stewardship.
- Carry out a survey to assess whether antibiotics are being used properly.

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

Benin level of capabilities

Despite significant understaffing, with public sector veterinarians retiring and very low levels of recruitment, the Veterinary Services Office of the Ministry of Agriculture, Livestock and Fishing and the relevant departments of the Ministry of Health have had to handle a number of serious zoonotic disease alerts in the subregion (namely HPAI and Ebola haemorrhagic fever, which were present in neighbouring countries but did not affect Benin). In addition, Benin had to contend with several episodes of Lassa fever in 2014, 2016 and February 2017. The toll in terms of human lives lost showed these epidemics to be extremely destructive.

By Order No. 080/MDR/DCAB/SGM/DA/CP of 6 February 2001, the government established a list of zoonotic diseases to be monitored in Benin, and the Veterinary Services Office regularly reports confirmed cases to OIE.

Benin has several prevention and response plans for potentially epidemic zoonotic diseases such as HPAI, anthrax, rabies and haemorrhagic diseases. The One Health approach has not yet been officially adopted, but during crises departments from different ministries are able to exchange information and jointly manage the situation.

The animal health and human health epidemiological surveillance networks function in parallel, without any communication between them.

Recommendations for priority actions

- Follow through on the national plan on priority zoonotic diseases (Studies and Programming Division) and regularly update the contingency plans and control plans that are developed.
- Establish a public-private partnership to meet veterinary staffing needs within the health system.
- Develop and implement a continuing education programme in field epidemiology leading to a degree.
- Institute a mechanism for communication between the veterinary and human health services with a view to better managing zoonotic diseases.

Indicators and scores

P.4.1 Surveillance systems in place for priority zoonotic diseases/pathogens – Score 3

Strengths/best practices

- A field network with adequate linkages is in place.
- Livestock keepers are well-informed about common diseases.
- Veterinary staff are present in each region.
- There are emergency plans for certain zoonotic diseases.

Areas that need strengthening/challenges

- Revitalize the epidemiological surveillance network.
- Train newly recruited technicians.
- Provide animal health information to the human health services.
- Update existing emergency plans.
- Prepare new plans to control zoonotic diseases.
- Organize full-scale simulations for the major zoonotic diseases.

P.4.2 Veterinary or animal health workforce – Score 3

Strengths/best practices

- There are recently graduated veterinarians in the private sector.
- Field epidemiology training is available.
- There is sufficient coordination with the human health services during crises.
- The capacity exists to provide continuing education as needed.

Areas that need strengthening/challenges

- Implement continuing education plans for all health workers.
- Organize joint training on zoonotic diseases for the human health and veterinary services.
- Formalize a partnership with private-sector veterinarians for assistance in IHR implementation.

P.4.3 Mechanisms for responding to infectious and potential zoonotic diseases established and functional – Score 3

Strengths/best practices

- Plans to control certain zoonotic diseases (including HPAI, rabies and telluric diseases) are in place.
- The relevant services are familiar with the preparation of emergency plans.
- The Ministry of Health and the Ministry of the Environment share information in the event of an epizootic or zoonotic epidemic.

Areas that need strengthening/challenges

- Improve the still weak capacity to respond to zoonotic diseases in a timely manner.
- Prepare emergency or control plans for the other zoonotic diseases.
- Institute regular meetings of the veterinary and human health services during non-crisis periods.

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..

Benin level of capabilities

All the components of a robust framework for food safety surveillance and control actually exist in Benin: national or international food safety standards are in place, Benin participates in the International Network of Food Safety Authorities (INFOSAN), and there is a laboratory for monitoring food quality and detecting bacterial and other pathogens. However, action by the relevant government services is sporadic and often belated.

Despite the existence of these components, there is no effective mechanism to exchange information rapidly, nor is there multisectoral collaboration to create a risk profile for food safety issues. Benin does not have guidelines for the prevention of foodborne intoxications. If a food-safety-related situation were to arise, the country's specialists would follow FAO guidelines.

Recommendations for priority actions

- Designate a national reference laboratory by ministerial order and develop standard operating procedures and technical guidelines to be applied in all suspected cases of foodborne intoxication.
- Under the aegis of the National Public Health Office, identify multidisciplinary local teams (at the peripheral, intermediate and central levels) trained in investigating outbreaks of foodborne diseases.
- Prepare and implement a 10-year food safety management and control plan involving laboratories, human and animal health facilities, human health and animal health focal points, sociologists and traditional communicators.

Indicators and scores

P.5.1 Mechanisms for multisectoral collaboration established to ensure rapid response to food safety emergencies and outbreaks of foodborne diseases – Score 1

Strengths/best practices

- The Central Laboratory for Food Safety Control is well equipped and accredited.
- The Beninese Food Safety Agency is in place.
- The Food, Nutrition and Health Safety Thematic Group is in place.
- Benin is part of INFOSAN.
- Regional focal points have responsibity for collecting specimens in suspected cases of foodborne intoxication and sending them to the Central Laboratory for Food Safety Control.

Areas that need strengthening/challenges

- Boost multisectoral collaboration to create a food safety risk profile that can help authorities identify ways to implement appropriate risk management strategies.
- Establish effective, standing lines of communication among food safety stakeholders.

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.

Benin level of capabilities

Benin's established capacity to improve biosafety and biosecurity is very limited and considerable efforts will be required. For example, there is no biosafety and biosecurity system that involves the human health, animal health and agricultural sectors. There are no biosafety and biosecurity plans or training programmes in place. However, training sessions to introduce laboratory staff to these areas and to keep them up to date have been held with support from technical and financial partners and the West African Network of Biomedical Analysis Laboratories.

Recommendations for priority actions

- Prepare and roll out a national plan targeting biosafety and biosecurity with intersectoral involvement (human, animal and environmental facilities) and with whole-of-government support and backing (National Public Health Office).
- Prepare, approve and implement standard operating procedures for each class of pathogens (with a register or inventory that is kept up to date) in facilities that hold or work with hazardous pathogens and toxins (National Public Health Office).

Indicators and scores

P.6.1 Whole-of-government biosafety and biosecurity system in place for human, animal and agriculture facilities – Score 1

Strengths/best practices

- There is a suitable policy for managing biomedical waste.
- There are HIV/AIDS serum banks at the reference laboratories of the AIDS Health Programme and the National Blood Transfusion Agency.

Areas that need strengthening/challenges

- Find funding for the national biosafety and biosecurity system, together with technical and financial partners.

P.6.2 Biosafety and biosecurity training and practices – Score 1

Strengths/best practices

- Government authorities are increasingly committed to technically and financially supporting the preparation of a national biosafety and biosecurity staff training programme for all facilities where hazardous pathogens and toxins are held or handled.

Areas that need strengthening/challenges

- Set up a biosafety and biosecurity staff training system in all facilities where hazardous pathogens and toxins are held or handled.

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.

Benin level of capabilities

The Republic of Benin has a five-year national immunization plan that is aligned with the WHO Global Vaccine Action Plan. Unfortunately, it does not address zoonotic diseases, even though veterinarians administer rabies and anthrax vaccines in parallel.

The national immunization agency runs the national programme and has resource-mobilization capacities. However, the funding system is not sustainable, as the programme is largely dependent on external partners. A review by the Expanded Programme on Immunization shows measles immunization coverage being under 70%, but according to government data, coverage exceeds 100%. This indicates a real problem in the quality of programme data.

Vaccine access and delivery covers Benin's 34 health areas and the supply system is effective. However, vaccines held by private parties, such as pharmacies, are not controlled. This is also a problem with respect to animal vaccines, as the majority are held by private parties and remain outside official animal immunization campaigns.

The national regulatory authority is not yet functional, but various governmental offices (the Office for Pharmacy, Medicine and Diagnostic Exploration, the National Agency for Immunization and Primary Healthcare and the National Public Health Office) provide quality control for vaccines, data, the cold chain and medical consumables. A pharmacovigilance committee is in place to manage cases of adverse events following immunization.

Recommendations for priority actions

- Regularly perform quality control (the Office for Pharmacy, Medicine and Diagnostic Exploration, the National Agency for Immunization and Primary Healthcare and the National Public Health Office).
- Advocate for a progressive increase in government funding of the national immunization plan so that the progress made to date can be maintained and continued.
- Improve the collaborative synergy between the health and animal sectors.
- Expand vaccine delivery to include zoonotic diseases (the National Public Health Office).
- Include the animal sector in the comprehensive multi-year plan for the period 2019-2023.

Indicators and scores

P.7.1 Vaccine coverage (measles) as part of national programme – Score 2

Strengths/best practices

- The comprehensive multi-year plan for the period 2014-2018 includes measures to increase Benin's routine immunization coverage to 90% and also provides for immunization campaigns.
- The measles strategic plan includes specific targets intended to increase immunization coverage in Benin. Strategies put forward are regularly carried out with support from partners.

Areas that need strengthening/challenges

- Increase measles immunization coverage throughout the country.
- Address zoonotic diseases in the national immunization plan.

P.7.2 National vaccine access and delivery – Score 4

Strengths/best practices

- WHO prequalified vaccines are delivered to 79% of health districts.
- A storage system encompassing the central and departmental levels is in place.
- During campaigns, supervisors ensure the proper storage of vaccines at vaccination sites.

Areas that need strengthening/challenges

- Increase government funding for the immunization programme.
- Ensure better management of vaccine stocks.

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.

Benin level of capabilities

Benin's national laboratory system includes facilities operated by the Ministry of Health and the Ministry of Agriculture, Livestock and Fishing, but they are not part of an official laboratory network. The public health laboratory system is organized at the local, regional and central levels. The central laboratory, which is the reference laboratory, has the capacity to perform the principal tests for HIV, tuberculosis, malaria, measles, dysentery-related conditions, yellow fever, cholera, meningitis and polio. Regionally, laboratories are able to carry out the principal tests for cholera, HIV, malaria and meningitis. Some laboratories plan to begin the process of becoming accredited. Benin has a P3 laboratory for the diagnosis of viral haemorrhagic fevers.

Difficulties remain in the packaging and transporting of clinical specimens in terms of both supplies and the logistics of transport. There seems to be room for significant improvement in the protection of workers against contamination risks. The same is true for the level of biosafety in the disposal of biomedical waste.

The laboratories have no external quality assessment programmes, no set standards, and no quality-assurance or equipment-maintenance programmes. Only the central and veterinary laboratories receive support from WHO and OIE, respectively.

Recommendations for priority actions

- Strengthen the operational capacity of laboratories, specifically by providing a qualified and stable workforce.
- Set up an operational national quality control committee.
- Set up a national quality assurance programme for the central laboratories.
- Begin a conversation on how the human health and animal health sectors can share the supplies and human resources required for cutting-edge technology.

Indicators and scores

D.1.1 Laboratory testing for detection of priority diseases – Score 3

Strengths/best practices

- There are adequately equipped laboratories.
- There are hard-working and competent staff.
- The field network is sufficiently dense to allow early detection of foci.

Areas that need strengthening/challenges

- Strengthen the operational capacity of existing laboratories.
- Provide incentives for specialized staff and decrease their turnover.
- Create formal channels of communication between the veterinary and human health services.
- Make the IT systems used in the animal health and human health sectors interoperable.

D.1.2 Specimen referral and transport system – Score 3

Strengths/best practices

- A basic capacity to collect and package specimens is in place.
- There is a system for transporting specimens.
- If needed, specimens can be sent to laboratories abroad.

Areas that need strengthening/challenges

- Ensure that the supplies needed to collect specimens are available.
- Standardize the documentation of specimens.
- Make sure field workers know which reference laboratory to send specimens to.
- Provide secure transport for specimens.

D.1.3 Effective modern point-of-care and laboratory-based diagnostics – Score 3

Strengths/best practices

- There is sufficient capacity at the central and regional levels to meet the needs in this area.
- Specialized personnel receive continuing education with support from technical and financial partners.
- There are well-equipped food-hygiene facilities.

Areas that need strengthening/challenges

- Maintenance of equipment is problematic.
- There are frequent stock outs of reagents.
- There is no communication among laboratories under different ministerial departments.

D.1.4 Laboratory quality system – Score 2

Strengths/best practices

- There is a significant support for involving reference laboratories in an existing quality-assurance procedure.
- There are routine checks.
- The human and animal health reference laboratories are part of regional laboratory networks.

Areas that need strengthening/challenges

- Train staff in quality assurance procedures.
- Progressively expand those procedures to include secondary laboratories.

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.

Benin level of capabilities

Benin has adopted and implemented an IDSR strategy for human health, with adapted IDSR guidelines and a list of 47 priority diseases under surveillance. The real-time surveillance put in place through this strategy includes indicator-based surveillance and surveillance of the principal public health emergency-like syndromes (viral haemorrhagic fever, acute flaccid paralysis, meningitis-like syndrome, jaundice with fever). With regard to animal health, a surveillance system has also been implemented, but it does not fall within the One Health approach and has not been sufficiently documented in this evaluation.

Surveillance of events likely to threaten public health, which is an important component of real-time surveillance, has not been sufficiently implemented. Some efforts to monitor rumours are under way and are being encouraged at different levels of the health system.

Efforts to roll out an electronic real-time reporting system are in progress, but effective interoperability and interconnectivity among the different systems, including the animal health and human health systems, have yet to be achieved.

Recommendations for priority actions

- Set up a structured surveillance system for events likely to threaten public health.
- Put an interoperable and interconnected electronic real-time reporting system into operation.
- Provide funding for internet connections for the prompt and full transmission of surveillance data.
- Systematically produce and disseminate surveillance bulletins and reports.
- Strengthen formal communication mechanisms between the animal health and human health sectors.

Indicators and scores

D.2.1 Indicator- and event-based surveillance systems – Score 3

Strengths/best practices

- A surveillance system is in place, with a clear list of priority diseases and electronic and paper-based data collection pathways.
- The data is collected using standardized forms, in electronic or other formats.
- A hotline was set up as part of Ebola preparedness and is still available for use in the event-based surveillance system.

Areas that need strengthening/challenges

- Set up an event-based surveillance system for events likely to threaten public health.
- Create and regularly fund a dedicated budget line for public health emergency surveillance and response.

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

Strengths/best practices

- There is an electronic system for reporting surveillance data that is used by stakeholders at the national, intermediate and peripheral levels.
- The animal sector has a data platform that is interoperable with OIE.
- The DHIS 2 platform is available in Benin and already covers certain priority illnesses under surveillance, such as malaria, that are reported on weekly.

Areas that need strengthening/challenges

- Set up and pilot a framework for dialogue between the animal health and human health sectors in order to effectively implement the One Health approach.

D.2.3 Integration and analysis of surveillance data – Score 3

Strengths/best practices

- Human health surveillance data are regularly analysed at the district and regional levels. They are transmitted weekly up through the hierarchy to the central level, where a comprehensive analysis is conducted.
- At least 80% of all reporting offices prepare complete and timely reports.
- Quarterly or semi-annual news bulletins are prepared and disseminated.
- Participants in the surveillance systems are periodically trained and retrained.

Areas that need strengthening/challenges

- Systematically share surveillance reports with other IHR-related sectors.

D.2.4 Syndromic surveillance systems – Score 4

Strengths/best practices

- A syndromic surveillance system is in place at all levels of the pyramid.

Areas that need strengthening/challenges

- Improve the timeliness and completeness of the surveillance reports prepared by all reporting offices.

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.

Benin level of capabilities

A national IHR focal point has been designated at the country level, as have national focal points for other sectors. The designated national focal point is the Ministry of Health (although we have not seen the official act of designation). The focal points have received the passwords for the web site and therefore have access to the training modules and best practices prepared by WHO, OIE and FAO. We cannot be sure that the training has been completed.

In the animal health sector, an OIE focal point has been designated and the mechanism for communication between the animal health sector and OIE functions well. However, no mechanism exists for the exchange of information between the national IHR focal point and the OIE focal point on issues such as zoonotic diseases. Trained rapid response teams at each level of the health pyramid facilitate the official decision-making process if a health emergency or event is reported.

Overall, the reporting capacity needs to be strengthened by clearly designating an IHR focal point, defining the terms of reference of its various components, and setting up a mechanism and procedures for reporting to WHO, OIE or FAO.

With regard to the regulatory or statutory protocols and procedures governing reporting, Benin does not yet have standard operating procedures for approving and reporting potential public health emergencies of international concern to WHO. The national IHR focal point uses informal WHO consultation mechanisms.

Recommendations for priority actions

- Institute a formal information-exchange mechanism for the national IHR focal point and WHO and OIE contacts.
- Strengthen reporting capacity overall by defining the terms of reference for the national IHR focal point and setting up a mechanism and procedures for reporting to WHO, OIE and FAO.
- Prepare standard operating procedures for the approval and reporting of all potential public health emergencies of international concern to WHO, OIE and FAO (National Public Health Office, Livestock Office).

Indicators and scores

D.3.1 System for efficient reporting to FAO, OIE and WHO – Score 2

Strengths/best practices

- Cross-border meetings are held with neighbouring countries to discuss reporting of public health emergencies or events.
- The informal WHO consultation mechanisms provided for under Article 8 of IHR are used.
- Trained rapid response teams are available at every level of the health pyramid.
- A simulation exercise was held in 2015 to test national systems for identifying and reporting potential public health emergencies of international concern.

Areas that need strengthening/challenges

- Make the national IHR focal point operational and define the terms of reference of its various components.
- Set up a mechanism for the national IHR focal point and WHO and OIE contacts to exchange information on public health events, including zoonotic diseases.

D.3.2 Reporting network and protocols in country – Score 2

Strengths/best practices

- Trained rapid response teams at each level of the health pyramid with the capacity to conduct rapid investigations to facilitate official decision-making if a health emergency or event is reported.
- IDSR guidelines for IHR reporting on public health events.

Areas that need strengthening/challenges

- Set up national standard operating procedures for approving and reporting potential public health emergencies of international concern to WHO.
- Study potential synergies between the health pyramid, the IDSR reporting tools and mechanism, and the progress that has been made in this area in order to refine the protocols and procedures for reporting public health events to WHO, OIE and FAO.

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).

Benin level of capabilities

Benin has well-organized teams of multidisciplinary specialists able to respond to epidemics without foreign assistance. A partnership has been created with other countries in the region to share staff with degrees in field epidemiology during emergencies. A training plan incorporating field epidemiology training and available long-term training programmes is in place to increase the number of qualified in-country public health workers. A regional public health institute located in Ouidah trains epidemiologists and public health professionals. With support from the Centers for Disease Control and the West African Health Organization, Benin has developed an introductory FETP programme and sends two or three physicians abroad every year for advanced FETP training. Despite these strengths, Benin's weaknesses include an insufficient number of field epidemiologists. However, an incentive strategy to retain existing staff is in place.

Recommendations for priority actions

- Increase the number of staff by recruiting specialists during the next recruitment as part of IHR implementation.
- Develop comprehensive incentive strategies for all staff involved in IHR (2005).
- Continue the training of field epidemiologists by setting up an intermediate-level FETP programme.

Indicators and scores

D.4.1 Human resources available to implement IHR core capacity requirements – Score 3

Strengths/best practices

- Well-organized teams of multidisciplinary specialists are able to respond to epidemics without foreign assistance.
- Available long-term training programmes help increase the number of qualified public health professionals.

Areas that need strengthening/challenges

- Increase the currently limited number of multidisciplinary specialists.

D.4.2 FETP or other applied epidemiology training programme in place – Score 4

Strengths/best practices

- The well-executed training plan includes field epidemiology training.
- An introductory FETP programme is available in country.
- Benin participates in the advanced FETP programme in Burkina Faso.

Areas that need strengthening/challenges

- Meet the coverage needs in field epidemiology.
- Involve other sectors in the introductory and advanced FETP training.

D.4.3 Workforce strategy – Score 2

Strengths/best practices

- There is a workforce training plan.
- A strategy is in place to retain existing staff with incentives such as performance-based compensation and housing.

Areas that need strengthening/challenges

- Ensure the sustainability of workforce incentive strategies.

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.

Benin level of capabilities

To strengthen public health emergency preparedness, the national risk and resource profiles were assessed in 2016. National resources have been mapped, as have risks in the animal health sector, but a national multi-hazard public health emergency preparedness and response plan to ensure IHR core capacities has not yet been prepared.

In terms of overall financing, there is only a small budget line under the National Public Health Office for the management of epidemics (public health emergency preparedness and response). This budget line is insufficient and difficult to mobilize, which means there is a delay in carrying out emergency operations. An estimated 90% of funding for public health emergencies is provided by partners.

Recommendations for priority actions

- Prepare a national multisectoral public health emergency preparedness and response plan to ensure IHR core capacities.
- Advocate for a larger budget line for health emergency preparedness and management.
- Prepare a national resource management and distribution plan (for human, material and financial resources) on the basis of the available assessment.

Indicators and scores

R.1.1 National multi-hazard public health emergency preparedness and response plan developed and implemented – Score 1

Strengths/best practices

- A public health emergency operations centre is being set up and a partial version of its implementation plan is available.
- There is a national disaster relief plan to organize preventive measures and deploy necessary relief efforts in the event of somewhat serious accidents, disasters and catastrophes.
- There is a national platform for risk reduction and climate change that is chaired by the Minister of the Interior. The Minister of Health is the vice chairperson.

Areas that need strengthening/challenges

- Integrate the One Health approach into all public health emergency preparedness measures.

R.1.2 Priority public health risks and resources mapped and utilized – Score 2

Strengths/best practices

- Risks in the animal health sector have been mapped.
- The national risk and resources profiles for the human health sector were assessed in 2016.

Areas that need strengthening/challenges

- Regularly assess risks and national resources in human health and animal health with a view to periodically updating the public health emergency preparedness and response plan.
- Arrange sustainable funding for public health emergency preparedness and response.

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.

Benin level of capabilities

Benin has rapid response teams at the central, intermediate and local levels that are trained in responding to public health emergencies. These teams have been activated on several occasions to respond to emergencies such as the Lassa fever epidemics of November 2014, February 2016 and 2017. Benin has just built a public health EOC to improve its capacities for timely detection of health emergencies and appropriate response. Through the EOC, the country will be able to coordinate information and operational resources in order to strategically manage public health emergencies. To ensure that the centre runs smoothly, an EOC focal point has already been identified and the documents governing its organization and operations are being prepared. Benin's experience in managing catastrophes and the full-scale simulation exercises it has carried out will contribute significantly to the smooth operation of the EOC. However, the profiles required for the EOC to function are inadequate and its multisectoral nature is not sufficiently reflected in the relevant documents.

Recommendations for priority actions

- Support the National Public Health Office by providing the funding needed to make the EOC operational.
- Make sure the national IHR focal point and the EOC are aligned.
- Identify and train the staff required to operate the EOC.
- Prepare the rules, procedures and legal documents that will govern EOC operations.

Indicators and scores

R.2.1 Capacity to activate emergency operations – Score 1

Strengths/best practices

- There is a national multisectoral programme for disaster risk reduction and climate change adaptation.
- Parts of the platform are operational at the intermediate (departmental) and local (communal) levels, with staff and focal points in place.
- A plan to equip all proposed EOC facilities is in place.

Areas that need strengthening/challenges

- Prepare the procedures for activating emergency response operations.

R.2.2 EOC operating procedures and plans – Score 1

Strengths/best practices

- An EOC focal point has been identified.
- The documents governing the organization and operations of the EOC are being drafted.

Areas that need strengthening/challenges

- Develop procedures for the incident management structure.

R.2.3 Emergency operations programme – Score 1

Strengths/best practices

- Rapid response teams trained in responding to public health emergencies are present at the central, intermediate and local levels.
- The rapid response teams have been activated on several occasions to respond to emergencies such as the Lassa epidemics.

Areas that need strengthening/challenges

- Bolster EOC operations by providing qualified staff.
- Implement EOC capacity-building strategies with simulation exercises.

R.2.4 Case management procedures implemented for IHR relevant hazards – Score 1

Strengths/best practices

- Simulation exercises have been held on haemorrhagic disease case management.
- Benin has experience in managing cases of Lassa fever.

Areas that need strengthening/challenges

- The areas that need strengthening were not presented during the external evaluation.

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.

Benin level of capabilities

Benin has a national platform for disaster risk reduction, public health emergencies of international concern and climate change adaptation. This platform has functioning offices, with staff and trained focal points, at the intermediate (departmental) and local (communal) levels. The platform managers were trained in Ghana with support from ECOWAS and United States Africa Command. In 2016 Benin tested its national contingency plan by organizing full-scale simulation exercises that included epidemics.

Despite these strengths, there are also weaknesses, such as the lack of written standard operating procedures or agreements for joint coordination of operations during public health emergencies. There is also no agreement on the sharing of information on risks during events likely to threaten public health and safety. There are no laws allowing the government to quarantine an individual or a locality that poses a risk to public health and there is insufficient communication and coordination among the different stakeholders during emergencies.

Recommendations for priority actions

- Prepare written standard operating procedures or agreements to coordinate joint operations during public health emergencies.
- Draft a memorandum of understanding or other agreement (protocol) between the public health sector and law enforcement, as this should be in place.
- Enact national laws and regulations for the management or quarantine of confirmed cases during health emergencies.

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 2

Strengths/best practices

- A national coordination platform manages all risks, threats and disasters.
- The platform has functioning offices, with staff and trained focal points, at the intermediate (departmental) and local (communal) levels.
- Sixty platform managers and participants have been trained in the preparation of contingency plans.
- Full-scale simulation exercises have been held on the national contingency plan and have taken into account floods, fires, epidemics and seasonal migrations.
- A table top simulation exercise has been held on the contingency plans of high-flood-risk areas.

Areas that need strengthening/challenges

- Put in place written standard operating procedures or agreements to coordinate joint operations during public health emergencies.
- Share information on risks if events likely to threaten public health and safety arise.
- Draft legislation allowing the government to quarantine an individual or a locality that poses a risk to public health.
- Improve communications during emergencies and in coordinating with various groups.

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.

Benin level of capabilities

Benin has no national plan for the transfer of medical countermeasures and the deployment of health personnel. However, the country has significant experience in collaborating with a range of international partners to receive medical countermeasures and transfer health personnel.

Recommendations for priority actions

- Develop a comprehensive plan for sending and receiving medical countermeasures and personnel that is consistent with the existing emergency management framework (the EOC, the national disaster relief plan, and the contingency plan) and takes regulatory, logistical, security and financial considerations into account.
- Support implementation of the plan developed by the different sectors.
- Conduct a practical exercise to test implementation of the plan.

Indicators and scores

R.4.1 System in place for sending and receiving medical countermeasures during a public health emergency – Score 1

Strengths/best practices

- Benin receives medical countermeasures from humanitarian partners through ad hoc initiatives.
- Laboratory capacities have been developed with support from Germany; Benin has taken all possible measures to facilitate reception of the laboratory equipment, and this has happened without any significant problems.

Areas that need strengthening/challenges

- Develop a specific national plan for the reception of medical supplies to deal with a possible epidemic or pandemic.

R.4.2 System in place for sending and receiving health personnel during a public health emergency – Score 1

Strengths/best practices

- Good experience of collaborating with international partners to receive international health personnel.
- Experience of sending personnel, e.g. the civilian and military personnel who were dispatched to support the three countries affected by the Ebola epidemic (Guinea, Sierra Leone and Liberia).
- Participation in the meeting of ECOWAS health ministries organized by the West African Health Organization to develop a regional rapid response team.
- Existence of a national disaster relief plan, albeit domestic in scope and implemented at the departmental level only. The plan does not include procedures to mobilize personnel regionally or internationally.

Areas that need strengthening/challenges

- Set up a specific plan for deploying personnel in the event of an epidemic or pandemic.

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.

Benin level of capabilities

Benin's risk communication capacity is somewhat developed. Although a coordination mechanism is available, there is no specific communication plan and no funding has been allocated to the communication system.

The health promotion department is part of the National Public Health Office of the Ministry of Health and works closely with the communication unit of the Ministry of Health. During health crises, Benin has the capacity to set up an entity responsible for communication. In most cases, information is disseminated in the local languages. The Ministry of Health website is regularly updated, but there is no analysis or sharing of experiences or new strategies to improve communications.

Collaboration with the media takes the form of media coverage of ministry events, press conferences or press briefings, but there is no set focal point.

With support from technical and financial partners, training sessions have been organized to strengthen communication capacities. Trained community networks are available, as is a hotline for the regular reporting of rumours. However, this information is not shared with partners and there has been no assessment of the impact on behaviours.

Recommendations for priority actions

- Prepare and implement a comprehensive risk communication plan (EOC).
- Create risk communication units at all levels of the health system and strengthen the units' capacities.
- Formalize mechanisms and procedures for monitoring and managing rumours.

Indicators and scores

R.5.1 Risk communication systems (plans, mechanisms, etc.) – Score 1

Strengths/best practices

- Risk communication will be integrated in the national action plan.
- There is an internal procedure for authorizing the dissemination of messages to the public.

Areas that need strengthening/challenges

- Create a risk communication plan and mechanisms.
- Set up a coordinated budget for risk communications operations.

R.5.2 Internal and partner communication and coordination – Score 2

Strengths/best practices

- Benin has the capacity to set up a health crisis committee with a communications subcommittee. All stakeholders disseminate the same information, validated by the government.

Areas that need strengthening/challenges

- Coordinate a budget for communications operations with partners and stakeholders.

R.5.3 Public communication – Score 3

Strengths/best practices

- A health promotion department has been created at the Ministry of Health under the communications unit.
- The executive branch has a communications office with a communications plan.
- Communications focal points are present in each ministry and in each minister's cabinet. Grievances can be communicated through these channels.
- The website is regularly updated and quite a few national communications experts are available.

Areas that need strengthening/challenges

- Assess the impact of communications on the target populations.

R.5.4 Communication engagement with affected communities – Score 3

Strengths/best practices

- The national platform for disaster risk reduction has a training and awareness-raising programme on flood risks.
- Trained, functional networks of legislative correspondents, women, and legislators are available to strengthen communications.
- In the communes, peer communicators have received training and mayors take account of them. This decentralization has also been strengthened by a circular that allows departmental offices to act at the intermediate level.

Areas that need strengthening/challenges

- Strengthen the capacity for community participation.
- Shore up sustainable funding and close collaboration with the media.

R.5.5 Dynamic listening and rumour management – Score 3

Strengths/best practices

- A four-digit hotline is available for receiving information and taking questions from the public. The operators have received training on the diseases under surveillance.
- There is a system for regular reporting. Index cases are also reported.
- Information bulletins prepared by the gendarmes also provide authorities with a source of rumours.

Areas that need strengthening/challenges

- Assess the operations and expertise of the communications system put in place.
- Share information with partners to further risk communication.

OTHER IHR-RELATED HAZARDS AND POINTS OF ENTRY

Points of entry

Introduction

All core capacities and potential hazards apply to "points of entry" and thus enable the effective application of health measures to prevent 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.

Benin level of capabilities

Benin has identified and designated 13 points of entry: the airport of Cotonou, the port of Cotonou and 11 ground crossings. Health workers are stationed at these points of entry and are responsible for carrying out health controls, including verifying the immunization status of arriving passengers.

They have participated in a series of training sessions on Ebola haemorrhagic fever and IHR. The health workers assigned to the airport and port of Cotonou are rotated every three years. Trained officials from the veterinary and plant protection services are also present at the port and airport of Cotonou and at the ground crossings designated as points of entry.

However, the points of entry still lack sufficient appropriate facilities, diagnostic tools, equipment and supplies to be able to rapidly examine and treat sick travellers or to transport them to a suitable medical facility.

There is no national response plan for public health emergencies at points of entry. With support from partners (the Abidjan–Lagos Corridor project), efforts are under way to introduce emergency plans at the port and airport of Cotonou and at certain ground crossings.

Recommendations for priority actions

- Finalize, test and approve standard operating procedures for points of entry.
- Build, equip and operationalize health posts at the five priority points of entry (the airport and port of Cotonou and three ground crossings).
- Provide training/retraining on IHR implementation to the various stakeholders at points of entry.
- Strengthen intersectoral coordination to implement IHR at points of entry.
- Prepare a national response plan for emergencies at points of entry and develop individual plans tailored to each designated point of entry.

Indicators and scores

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

Strengths/best practices

- Human and animal health workers are available at the 13 designated points of entry.
- Capacity-building activities are under way at points of entry, with support from the ECOWAS-funded Abidjan-Lagos Corridor project.
- Partners are ready with technical and financial support for preparing and disseminating operating procedures and developing capacities at points of entry.

Areas that need strengthening/challenges

- Prepare standard operating procedures for points of entry.
- Improve health post facilities and equipment at points of entry.
- Regularly update the IHR expertise of stakeholders at points of entry.

PoE.2 Effective public health response at points of entry – Score 1

Strengths/best practices

- A national response plan is in place for Ebola virus disease and Lassa fever (the national contingency plan), including action to be taken at points of entry.
- Points of entry have been assessed on measures to prevent and manage Ebola haemorrhagic fever and Lassa fever.

Areas that need strengthening/challenges

- Prepare written standard operating procedures or agreements for the multisectoral coordination of joint operations if a public health emergency arises at a point of entry.
- Supplement legislation on the management of travellers who pose a public health risk.

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.

Benin level of capabilities

The required capacities for managing chemical risks have not been put in place in Benin. The required mechanisms and action plans have not been prepared, despite the existence of a national environment policy. No entity has primary responsibility for chemicals and monitoring of chemicals.

No chemicals management guidelines are in place, those of the International Programme on Chemical Safety are not taken into account. Benin is not part of an international chemicals network (such as INTOX), nor does it have access to specialized international databases on poison management (e.g. Poisindex, Inchem and Toxine). No intersectoral coordination mechanism for chemical safety is in place. Risk management capacities are almost non-existent. There is no management and monitoring facility, such as a poisons centre, for the real-time identification and assessment of risks. Hospitals are unprepared for the care of patients exposed to IHR-related chemical risks.

Nevertheless, Benin has ratified the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal, the Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade, The Stockholm Convention on Persistent Organic Pollutants, the Convention of the United Nations Economic Commission for Europe on the Transboundary Effects of Industrial Accidents, and the Minamata Convention on Mercury. It observes the Strategic Approach to International Chemicals Management (SAICM) Declaration on International Chemicals Management and the Libreville Declaration. There are industry-wide procedures for risk assessment in the area of surveillance and control of chemicals so that an appropriate and proportional response can be activated/prepared. Pharmaceutical products are the subject of special regulations.

The environmental monitoring laboratory, the national food safety laboratory, and the national water laboratory participate in chemical event risk assessment.

Recommendations for priority actions

- Strengthen the legal and institutional framework for chemicals management.
- Set up and institutionalize an interministerial commission of all stakeholders in chemical risk and event management and provide it with a budgeted action plan.
- Prepare a health and environment action plan as part of the Libreville Declaration implementation process.
- Set up a surveillance system for chemical risks and events (poisons centre, toxicovigilance centre, etc.).
- Update Benin's chemical profile to reflect chemical nomenclature.

Indicators and scores

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

Strengths/best practices

- A national chemicals management profile has been prepared and there is a plan for disposing of obsolete pesticides.
- The Beninese Environmental Agency takes the lead in this area. It works with the General Office for the Environment and Climate and carries out domestic industry audits.
- The Ministry for Living Environments and Sustainable Development has a suitably equipped environmental monitoring laboratory and is potentially able to collaborate with the food safety control laboratory in the context of monitoring consumer products (food and goods) for chemical hazards.

Areas that need strengthening/challenges

- Create clear-cut mechanisms for intersectoral collaboration in chemical risk and event management.
- Map and create a nomenclature for chemical incidents and residual waste management.
- Strengthen etiological research of chemical incidents and risks related to imported products.
- Increase funding to meet additional demands in the event of a chemicals-based public health emergency.
- In the absence of a clinical toxicology laboratory, put in place protocols for a syndromic approach to guide etiological diagnosis in the event of a chemical incident.

CE.2 Enabling environment in place for management of chemical events – Score 1

Strengths/best practices

- A strategic plan for chemical safety has been prepared and is awaiting implementation.

Areas that need strengthening/challenges

- Strengthen mechanisms for multisectoral and interdisciplinary coordination on chemical safety.
- Increase funding for the preparation of the strategic plan.

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.

Benin level of capabilities

Benin does not have a strategy or national plan for detecting, assessing or responding to radiation emergencies. Radiation safety has not been assessed.

A radiological and nuclear authority has not been established. There is no mechanism for coordination and communication among the national authorities responsible for radiological or nuclear emergencies. It should however be noted that there is strong political commitment and a favourable political climate, and an interministerial focal point for radiological emergencies has been identified. A bill on radiation security and nuclear safety, drafted with assistance from the International Atomic Energy Agency (IAEA), has been submitted to the National Assembly, which has unfortunately been slow to approve it. In addition, persons skilled in radioprotection have been appointed to radiology units in hospitals.

Recommendations for priority actions

- Support advocacy for a prompt vote on the nuclear safety bill (Ministry of Health, WHO, IAEA).
- Designate an authority responsible for managing radiological and nuclear risks and events and institute mechanisms to coordinate with the relevant sectors.
- Develop and roll out a national action plan and functional mechanisms to detect and respond to radiological and nuclear emergencies.
- Set up a surveillance system for radiological and nuclear events.

Indicators and scores

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

Strengths/best practices

- A bill on radiation security and nuclear safety, drafted with assistance from the International Atomic Energy Agency (IAEA), has been submitted by the Government to the National Assembly for review and approval.
- Persons skilled in radioprotection have been designated in hospitals.

Areas that need strengthening/challenges

- Develop a continuing education programme and measuring instruments to build radioprotection capacity.

RE.2 Enabling environment in place for management of radiation emergencies – Score 1

Strengths/best practices

- There is an interministerial focal point for radiological emergencies.

Areas that need strengthening/challenges

- Prepare a national strategy for radiological emergency detection, risk assessment and response.
- Establish an authority responsible for radiological and nuclear matters.

Appendix 1: JEE background

Mission place and dates

Grand-popo, Republic of Benin, 22 to 26 May 2017

Mission team members:

- Cheikh S. Fall, Senegal, United States Department of Agriculture (team leader)
- Hampaté Bâ, Mauritania, Ministry of Health
- Daniel Bourzat, France, World Organisation for Animal Health
- Kpandja (KP) Djawe, USA, Centers for Disease Control
- Coralie Giese, USA, Centers for Disease Control
- Marie Chantal H. Kambire-Diarra, Burkina Faso, World Health Organization
- Sainda Mohamed, Comores, World Health Organization
- Lalla Moulaty Moulaye, Mauritania, Ministry of Health
- Allie Pasieka, Switzerland, World Health Organization
- Naima Rhalem, Morocco, Ministry of Health
- Massambou Sacko, Mali, World Health Organization
- Roland Wango, Congo, World Health Organization

Objective

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

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 publicly available.
- The evaluation is not just an audit. Information provided by Benin will not be independently verified but will be discussed and the evaluation rating mutually agreed to by the host country and the evaluation team. This is a peer-to-peer review.

Key host country participants and institutions

Last name, First name	Organization/Position
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AHLINVI, Maurice	SGM/MS
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de SOUZA, Joselita	National Public Health Office/Ministry of Health/Head of Secretariat
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YACOUBOU, Zaliatou Epse OGOUCHINA	Registered government nurse/Porga/Atacora

Last name, First name	Organization/Position
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YOROU CHABI, Orou Bagou	National Consultant/National Blood Transfusion Agency/Ministry of Health

Supporting documentation provided by host country

IHR coordination, communication and advocacy

- National IDSR guidelines, Republic of Benin, Ministry of Health, National Public Health Office, March 2015
- National strategic plan for IDSR and IHR implementation 2014-2018, Republic of Benin, Ministry of Health, National Public Health Office, April 2014

Workforce development

- Training plan of the Ministry of Health for the period 2015-2017, Ministry of Health, General Secretariat of the Ministry, Human Resources Office, March 2015
- Strategic plan for workforce development

Antimicrobial resistance

- National action plan for infection prevention and control, July 2016

Zoonotic diseases

- The OIE PVS Pathway, http://www.oie.int/en/support-to-oie-members/pvs-pathway/
- Handbook for the assessment of capacities at the human animal interface, WHO & OIE, 2015 www.who.int/ihr/publications/handbook_OMS_OIE/en/
- List of all publications on food safety and related areas as at April Avril 2017, http://www.who.int/foodsafety/publications/all/en/
- Good Emergency Management Practice: The Essentials. A guide to preparing for animal health emergencies, http://www.fao.org/3/a-ba0137e.pdf

Immunization

- Comprehensive multi-year plan for the period 2014-2018
- Report of the Expanded Programme on Immunization review
- Measles strategic plan 2012-2020

National laboratory system

- Strategic plan for national laboratories setting out the multi-level laboratory network
- Documented list of 10 priority diseases and three main syndromes to improve prevention, detection and response
- Procedure for transferring documented specimens for detection/confirmation of the 10 priority diseases

Real-time surveillance

- Benin's ISDR technical guidelines
- List of major public health emergency-like syndromes

Preparedness

- Map of risks and national resources in human health
- Map of animal health risks

Reporting

- National ISDR technical guidelines, National Public Health Office, Ministry of Health, Republic of Benin, March 2015

Points of entry

- Health procedures at the airport and maritime port points of entry
- Procedures at points of entry for diseases likely to cause epidemics
- Guidelines and standard operating procedures on Ebola and Lassa fever for points of entry
- Assessment of measures taken at points of entry to prevent and manage Ebola and Lassa fever

Chemical events

- International Programme on Chemical Safety (IPCS), guidelines on the prevention of toxic exposure, education and public awareness activities, World Health Organization in collaboration with the United Nations Environment Programme and the International Labour Organization, 2010

WHO/WHE/CPI/REP/2017.48