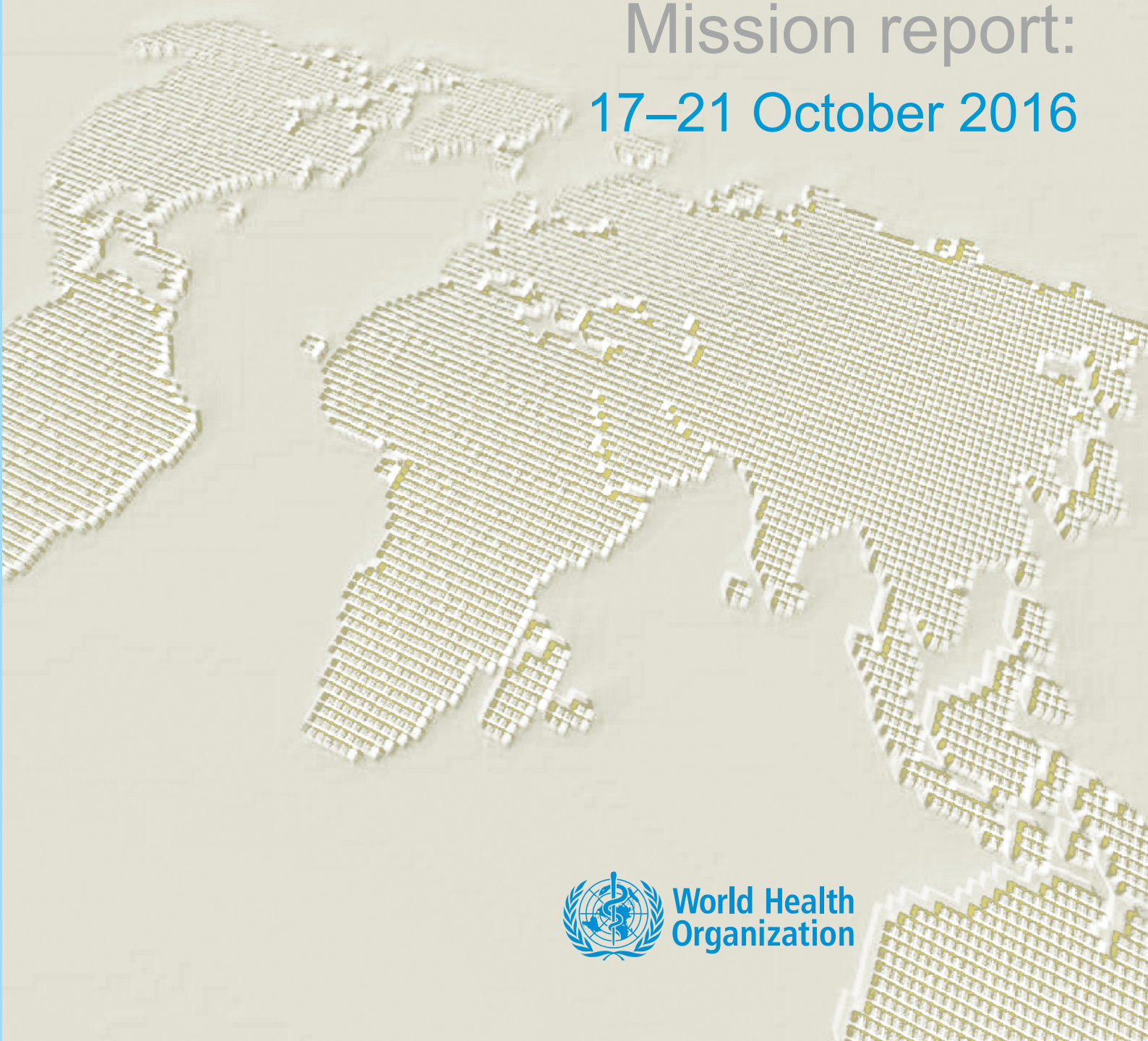
JOINT EXTERNAL EVALUATION OF IHR CORE CAPACITIES

of the

REPUBLIC OF SOMALIA

Mission report:

17–21 October 2016



World Health Organization

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Contents

Abbreviations

AMR	Antimicrobial resistance
C4D	Communication for development
EMR	WHO Eastern Mediterranean Region
EOC	Emergency operations centre
EPHS	Essential Package of Health Services
EPI	Expanded Programme on Immunization
ERC	Emergency risk communication
FAO	Food and Agriculture Organization of the United Nations
FETP	Field epidemiology training programme
IAEA	International Atomic Energy Agency
IHR	International Health Regulations (2005)
JEE	Joint External Evaluation of the IHR (2005)
MoH	Ministry of Health
NFP	National Focal Point
NGO	Nongovernmental organization
OIE	World Organisation for Animal Health
PoE	Point of entry
PPE	Personal protective equipment
SOP	Standard operating procedures
TB	Tuberculosis
UNICEF	United Nations Children's Fund
WHO	World Health Organization

Executive summary

A joint external evaluation (JEE) of the International Health Regulations (2005) (IHR) capacities in the Republic of Somalia was carried out on 17–21 October 2016 using the World Health Organization (WHO) IHR JEE tool. The JEE allows countries to identify the most urgent needs within their health security system; to prioritize opportunities for enhanced preparedness, detection and response capacity, including setting national priorities; and to allocate resources based on the findings.

The findings of this JEE indicate the following:

- The country has very limited legislation, regulations, administrative requirements, and other governmental instruments governing IHR implementation in the relevant sectors. Full and effective implementation of existing legislation is needed to facilitate achieving IHR targets. In addition, there is no budget allocated by the Government to support IHR activities. Sustainable financing is critical to develop IHR core capacities and implement IHR strategies.
- Knowledge about IHR and its requirements is lacking among personnel from the different sectors. IHR capacities in the technical areas are either in the early phase of development or lacking. While an IHR National Focal Point (NFP) was designated in 2014, it has no clear functions, no training, has not been renewed or confirmed, and details on the IHR NFP have been not shared with the relevant sectors. Moreover, only limited coordination mechanisms exist for multisectoral communication and response in the three administrative zones of Somalia (Puntland, Somaliland and South Central), which mainly function to respond to public health events including emergencies. Most intersectoral cooperation is based on ad hoc events and informal communication.
- Somalia has not yet established a multidisciplinary and multisectoral committee, nor drafted an action plan to combat antimicrobial resistance (AMR). Laboratory capacity to detect AMR pathogens is poor, and no routine AMR surveillance exists in humans or animals, except for tuberculosis. Only Somaliland is drafting an Infection Prevention and Control plan, and has a policy approved on Hygiene and Sanitation and on Medical Waste Management. Waste management is a concern, especially in South Central zone. Each zone has an Essential Medicines List and Standard Treatment Guidelines. Antibiotics for use in humans and animals are easy to acquire in each zone.
- Formal policies governing zoonotic diseases are not yet functional. The country has determined zoonotic diseases of greatest national public health concern but does not have animal zoonotic surveillance systems in place. Laboratory capacity to detect all priority zoonotic diseases exists in the human and animal health laboratories in all states. However, laboratories are not linked and there is no formal mechanism to share findings. Somalia has initiated a One Health/Zoonotic Disease Unit as a joint venture between the human and animal health authorities.
- Currently, aspects of food safety management are scattered among different stakeholders, and multisectoral response to foodborne events is inadequate. Food inspection is currently limited to monitoring wholesomeness and expiry dates. The Ministry of Health (MoH) occasionally investigates foodborne disease through surveillance reports under the "unusual event" notification. In Somaliland, a Food Quality Act has been passed and a dedicated governmental body for food safety is functioning (National Food Quality Assurance Agency). In Puntland, a similar body is established but is not yet functional while in South Central State, no such body exists. Laboratory capacity is able to test for biological contaminants.
- Whole-of-government biosafety and biosecurity systems are not in place for human, animal, food or environmental laboratories. The national laboratory system is capable of conducting 3–4 core tests. A system is in place to transport specimens to national laboratories from less than 50% of intermediate

level/districts for advanced diagnostics. There is no evidence of use of rapid and accurate point-of-care or laboratory-based diagnostics, and no tier-specific diagnostic testing strategies are documented. The country has no national laboratory quality standards related to biosafety and biosecurity.

- Indicator-based surveillance is in place in all three Somali administrative areas. However, the quality and coverage of the systems, and their utility to detect and respond to infectious disease outbreaks is limited. The timeliness and quality of the data collected must be improved and dedicated and skilled analytical staff recruited as they are in very short supply.
- Ensuring accessible and sustainable health-care services including good Expanded Programme on Immunization (EPI) coverage for the whole population remains a major challenge. In all three zones, placing and retaining health workers in remote areas, and providing supervision and in-service training for them, is difficult. There are almost no qualified health system planners, health economists, technology analysts, nutritionists, or chemical or radiological specialists. In other areas, such as behaviour change communication and immunization, much of the capacity is funded by international partners rather than the MoH.
- Protocols for information sharing and notification of public health events of potential international concern internally and with WHO do not exist. In addition, as surveillance of public health events is poor, their early detection and notification to WHO is limited.
- The majority of public health staff are trained initially outside the country in programmes of varying or unknown quality. Several people have been trained in field epidemiology type training programmes but there is no registry of them and no existing or planned programme for the country. A strategy of human resources for health exists but has not been implemented. Nonetheless, governmental control over employment and training standards is partially in place.
- The three zones have a central unit responsible for emergencies within the MoH for their territory. There is also a Disaster Management Agency, mainly responsible for the overarching response to natural emergencies like floods and droughts. However, it has no mandate to coordinate the response to public health events such as disease outbreaks, which are initiated by the emergency coordinator at the MoH.
- The current system in the country theoretically allows the public health sector to call for the support of the security sector, although such collaboration is not supported by legislation or written agreements.
- An informal but well-functioning system of coordinated communication exists between the key government departments, international partners and nongovernmental organizations across the three zones. Coordination usually extends to regional and district level. Public communication teams and trained spokespersons are in place in the MoH in Somaliland and Puntland. Social mobilization, behaviour change communication and community engagement are central to some key Somali public health programmes. Engagement with community leaders and civil society groups at district and regional level is a routine part of the response to outbreaks and hazards.
- Somalia has 18 points of entry (PoEs), of which four are ports, six are airports, and eight are ground crossings. None of these PoEs is designated for IHR implementation. A few IHR routine capacities are in place at PoEs, but are not properly maintained. No public health contingency plan to respond to public health emergencies of any hazards exists at any PoE, nor any designated spaces to isolate ill passengers or animal quarantine.
- The surveillance systems in place for chemical events are fragmented across institutions, with inadequate identification of intoxications and incomplete laboratory capacity for confirmation of events. No national policy, action plan and legislation for surveillance, or alert and response to chemical events exist.
- National policies, strategies or plans for the detection, assessment, and response to radiation emergencies have not been established. Monitoring mechanisms do not exist for radiation emergencies that may constitute a public health event of international concern. A radiation emergency response

plan does not exist and no services are available for managing exposed patients. Policies, strategies or plans for internal and international transport of radioactive material, samples and waste management, including those from hospitals and medical services, are not yet established.

Major cross-cutting themes

During the review of the 19 technical areas, four recurring cross-cutting themes that severely impact IHR implementation emerged. These are overarching issues for consideration by Somalia.

1. No legal background supports the planning and implementation of public health capacities.
2. Very limited governmental finance, staffing, and institutional development capacity exist for IHR implementation and sustainability.
3. Organizational and political systems are complex, and public health-related activities rely on external support.
4. The current security situation limits access to, and provision of public health services relevant to IHR implementation in several districts, especially in the South Central zone.

In conclusion, the External Evaluation Team acknowledges that Somalia has very limited capacity in most of the 19 technical areas of the IHR. Continuous commitment to develop such capacity and willingness to conduct an annual self-evaluation using the JEE tool, together with an external JEE every 3–5 years, could facilitate implementation of the IHR. This will strengthen the country's capacity to prevent, detect and rapidly respond to public health threats whether occurring naturally, or due to deliberate or accidental events.

Introduction

This joint external evaluation (JEE) of the International Health Regulations (2005) (IHR) capacities was conducted for the Republic of Somalia using the World Health Organization (WHO) IHR JEE tool. The JEE allows countries to identify the most urgent needs within their health security system; to prioritize opportunities for enhanced preparedness, detection and response capacity, including setting national priorities; and to allocate resources based on the findings.

The evaluation was carried out in Entebbe, Uganda on 17–21 October 2016 jointly by Somali experts and external subject matter experts. The external team consisted of individuals selected from peer countries on the basis of their recognized technical expertise, as well as advisors representing international organizations including WHO. The evaluation included interactive technical presentations that covered the self-assessment results, and joint multisectoral discussions. No site visits were conducted as the evaluation was conducted at an out-of-country location for security and logistical reasons. A comprehensive description of the evaluation methodology is provided in Annex 1. This report presents the recommendations for priority actions jointly developed by the external team and their Somali peers. Technical area scores and their justification for each of the 19 areas of the JEE tool and supporting information are provided under each technical section.

By requesting this JEE, the Somali authorities demonstrate strong commitment to global health security and core national capacities required by the IHR. This was the eighth JEE process completed in the WHO Eastern Mediterranean Region (EMR) and the nineteenth globally.

According to the WHO World Health Statistics Report 2015, one in every eleven Somali children dies before the age of one. The under-five mortality rate is 145.6 deaths per 1000 live births, reflecting the poor health-care delivery system and still very high burden of communicable diseases and malnutrition. Prolonged conflict, insecurity and poverty, together with natural catastrophes, have led to mass displacement of populations and high reliance on external assistance from the international community and donors. However, the security situation and is improving, especially in Somaliland.

Administratively, Somalia is divided into three zones (Puntland, Somaliland and South Central) which have their own elected governments and ministries of health (MoH). Puntland and South Central zones operate under the Federal Government. Given the independent status of zonal governments and involvement of a large number of actors in the health sector, multi-layered coordination mechanisms have been put in place. The Health Advisory Board operating from Nairobi, Kenya, is the highest level coordination mechanism including three ministers, and United Nations, donor and nongovernmental organization (NGO) representatives. The Health Sector Coordination Committee and technical committees submit guidance and recommendations for approval by the Health Advisory Board.

The Health Sector Strategic Plan (HSSP) 2013–2016 was an important step in building the Somali Government's capacity to govern the health sector and improve access to health services. The next HSSP for 2017–2020 is under way. Health service delivery at the primary health care level is framed around the Essential Package of Health Services (EPHS), developed in 2009. It comprises four levels of service provision as well as a community-based health programme including EPI. However, the implementation of EPHS is not uniform across all regions and a functioning referral system is lacking. In the regions where EPHS does not exist, health service delivery is inconsistent and often depends on the presence of humanitarian organizations. Some of the South Central zone districts are still considered inaccessible in terms of public health-care services. Despite the lack of health care delivery structures, several vertical disease programmes such as polio, malaria, HIV, and tuberculosis (TB) exist, mainly funded and coordinated by international donors. Especially in the cities, the growing private sector provides a large proportion of health-care services. While the status of health sector legislation, the regulatory framework and governmental supervision varies in the different zones, it is generally in the early phase of development.

Somali scores

Capacities	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	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 the 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 (AMR) detection	1
	P.3.2 Surveillance of infections caused by AMR pathogens	1
	P.3.3 Healthcare associated infection 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	2
	P.4.2 Veterinary or animal health workforce	2
	P.4.3 Mechanisms for responding to zoonoses and potential zoonoses are established and functional	1
Food safety	P.5.1 Mechanisms are established and functioning for detecting and responding to foodborne disease and food contamination	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	1
	P.7.2 National vaccine access and delivery	2
National laboratory system	D.1.1 Laboratory testing for detection of priority diseases	3
	D.1.2 Specimen referral and transport system	2
	D.1.3 Effective modern point of care and laboratory-based diagnostics	1
	D.1.4 Laboratory quality system	2
Real-time surveillance	D.2.1 Indicator- and event-based surveillance systems	2
	D.2.2 Interoperable, interconnected, electronic real-time reporting system	1
	D.2.3 Analysis of surveillance data	2
	D.2.4 Syndromic surveillance systems	4
Reporting	D.3.1 System for efficient reporting to WHO, FAO and OIE	2
	D.3.2 Reporting network and protocols in country	1
Workforce development	D.4.1 Human resources are available to implement IHR core capacity requirements	2
	D.4.2 Field Epidemiology Training Programme or other applied epidemiology training programme in place	1
	D.4.3 Workforce strategy	2

Preparedness	R.1.1 Multi-hazard National 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	1
Emergency response operations	R.2.1 Capacity to activate emergency operations	2
	R.2.2 Emergency Operations Centre operating procedures and plans	1
	R.2.3 Emergency Operations Programme	2
	R.2.4 Case management procedures are implemented for IHR-relevant hazards	2
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 is in place for sending and receiving medical countermeasures during a public health emergency	2
	R.4.2 System is in place for sending and receiving health personnel during a public health emergency	2
Risk communication	R.5.1 Risk communication systems (plans, mechanisms, etc.)	1
	R.5.2 Internal and partner communication and coordination	3
	R.5.3 Public communication	2
	R.5.4 Communication engagement with affected communities	2
	R.5.5 Dynamic listening and rumour management	3
Points of entry (PoE)	PoE.1 Routine capacities are established at PoE	1
	PoE.2 Effective public health response at PoE	1
Chemical events	CE.1 Mechanisms are established and functioning for detecting and responding to chemical events or emergencies	1
	CE.2 Enabling environment is in place for management of chemical events	1
Radiation emergencies	RE.1 Mechanisms are established and functioning for detecting and responding to radiological and nuclear emergencies	1
	RE.2 Enabling environment is in place for management of radiation emergencies	1

Score 1: no capacity; **score 2:** limited capacity; **score 3:** developed capacity; **score 4:** demonstrated capacity; **score 5:** sustainable capacity.

Note on scoring of technical areas of the JEE tool

The JEE process is a peer-to-peer review and a collaborative effort between host country experts and JEE team members. In completing the self-evaluation, the first step in the JEE process, and as part of preparing for an external evaluation, host countries are asked to provide information on their capabilities based on the indicators and technical questions included in the JEE tool.

The host country may score their self-evaluation or propose a score during the onsite visit with the JEE team. The entire external evaluation, including the discussions around the score, strengths and best practices, areas that need strengthening, challenges, and the priority actions, is done in a collaborative manner, with the JEE team members and host country experts seeking agreement.

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

PREVENT

National legislation, policy and financing

Introduction

The 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 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.[1] Policies that identify national structures and responsibilities as well as the allocation of adequate financial resources are also important.

Target

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

Somalia level of capabilities

Although the Constitution of the Republic of Somalia addresses health, the country has very limited legislation, regulations, administrative requirements, and other governmental instruments covering IHR implementation in the relevant sectors such as public health surveillance and response to all hazards, food safety, the use of chemicals and radioactive material, and waste management.

Following a recent assessment to develop a public health law, a task force was nominated to develop the law. A national Health Professional Council/Commission is in place in Puntland and Somaliland and a draft Act is in place for the creation of such a body in South Central zone.

The National IHR Focal Point (NFP) was designated in 2014, but without clear functions. Two ministerial decrees were issued to establish the Disaster Management Agency to coordinate the response to disasters; and the emergency preparedness and emergency response units in the Ministry of Health (MoH) to coordinate the response to disease outbreaks; however, multisectoral coordination needs further strengthening. Additionally, two ministerial decrees were issued in 2015 to establish a public health team for the detection and response to Ebola and for Somali refugees returning from Yemen.

Legal provisions for the exportation and quarantine of animals are in place but do not address surveillance and response to zoonotic disease. Also, a Food Safety Code is in place but does not comprehensively address aspects related to foodborne disease and food contaminants, licensing, importation, etc.

[1] See guidance on IHR implementation in national legislation at www.who.int/ihr/legal_issues/legislation/en/index.html.

Full and effective implementation of existing legislation is needed to facilitate implementation of the IHR, although Somalia has limited capacity to achieve this. Sustainable financing is critical to develop the IHR core capacities and implement national and international IHR strategies. There is no budget allocated by the Government to support IHR activities.

Recommendations for priority actions

- Establish a committee of legal advisors from different sectors to review the existing legislation, laws, administrative procedures, acts and policies and identify gaps to enable the implementation of IHR.
- Develop a comprehensive public health law based on the assessment carried out and ensure that most areas involved in the IHR are covered.
- Expedite the endorsement and implementation of the National Health Professional Council Act in South Central zone.
- Review and update agreements with neighbouring countries on cross-border surveillance and response to public health events.

Indicators and scores

P.1.1 Legislation, laws, regulations, administrative requirements, policies or other government instruments in place are sufficient for implementation of International Health Regulations (IHR) (2005) - Score 1

Existing laws, administrative procedures, polices are not sufficient for the implementation of IHR. No assessment has taken place to assess the functionality of existing laws, acts, procedures and policies.

Strengths and best practices

- Somalia is committed to implementing the IHR; in addition to this JEE, an assessment of public health law has been carried out.
- Senior officials of different sectors are aware and willing to establish legislation, policies and procedures.
- An environmental analysis was conducted to develop related laws and regulations.

Areas that need strengthening/challenges

- Governmental human and financial resources are limited to support the implementation of IHR capacities.
- Technical capacity is limited to develop the needed laws and regulations to support IHR implementation.
- Multisectoral coordination is lacking between stakeholders to support the planning and implementation of the One Health approach.

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

Existing laws, administrative procedures and policies do not enable the implementation of or compliance with required IHR capacities.

Strengths and best practices

- Somalia is improving coordination and communication is some sectors relevant to IHR, including establishing a multisectoral committee for IHR implementation.
- The IHR NFP functions are being defined.

Areas that need strengthening/challenges

- Existing acts and policies need to be reviewed and approved by concerned authorities, and implemented.
- Gaps in laws and regulations need to be identified and a mechanism established to develop and endorse new laws and regulations.
- Available legislation, regulations, and policies should be regularly evaluated to facilitate full IHR implementation.

IHR coordination, communication and advocacy

Introduction

Implementation of the IHR requires multisectoral and multidisciplinary approaches through national partnerships for effective alert and response systems. Coordination of nationwide resources, including the designation of an IHR NFP, which is a national centre for IHR communications, is a key requisite for IHR implementation.

Target

The IHR NFP should be accessible at all times to communicate with WHO IHR Regional Contact Points and with all relevant sectors and other stakeholders in the country. States Parties should provide WHO with contact details of IHR NFPs, continuously update and annually confirm them.

Somalia level of capabilities

The Ministry of Health and Human Services, Federal Government of Somalia was notified to WHO as the IHR NFP in 2014. There is also an operational contact point for the World Organisation for Animal Health (OIE). However, the nomination of the IHR NFP has not been disseminated to the different relevant sectors. Implementation of the IHR is still in an early phase as there is no formal coordination or information exchange within relevant ministries and other stakeholders on early detection, investigation and response to events that may constitute a public health event or risk of international concern. No committee or other formal structure is established to supervise or monitor implementation of the IHR, and general awareness of the IHR requirements is lacking at all levels of administration.

Recommendations for priority actions

- Formally establish high-level and technical multisectoral IHR taskforces/committees with clear terms of reference.
- Develop standard operating procedures (SOPs) and guidelines for coordination and information sharing between ministries and other relevant sectors.
- Conduct IHR awareness, advocacy and training activities targeting all relevant stakeholders to promote IHR and its implementation.

Indicators and scores

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

The IHR NFP has been established, but without formal coordination or information exchange with relevant ministries or other stakeholders. The health sector coordination mechanisms currently operating from Nairobi for the three Somali zones are not sufficient for timely and effective IHR implementation.

Strengths and best practices

- The IHR NFP has been designated.
- There are ad hoc functional mechanisms for multisectoral collaboration that include animal and human health surveillance units and laboratories.

- Real-life events such as the response to a cholera epidemic provide opportunities to establish and field test IHR coordination mechanisms.

Areas that need strengthening/challenges

- Functions as well as roles and responsibilities of the IHR NFP are not clearly identified.
- An IHR multisectoral committee needs to be put in place to monitor implementation and sustainability of IHR capacities; updates of IHR implementation are not being shared with other relevant sectors.
- No SOPs or guidelines are available for coordination and information sharing between the IHR NFP and relevant sectors.
- There is a lack of awareness of IHR and its implementation among stakeholders, including decision-makers of non-health sectors.

Relevant documentation

- No documents on IHR coordination, communication or advocacy are available.

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. The evolution of antimicrobial resistance (AMR) is occurring 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 being coordinated by WHO, FAO, and OIE to develop an integrated and global package of activities to combat antimicrobial resistance, spanning human, animal, agricultural, food and environmental aspects (i.e. a one-health approach), including: a) Each country has its own national comprehensive plan to combat antimicrobial resistance; b) Strengthen surveillance and laboratory capacity at the national and international level following agreed international standards developed in the framework of the Global Action Plan, considering existing standards and; c) 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.

Somalia level of capabilities

Somalia has not yet established a multidisciplinary, multisectoral committee to combat AMR and no action plan has been drafted. Nonetheless, there are three human laboratories in Mogadishu, Bosaso (Puntland) and Hargeisa (Somaliland) with capacity to detect and report all seven priority AMR pathogens listed by WHO[2] plus Mycobacterium tuberculosis. The three zones also have a veterinary laboratory capable of detecting all relevant AMR pathogens. For M. tuberculosis, microscopy and GeneXpert are the standard cultures, performed only in Somaliland. The National Public Health Reference Laboratory (NPHRL) and the Central Veterinary Research Laboratory are the designated referral labs for AMR in each zone.

At country level, however, laboratory capacity to detect AMR pathogens is hardly developed, except for some at major hospitals such as Mogadishu Turkish Hospital. It is planned to expand laboratory capacity in Mogadishu. Staff capacity (laboratory professionals) is satisfactory but there are awareness-raising and training needs on AMR detection, surveillance and reporting in the public health, veterinary and laboratory sectors (regional and private labs).

Currently there is no routine AMR surveillance in humans or animals, except for TB where there is a good vertical control programme (World Vision). Multi drug-resistant (MDR) TB prevalence in Somalia is the highest in the EMR and African regions. There are several TB centres operating across the country, which is above WHO's recommended rate. According to Guled et al.[3] the high association of previous TB treatment to MDR-TB might be due to inappropriate antitubercular regimens, suboptimal drugs, inadequate or irregular drug supply, unsatisfactory patient or clinician compliance, lack of supervision of treatment, and absence

[2] Escherichia coli, Klebsiella pneumoniae, Neisseria gonorrhoeae, Staphylococcus aureus, S. pneumoniae, Salmonella spp., and Shigella spp.

[3] Guled A, Elmi A, Abdi B, Rage AMA, Ali F, Abdinur A et al. Prevalence of Rifampicin Resistance and Associated Risk Factors among Suspected Multi-drug Resistant Tuberculosis Cases in TB Centers Mogadishu-Somali: Descriptive Study. Open Journal of Respiratory Diseases. 2016;6:15–24.

of infection control measures in health-care facilities. In a previous survey in Somalia in 2011, MDR-TB was found in 5.2% and 40.8% of patients with new and previously treated TB, respectively (Guled et al.).

With regard to infection control, only Somaliland is drafting an Infection Prevention and Control (IPC) plan; the state also has policies on Hygiene and Sanitation and Medical Waste Management. At country level, implementation of IPC in the majority of health-care facilities is lacking and no training for IPC exists. Some guidelines for hand washing exist, and some campaigns for hand hygiene have been done.

Waste management is a concern, especially in South Central zone, where medical waste is collected by a private company. No information is available on how this waste is managed. However, municipalities have policies for medical waste management and main hospitals and some health centres have autoclaves and/or incinerators.

Each zone has an Essential Medicines List and Standard Treatment Guidelines. While Somaliland has a drug warehouse to guarantee availability, the other zones are more prone to stockouts and rely on the United Nations Children's Fund (UNICEF) to assist them in supplying essential drugs. There is no mechanism in place to monitor adherence to national treatment guidelines. Antibiotics for use in humans and animals are easy to acquire in each zone, and to date there is no law to mandate prescription. Suboptimal drugs are privately imported, and the types and quantities of antibiotics used in the animal sector are not known.

A medicines policy, developed by the MoH, is awaiting Cabinet approval, and some activities are focusing on formalizing the national drug regulatory authority. In Somaliland and Puntland there is a newly established pharmaceutical governing board to implement regulation.

Awareness campaigns on IPC and AMR, highlighting the collateral damage caused by inappropriate consumption and prescription of antibiotics, are essential to combat AMR as the whole community is involved, including patients, farmers, prescribers and pharmacists.

Recommendations for priority actions

- Establish an AMR committee with all relevant stakeholders and define roles and responsibilities.
- Develop an AMR plan, ensuring alignment with the 2015 Global Action Plan on AMR, covering all core sectors.
- Implement AMR surveillance systems in humans (Global Antimicrobial Resistance Surveillance System, GLASS) and animals.
- Develop awareness programmes on AMR and IPC for different stakeholders, taking part in the yearly World Antibiotic Awareness Week (November) and SAVE LIVES: Clean Your Hands (5 May) campaigns.

Indicators and scores

P.3.1 Antimicrobial resistance detection - Score 1

Strengths and best practices

Somalia's capacity exceeds the score of 1 for indicator P.3.1. in the following ways: three human laboratories (one per zone) have the capacity to detect and report all seven priority AMR pathogens listed by WHO; the veterinary laboratory in each state also has the capacity to detect all relevant AMR pathogens; and the NPHRL and the Central Veterinary Research Laboratory are the designated national referral labs for AMR in each zone.

Areas that need strengthening/challenges

- No national plan for detection and reporting of priority AMR pathogens has been approved.
- The capacity for detection and reporting of priority AMR pathogens at country level needs to be developed for both the human and animal sectors.
- For M. tuberculosis, microscopy and GeneXpert cultures are done only in Somaliland.

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

Strengths and best practices

- AMR surveillance is conducted for TB, including MDR-TB.

Areas that need strengthening/challenges

- AMR surveillance is needed for all priority AMR in humans and animals. Enrolling in GLASS is the best way to establish a national AMR surveillance system while contributing to global data collection on AMR.

P.3.3 Health care-associated infection prevention and control programmes - Score 2

Strengths and best practices

- Somaliland is drafting a National Infection Prevention and Control plan, and has a policy approved on Hygiene and Sanitation and on Medical Waste Management.
- Some health-care facilities have an IPC department or programme.

Areas that need strengthening/challenges

- In all three Somali zones, implementation of IPC is a concern.
- There are no Somali training plans on IPC.

P.3.4 Antimicrobial stewardship activities - Score 1

Strengths and best practices

- A National Essential Medicines List is available.
- A National Medicines Policy was adopted by the MoH in Mogadishu.
- All zones have national Standard Treatment Guidelines (revised in 2016).

Areas that need strengthening/challenges

- Prescription of antibiotics should be mandatory by law: currently they can be bought without prescription in Somali pharmacies.
- Some antibiotics on the Essential Medicines List are not available.
- Awareness of AMR is lacking in both human health and animal sectors.

Zoonotic diseases

Introduction

Zoonotic diseases are communicable diseases and microbes spreading between animals and humans. These diseases are caused by bacteria, viruses, parasites, and fungi that are carried by animals, and insect or inanimate vectors may be needed to transfer the microbe. Approximately 75% of recently emerging infectious diseases affecting humans are of animal origin; approximately 60% of all human pathogens are zoonotic.

Target

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

Somalia level of capabilities

Agriculture is a significant contributor to the Somali economy. Animal production is important in all Somali zones and the animal populations are large. Somali exports several livestock species. In 2014, the Ministry of Livestock estimated the Somali livestock population to be around 39 million. Consequently, animal diseases – several of which are zoonotic – are an important veterinary health priority as they can endanger public health, especially at the human–animal interface. The Somali authorities determined that anthrax, brucellosis, bovine TB, Rift Valley fever (RVF), and toxoplasmosis are priority zoonotic diseases.

Formal policies governing zoonotic diseases are not yet functional in the country. Somalia has initiated a One Health/Zoonotic Disease Unit as a joint venture between the human and animal health authorities in South Central zone. It is important that wildlife professionals are involved in this initiative at the early stages before it is expanded to include representation from other relevant sectors. Under this initiative, a technical working group has been nominated which is drafting a strategic document for One Health. This document will mainly focus on multisectoral coordination and collaboration, integrated surveillance and diagnostics, applied research training, and capacity-building. This group should also develops policies to control the spill-over of zoonotic diseases from animal to human populations. Similar units do not yet exist in Puntland and Somaliland.

The information provided shows that the animal health authorities are currently conducting surveillance for at least two of the priority zoonotic diseases: brucellosis and RVF. Surveillance for RVF is sentinel-based and mandated as it is a requirement for exporting livestock. Over a period of around seven years, surveillance showed no infections, indicating that RVF is not endemic in Somalia. Sentinel surveillance for brucellosis shows that Brucellosis is endemic in the country hence poses a significant health threat. On the human side, surveillance for zoonotic diseases is grouped within unusual events and thus underreporting might be an issue. Even though animal surveillance indicates an enzootic situation for brucellosis, no human cases were recently reported and no human cases of RVF have been detected. There is information indicating that anthrax outbreaks occur among livestock but no human cases have been detected, and this also applies to bovine TB. Human cases of toxoplasmosis have been reported but its incidence in animal populations is not known. Currently, there is no formal mechanism for sharing surveillance data across sectors and there are no joint surveillance systems in place.

Laboratory capacity to detect all priority zoonotic diseases exists at both the human and animal health laboratories in all states. Furthermore, laboratory capacity is available at the Benadir University Faculty

of Veterinary Medicine. However, laboratories are not linked and there is no formal mechanism to share findings.

So far, joint response to zoonotic diseases has not been performed. It is worth mentioning that the NGO sector plays a role in vaccination and treatment of animals as well as in providing training.

There are several veterinary colleges in the country where veterinarians are being trained. The majority of veterinarians are employed by the Ministry of Livestock. It appears that there are enough veterinarians in the country, although information on their distribution over national, regional, and district levels was not available. Furthermore, evidence showing public health training of veterinarians was not presented and it is advisable that this be implemented in Somalia. Technical support and training material can be obtained through the United States Centers for Disease Control and Prevention (CDC). Somalia has access to the field epidemiology training programme (FETP) in Kenya and Somali veterinarians should be trained through this programme.

Recommendations for priority actions

- Activate/establish One Health centres/zoonotic disease units to oversee all one health/zoonotic disease activities.
- Finalize the strategic document that describes the roles and responsibilities of each sector; surveillance and prevention of zoonotic diseases; and information sharing and linkages between surveillance systems and laboratories.
- Establish a joint mechanism for zoonotic disease investigation and response.
- Establish a public health training programme for the veterinary workforce.

Indicators and scores

P.4.1 Surveillance systems in place for priority zoonotic diseases/pathogens - Score 2

Somalia has determined zoonotic diseases of greatest national public health concern but does not have animal zoonotic surveillance systems in place.

Strengths and best practices

- A list of priority zoonotic diseases is available.
- Sentinel surveillance is in place for brucellosis and RVF in the animal sector.
- Zoonotic diseases can be reported through public health surveillance under "unusual events".

Areas that need strengthening/challenges

- A mechanism for sharing surveillance data across sectors should be developed and implemented.
- A retrospective analysis of human surveillance data reports of "unusual events" should be conducted to check if zoonotic diseases are being captured. If this is not the case, plans and case definitions should be developed for zoonotic disease surveillance.
- The burden of bovine TB on human health should be determined.

P.4.2 Veterinary or animal health workforce - Score 2

Animal health workforce capacity exists within the national public health system.

Strengths and best practices

- Sufficient veterinary workforce is available.

Areas that need strengthening/challenges

- Short in-service courses should be developed on zoonotic disease surveillance for public health and animal health professionals at various levels.
- Veterinarians should be included in FETP training.

P.4.3 Mechanisms for responding to zoonoses and potential zoonoses are established and functional - Score 1

Strengths and best practices

- Informal communication between the animal and public health sectors exists.

Areas that need strengthening/challenges

- A One Health zoonotic disease management programme should be developed and implemented, supported by the necessary legal instruments that clearly define the roles of all stakeholders at both national and provincial levels.

Relevant documentation

- Draft One Health Strategic Document for Somalia.

Food safety

Introduction

Food and waterborne 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

States Parties should have surveillance and response capacity for food and waterborne diseases' risk or events. It requires effective communication and collaboration among the sectors responsible for food safety and safe water and sanitation.

Somalia level of capabilities

Food safety is the responsibility of multiple Somali ministries and departments. Stakeholders include the MoH, Ministry of Livestock, Ministry of Agriculture, Ministry of Water Works, Ministry of Commerce, and municipalities. This makes food safety in Somalia a multisectoral area and hence all aspects of food safety must be handled using a multisectoral approach.

Currently, aspects of food safety management are scattered among the different stakeholders. Municipalities are in charge of issuing licences to food vending establishments and food workers. They are also in charge of inspecting food vending establishments. Since a large portion of Somali foodstuffs is imported, the Ministry of Commerce and municipalities are involved in inspecting imported food items. The private sector is also involved in this inspection process. However, inspection is currently limited to monitoring wholesomeness and expiry dates. The MoH occasionally investigates foodborne diseases through surveillance reports arriving under "unusual events". Since representatives from the Ministries of Agriculture and Livestock were not present at the JEE mission, the role they play was not clarified. Of major concern are street vendors who are currently not regulated by any authority.

In Somaliland, a dedicated governmental body for food safety is established and functioning (National Food Quality Assurance Agency). In Puntland, a similar body is established but is not yet functional, while in the South Central State, no such body is yet established. Furthermore, a Food Quality Act has been passed in Somaliland, but the same does not exist for the other states.

Public health surveillance for foodborne disease is currently grouped under "unusual events" reporting. When an unusual event is reported, the MoH dispatches teams to investigate and verify. An epidemiological investigation is carried out and samples are collected from patients and sent for testing at the public health laboratories. There is potential for underreporting/underdetection of foodborne disease given the current surveillance system and merging foodborne illnesses under "unusual events". It is recommended that surveillance data on unusual events be retrospectively analysed to determine the burden of foodborne illness. If underreporting exists, foodborne diseases should be included under the list of notifiable diseases, thus allowing the collection of specific data for foodborne illness. The necessary case-definitions should accompany this. No evidence of information sharing between sectors was observed.

Multisectoral response to foodborne events is limited. No formal mechanism is in place and intersectoral cooperation is ad hoc. Few health promotion campaigns for food safety are conducted, thus some effort directed at raising awareness is advisable.

Laboratory capacity to test for biological contaminants exists at both the public health and animal health laboratories across all states. There are some plans to have some laboratory capacity at points of import to test for the quality of received food. There is no laboratory capacity to test for chemical and other non-biological contaminants of food or causes of foodborne diseases (e.g. heavy metals, pesticides, insecticides).

Somalia is in the process of finalizing the Acute Watery Diarrhoea/Cholera Preparedness and Response Plan. This plan outlines how surveillance and response activities are performed and coordinated across the involved sectors. It also shows elements for mobilization of necessary logistics, community engagement, and risk assessment. This plan can be used as a starting point to improve other aspects of food safety.

Recommendations for priority actions

- Improve the current surveillance system to include foodborne illness as a notifiable disease. Surveillance should also include the ability to detect pathogens and contaminants in food.
- Nominate focal points in all relevant sectors for intersectoral coordination with defined roles and responsibilities.
- Designate a laboratory for food safety by expanding current laboratory capacity to meet food safety testing requirements.
- Develop SOPs for the investigation and response to foodborne diseases and train involved personnel on implementing these SOPs.

Indicators and scores

P.5.1 Mechanisms are established and functioning for detecting and responding to foodborne disease and food contamination - Score 1

No mechanisms are in place to detect and respond to foodborne disease and food contamination.

Strengths and best practices

- A dedicated Food Safety Agency and Food Safety Act exists in Somaliland.
- Some laboratory capacity exists to detect microbiological contaminants and disease agents across all states.
- A near-final Cholera Preparedness and Response Plan exists and is expected to be rapidly activated. This plan has all the elements of multisectoral food safety management and can be used as a template to expand to other aspects of food safety.

Areas that need strengthening/challenges

- A risk-based approach should be adopted for the development and implementation of standards.
- Better linkages should be set up between the health and agriculture sectors to achieve food safety outcomes with a view to cover food safety across the food chain.
- Consistency among states should be sought in terms of implementing food safety control management.
- The collation of data from different agencies should be strengthened, and the data shared for evidence-based decision-making.

Biosafety and biosecurity

Introduction

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

Somalia level of capabilities

The concepts of biosafety, and especially biosecurity, are relatively new in Somaliland, Puntland and South Central. The whole-of-government biosafety and biosecurity system is not in place for human, animal, food or environmental laboratories. There is currently no national biosafety and biosecurity legislation, regulation or guidelines. Awareness of biosafety, biosecurity and biorisk management needs to be improved.

Multisectoral collaboration is needed when a whole-of-government biosafety and biosecurity system is developed across the country. Sharing information, SOPs and best practices on biosafety and biosecurity between laboratories should be encouraged. Some training in biosafety and biosecurity has been organized by international organizations but no training programmes are available for all laboratories and all laboratory staff. Linkages with the African Biological Safety Association and other international organizations concerned with biosafety and biosecurity should be strengthened.

The lack of biosafety and biosecurity systems has already caused problems since laboratories cannot be sent reference strains due to insufficient biosafety and biosecurity. Personal protective equipment (PPE) and biosafety equipment are available in some laboratories but maintenance of equipment is inadequate due to the lack of resources.

There was no opportunity to visit laboratories during the assessment. There was no biosafety and biosecurity related documentation available.

Recommendations for priority actions

- Establish a multisectoral biosafety and biosecurity team to enhance collaboration and information sharing on biosafety and biosecurity best practices and SOPs:
  - Assess the existing gaps on biosafety and biosecurity
  - Make a workplan for developing biosafety and biosecurity in laboratories.
- Establish a multisectoral biosafety and biosecurity committee to review the development of biosafety and biosecurity legislation and to develop a biosafety and biosecurity programme in collaboration with the biosafety and biosecurity team:
  - Assess biosafety and biosecurity training needs and develop training material
  - Increase awareness of biosecurity and biosafety among the laboratory workforce.

Indicators and scores

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

No elements of a comprehensive national biosafety and biosecurity system are in place.

Strengths and best practices

- There is willingness to establish a biosafety and biosecurity system.
- Only three public health laboratories store pathogens.
- PPE, funded by WHO, is available in reference laboratories.

Areas that need strengthening/challenges

- Multisectoral collaboration is needed to assess existing gaps on biosafety and biosecurity, prepare a workplan and strategies to develop biosafety and biosecurity in laboratories, including a legal framework for biosafety and biosecurity, along with oversight and monitoring capacity.
- Awareness of biosafety, biosecurity and biorisk management needs to be raised. Biosafety and biosecurity practices should be adopted in all facilities working with biological materials.
- Availability of funds to support biosafety and biosecurity implementation should be ensured.
- How infectious waste, handled by private companies, is treated needs to be clarified.
- Biosafety and biosecurity measures should be implemented in all laboratories across public health, veterinary, agriculture and food sectors.

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

No biological biosafety and biosecurity training or plans are in place. In general, the awareness of international biosafety and biosecurity standards (WHO Biosafety Guidelines, CDC Biosafety in Microbiological and Biomedical Laboratories, etc.) and practices is limited.

Strengths and best practices

- Some public health reference laboratories and central veterinary laboratories have received biosafety and biosecurity training by Sandia National Laboratories.

Areas that need strengthening/challenges

- Biosafety and biosecurity training needs should be assessed, and a training programme to address gaps in biosafety and biosecurity developed and implemented.

Immunization

Introduction

Immunization is one of the most successful global health interventions and one of the most cost-effective ways to save lives and prevent disease. Immunizations are estimated to prevent more than 2 million deaths a year globally.

Target

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

Somalia level of capabilities

The National Health Policy (NHP) and Health Sector Strategic Plan (HSSP) 2013–2016 provide the foundations on which the three zonal governments develop and implement different health programmes and initiatives. The NHP envisages immunization as an integral part of reproductive, maternal, neonatal/child and nutrition services. Under this strategic policy direction, the NHP stresses several important goals, including universal immunization of all children and pregnant women through EPI with eight vaccines against the major child killer diseases, the permanent interruption of polio transmission, and enhancing the integrated surveillance of vaccine preventable diseases.

Under the umbrella of the NHP and HSSPs, the zonal authorities have developed their comprehensive Multi-Year Plan for Immunization Services 2016–2020. Other policy directions emanating from the HSSPs with importance for EPI are the development of a National Strategy for Communication and the National Immunization Plan (also known as One-EPI Plan) that, while maintaining the polio-free status, aims to strengthen routine immunization services and community awareness of the importance of vaccines.

All three zones have an EPI manager/unit organized under their respective MoH Primary Health Care department. At the regional level, the Regional Medical Officers are responsible for management and implementation of EPI activities. Immunization services are mainly carried out as part of the Essential Package of Health Services through fixed-site delivery at maternal and child health clinics, located primarily in and around urban areas. Outreach immunization services are still very limited, but reach scattered rural communities and hard-to-reach nomadic populations. Several districts, especially in the South Central zone, have limited or no access to EPI services for security reasons.

International organizations play a major role in supporting EPI in the three zones. UNICEF procures and distributes all vaccines and injection equipment, and supports the cold chain and other logistics. WHO provides technical support and funding, and supports polio eradication and measles control activities. GAVI supports the introduction of pentavalent vaccines and inactivated polio vaccine (IPV), as well as health-care infrastructure improvement. Several NGOs carry out immunization activities at facility level.

Currently the vaccines in the immunization programme include BCG, DTP-HBV-Hib, OPV/IPV[4] and measles. Pregnant women receive tetanus toxoid for prevention of neonatal tetanus. Somali zones probably have one of the lowest immunization coverage rates in the world. Actual population level immunization coverage

[4] BCG: Bacillus Calmette–Guérin vaccine; DTP-HBV-Hib: combined diphtheria, tetanus, pertussis–hepatitis B–Haemophilus influenzae type B vaccine; OPV/IPV: oral polio vaccine/inactivated polio vaccine.

rates are unknown as reliable denominator data do not exist, and survey data are very limited. In 2015, the WHO/UNICEF estimate for DTP-3 coverage was stagnant at 42%. The reported administrative coverage was higher in Somaliland (67%) and Puntland (50%) compared with South Central (38%). WHO/UNICEF reported coverage for the 1st dose of measles-containing vaccine, combined for the three zones, was 46%, but varied from 0% in inaccessible districts to high coverage in some districts in Somaliland. Reasons for the low coverage are closely related to structural problems and funding of the whole health-care system. These include: limited availability and unequal access to health care and immunization services; poor quality of services; suboptimal cold chain management; lack of a well-trained, paid and motivated workforce; as well as low population awareness and demand for immunization.

Vaccine preventable disease incidences are still high. The last major measles epidemic in 2014 led to a supplementary measles campaign targeting nearly 4 million children under the age of 10.

Recommendations for priority actions

- Urgently improve population-level vaccination coverage by
  - listing size, location, and situation for each under-vaccinated group, including those in the hard-to-reach areas, nomads, and internally displaced persons (IDPs)
  - implementing a sustainable reach-every-child approach including reach-every-district microplanning in every district (prioritizing the now identified 37 districts)
  - establishing new EPI fixed centres and mobile outreach teams
  - increasing population awareness and demand for vaccines through evidence-based communication strategies including communication for development (C4D) and community engagement.
- Continue supplementary immunization activities that are based on high quality surveillance data in different areas and populations.
- Increase sustainable resources and stakeholder commitment for EPI by
  - integrating EPI into other health and nutrition interventions to increase coverage and efficiency
  - merging Polio Eradication Initiative human and logistics resources with other immunization services
  - mobilizing resources from the governments (increasing allocated budget for health, engaging private companies, diaspora and non-traditional donors for additional funds for immunization).
- Strengthen country ownership of vaccine delivery and logistics management systems to ensure the availability of vaccines at all levels of the health system.

Indicators and scores

P.7.1 Vaccine coverage (measles) as part of national programme - Score 1

The incidence of measles remains very high. According to WHO/UNICEF estimates, less than 50% of 1-year-olds have received at least one dose of measles-containing vaccine. Immunization coverage estimates are generally higher for Somaliland.

Strengths and best practices

- Strong commitment exists to improve the EPI coverage as demonstrated by the new comprehensive multi-year plans and the introduction of pentavalent vaccines and inactivated polio vaccine.
- Reach-every-child, reach-every-district and C4D strategies are utilized.
- The polio eradication and supplementary immunization activities are successful.
- Somalia is able to combine EPI, nutrition and other child and family oriented interventions.

Areas that need strengthening/challenges

- Reliable immunization coverage and denominator data are lacking, especially from districts with limited access and among IDPs and nomadic populations.
- Poor access and insecurity severely limit the coverage of health-care services, including EPI services.
- Insufficient and non-sustainable funding have led to a lack of incentives for vaccinators.
- Population-level awareness and demand for vaccines is low.

P.7.2 National vaccine access and delivery - Score 2

Vaccine delivery is available in most districts but the South Central zone has districts that are inaccessible for security reasons. Due to very limited capacity at the MoH and district level, international organizations have a major role in supporting the vaccine procurement and delivery system, including the cold-chain management.

Strengths and best practices

- The recently improved security situation allows EPI services in some formerly inaccessible districts.
- Recommendations of the Effective Vaccine Management assessment conducted in 2013 are mostly implemented.

Areas that need strengthening/challenges

- Vaccine supply logistics from the central warehouse in Nairobi to different zones and districts are complicated and costly as a result of security threats, requiring air shipments.
- There is a severe lack of resources at all levels, including aging cold-chain equipment, lack of monitoring and supervision and insufficient human resources.
- Vaccine stockouts and shortages are frequent at facility level as well as vaccine wastage due to inefficient service delivery.

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.

Somalia level of capabilities

When the Somali Government collapsed in 1991, so did the entire health system, including the laboratory system. Currently, there are three reference laboratories in Mogadishu, Hargeisa and Bosaso. The reference laboratory in Mogadishu was established in 2015 while the other two are more developed. Each state has regional and district hospital laboratories as well as private laboratories and a central veterinary laboratory. Some inaccessible areas cannot reach the laboratory system. MoH financial support for the laboratory system is limited.

Laboratory capacity and capabilities have not been mapped out and there are no laboratory system policies, strategies, or diagnostic algorithms for performance of core laboratory tests. In 2014, an attempt was made to develop an annual work plan for all laboratories.

Animal and public health laboratories are not connected, and information sharing between public health and veterinary laboratories, as well as between public health laboratories, needs to be improved.

During the evaluation, limited information was available on veterinary and environmental laboratory systems.

Recommendations for priority actions

- Map existing laboratory capacity and establish laboratory system policies and strategies including requirements of laboratory quality management and biorisk management systems
- Ensure active training for detection and diagnosis of priority diseases; laboratory management; and sample transportation.
- Improve the laboratory referral system to transport specimens from district/regional laboratories to reference laboratories by developing guidelines and SOPs; and improving the communication between the reference laboratories and regional laboratories.
- Develop point-of-care diagnostic testing strategies for priority diseases.

Indicators and scores

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

The national laboratory system is capable of conducting 3–4 core tests. Somaliland, Puntland and South Central have identified priority pathogens. Reference laboratories can conduct four core tests identified by the IHR: serology for HIV, microscopy for M. tuberculosis, rapid diagnostic testing for Plasmodium and bacterial culture for Salmonella enteriditis serotype Typhi. TB laboratories are vertically funded in all three states. Samples for polio testing are collected and sent to poliovirus laboratory in Nairobi, Kenya. Laboratories employ classical diagnostic techniques including culturing and serology. Results are reported back from laboratories in 1–3 days.

Strengths and best practices

- PHRL established in Somaliland, Puntland and South Central can perform testing for four priority diseases.
- SOPs for bacteriological and serological tests are used by the reference laboratories, along with WHO guidelines for public health laboratories.
- PPE is available in reference laboratories.
- A training needs assessment has been conducted, although the results are not yet available.

Areas that need strengthening/challenges

- Laboratory system policies and strategies should be established. These should include the requirements of laboratory quality management and biorisk management systems.
- Information sharing between the human and veterinary sectors and laboratories should be improved.
- Many laboratories remain under-resourced in areas such as reagents, PPE, equipment and laboratory maintenance.

D.1.2 Specimen referral and transport system - Score 2

A system is in place to transport specimens to national laboratories from less than 50% of intermediate level/districts for advanced diagnostics. The specimen referral and transport system is stronger in Somaliland and Puntland. District hospitals refer specimens to reference laboratories through the Communicable Disease Surveillance and Response team. This team also collects samples during outbreaks. Results are reported back to the team, the emergency section of MoHs and the relevant stakeholders. WHO guidelines and SOPs are used for sample referrals and transport.

Strengths and best practices

- The specimen referral and transport systems in Somaliland and Puntland are developed.

Areas that need strengthening/challenges

- The specimen referral and transport system needs to cover all levels of the health delivery system.
- As sample referral systems have not been documented, guidelines and SOPs need to be developed.
- Communication between the reference and regional laboratories should be improved.

D.1.3 Effective modern point of care and laboratory based diagnostics - Score 1

No evidence of use of rapid and accurate point-of-care and laboratory-based diagnostics.

Strengths and best practices

- HIV, syphilis, hepatitis and malaria rapid tests are available at some point-of-care facilities.

Areas that need strengthening/challenges

- Tier-specific diagnostic testing strategies should be documented and implemented.
- Capacity-building needs to be prioritized to ensure that a tiered approach for specific diagnostic testing is implemented.

D.1.4 Laboratory quality system - Score 1

There are no national laboratory quality standards.

Strengths and best practices

In Somaliland, a licensing system exists for laboratories through the National Health Provision Council.

In Somaliland, an external quality assurance scheme is established with the regional reference laboratory in Muscat, Oman.

Areas that need strengthening/challenges

- A national body is needed to oversee internal quality control and external quality assessment schemes for public health laboratories at all levels.
- The licensing process needs to be extended for all public and private sector laboratories. Conformity to a quality standard must be required by law and inspected.
- No external quality controls are performed in most 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 subnational, national and international levels of authority regarding surveillance of events of public health significance; improved country and regional capacity to analyse and link data from and between strengthened, real-time surveillance systems, including interoperable, interconnected electronic reporting systems. This can 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 the OIE standards.

Somalia level of capabilities

During 2008–1012, WHO provided coordination and leadership for surveillance, using Epi Info™ as the system of analysis and reporting. This was a rare time of seamless coordination among public health personnel in Puntland, Somaliland, and the South Centre zones. During 2012–2014 two changes greatly weakened the system: a new reporting software system called the Electronic Diagnosis Early Warning System, and the devolution for running the surveillance system to each of the three administrations. This was done with little training in the new system, reduced or eliminated funding for surveillance staff, and failure to renew the contracts of key WHO staff familiar with the system. As a result, and unique among JEE scores, the capacity of the system to collect and analyse data on disease reporting is less now than it was three years ago.

As at September 2016, a total of 257 health facilities were reporting to state surveillance offices. Of these, 89 (35%) were received from the South Central zone, 55 (21%) from Puntland, 40 (16%), and 73 from South Central zone and Somaliland (28%) reporting sites, among the three Somali administrations. Data are collected and analysed separately in the three administrative areas. All hospitals in the three areas report as government institutions, but many NGO sites also take part in reporting. Consensus was that around 20% of people have no access to health services and another 30% access services with no surveillance reporting. Thus, around half of all consultations occur in areas where no reporting occurs.

The timeliness and quality of the data collected is not optimal and dedicated and skilled analytical staff are in very short supply. Where computer systems are unavailable, the system uses SMS-based reports to accumulate data. These reports are combined with computer-generated reports from hospitals and other Internet-based sites into Excel® sheets. This is widely seen as lower in analytical quality than the Epi Info-based system used in the past.

The system is based on diagnostic categories and syndromic categories. Apart from routine surveillance, rumours and events are investigated by the health authorities. In addition, separate systems outside of hospitals are used by vertical disease programmes such as polio, malaria, HIV, and TB. Outside these vertical programmes, there is little in-service training or quality improvement efforts. Dedicated funding is needed for salaries, skilled leadership and analysis, and upgrading the system's software.

Recommendations for priority actions

- Organize finance and leadership for surveillance to improve real-time surveillance functionality. The Disease Early Warning System is a good option to be considered.
- Adopt a standard system for data collection and analysis and train personnel: a review should analyse the merits of using either the Excel® or the SMS-to-Epi Info system.
- Establish a mechanism to supervise and cross check surveillance data through field visits from central to peripheral levels.
- Establish a real-time, interconnected surveillance system between animal and human sectors.

Indicators and scores

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

A system is in place in all three Somali administrative areas. The quality and coverage of the systems, and their ability to detect and respond to infectious disease outbreaks is limited.

Strengths and best practices

- The combined use of SMS and electronic reporting exists, albeit unplanned.
- A standard form exists for data collection (immediate/as soon as possible/weekly).
- A weekly summary of surveillance data results is available.
- Both event- and indicator-based reporting is carried out in Somaliland.

Areas that need strengthening/challenges

- Data validation needs to be done regularly.
- More skilled routine analysis is needed, and results should be published.
- Greater stability and coverage exists in Somaliland, but all three areas need to upgrade their systems, at least to recover what had been in place prior to 2014.

D.2.2 Interoperable, interconnected, electronic real-time reporting system - Score 1

The system had a score of limited capacity until 2014, since then it cannot be considered as real-time reporting.

Areas that need strengthening/challenges

- Greater connectivity and more electronic reporting are needed to enable real-time electronic reporting.
- Integration of veterinarian, human, laboratory and other related surveillance systems is needed.

D.2.3 Analysis of surveillance data - Score 2

Strengths and best practices

- Stable reporting from Somaliland could be transferred to the other zones.

Areas that need strengthening/challenges

- Laboratory reports and veterinary reports should be integrated into the system.

D.2.4 Syndromic surveillance systems - Score 4

Strengths and best practices

- Syndromic surveillance is at least partially in place for febrile rash (measles and rubella), acute flaccid paralysis (polio and Group B streptococcus), congenital rubella syndrome, and severe acute respiratory infections (influenza, pneumococcal diseases), etc.

Areas that need strengthening/challenges

- No structured system for event-based surveillance yet exists.
- No regular system exists for sharing surveillance data with all interested parties.
- Rumour and event-based surveillance is not systematic or integrated into regular reporting.
- Surveillance of zoonotic diseases in collaboration with the animal welfare department should be strengthened.
- The data management electronic system should be updated.

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.

Somalia level of capabilities

The country has designated an IHR NFP, which provides a reporting structure to WHO on public health events of potential international concern. However, this designation was not shared with the relevant sectors, and its functions were not clarified. This limitation mirrors the relation with GAVI and United Nations reporting whereby all will not be solved in the health sector alone. An opportunity is open to strengthen the functional level of relations without entering into political/structural arenas.

From the three Somali zones, outbreak reports or rumours come from any source. This information is compared with surveillance data, and reports are analysed with the Emergency Preparedness and Response Package, Communicable Disease Response, and laboratory teams. Sample collections may then be requested from the field and transported to the NPHRL where laboratory investigation is carried out.

Any and all of these reports can be presented to the National Surveillance Officer, CSR, Emergency Preparedness and Response Package, WHO and health cluster to determine a plan of action. This includes reporting to the WHO EMR office, as well as communication with regional and district health authorities and health partners. Since 2015, the MoH Federal Government of Somalia is tasked to notify WHO as the IHR NFP. While an operational OIE contact point exists, no mechanism ensures that the IHR NFP and OIE contact points exchange information. The IHR NFP/OIE contact points have undergone no training for this role, and no guidelines are in place to make decisions on reporting. Somaliland appears to have more systematic laboratory investigation and information gathering. Yet neither Somaliland nor Puntland has an IHR focal person assigned to reporting. The system is in need of development both horizontally within the country and vertically for reporting internationally.

Recommendations for priority actions

- Formalize an IHR taskforce; train the IHR NFP and OIE focal point on their specific tasks and mechanisms for reporting; assign the task force specific terms of reference; and disseminate to all relevant sectors.
- Include personnel dealing with diagnostics, livestock, environment, and security in the IHR taskforce.
- Systematize the informal mechanisms of communication and coordination among the Somali zones and improve the frequency and quality of reporting to WHO, OIE and/or FAO.

Indicators and scores

D.4.1 System for efficient reporting to WHO, FAO and OIE - Score 1

The country has an IHR NFP but with no defined terms of reference or training.

Strengths and best practices

- Functional relations exist among the various Somali zones under difficult situations.
- IHR NFP has the authority to report public health events of potential international concern to WHO.

Areas that need strengthening/challenges

- Training, norms, and standardized procedures are not yet established.
- A hierarchical reporting structure encompassing the whole country is not yet possible due to political/ structural limitations.
- Surveillance of public health events is not functioning; hence early detection of public health events of potential international concern is limited, and thus notification to WHO.

D.4.2 Reporting network and protocols in country - Score 1

Reporting protocols do not exist.

Areas that need strengthening/challenges

- All areas related to the detection, internal sharing of information, assessment and notification to WHO are in need of strengthening.

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 should have skilled and competent health personnel for sustainable and functional public health surveillance and response at all levels of the health system and the effective implementation of the IHR (2005). A workforce includes physicians, animal health or veterinarians, biostatisticians, laboratory scientists, farming/livestock professionals, with an optimal target of one trained field epidemiologist (or equivalent) per 200 000 population, who can systematically cooperate to meet relevant IHR and performance of veterinary services (PVS) core competencies.

Somalia level of capabilities

The three Somali zones have training programmes for nurses, physicians, midwives, and clinical officers. Some of these are of a high standard, maintaining relations, over years of instability, with leading universities in Europe. A Health Professions Council tries to maintain standards between these and other unregulated and private schools.

In all three zones, the majority of people live in rural areas while the majority of health professionals are in the main cities. Placing and retaining health workers in remote areas, and providing supervision and in-service training for them, is a major challenge. The absence of career ladders once graduated, low salaries, and weak administrative systems lead to a lack of incentives to stay in the system. A brain drain is occurring, not so much to other countries but to the private and NGO sector within the country, where salaries are better.

The majority of public health staff are trained initially outside the country in programmes of varying and unknown quality. There is almost a complete absence of qualified planners, health economists, technology analysts, nutritionists, and chemical or radiologic specialists. Several people have been trained in FETP-type programmes but there is no registry of them and no programme existing or planned for the country.

Recommendations for priority actions

- Create or officially join an FETP.
- Review and update the workforce strategy to include IHR-related disciplines, and create an in-service education programme for its implementation.
- Hire/train staff in specialized areas including radiation and chemical hazards.
- Expand and strengthen the existing rapid response teams to become multidisciplinary and multilevel.

Indicators and scores

D.4.1 Human resources are available to implement IHR core capacity requirements - Score 2

Epidemiological and biostatistics staff are employed. Rapid response teams are available but involve only biological hazards. No staff for radiation and chemical hazard are available.

Strengths and best practices

- Human resources to implement some IHR capacity are available at different levels of the health system.
- Experience is available on constituting rapid response teams on an ad hoc basis; however, these teams only have capacity to investigate and respond to infectious disease outbreaks.

Areas that need strengthening/challenges

- Working in partnership with sectors outside the MoH needs strengthening.
- Strategy development for establishing normative profiles and in-service training for public health staff are needed.

D.4.2 Field epidemiology training programme or other applied epidemiology training programme in place - Score 1

No FETP or applied epidemiology training programme is established or envisioned.

Areas that need strengthening/challenges

- Basic and in-service training for public health staff is needed.
- An FETP-like programme should be established.

D.4.3 Workforce strategy - Score 2

Strengths and best practices

- A strategy for human resources for health exists but has not been implemented.
- Governmental control over employment and training standards is partially in place.

Areas that need strengthening/challenges

- Public health needs to be added as part of the health workforce strategy.
- The existing health workforce strategy is limited and needs more elaboration.

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 potential hazards, identifying and maintaining available resources, including national stockpiles, and ensuring 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.

Somalia level of capabilities

The health system in Somalia has suffered from the devastating impact of a prolonged, complex emergency; health status is still in a critical situation with the worst health indicators in the world. The total population was estimated to be 13.1 million in 2016 of whom 1.1 million are IDPS. Only 24% of the population have access to proper sanitation, and open defecation is common practice. Only 32% of the population have access to safe drinking water. This vulnerable situation is propagated by unstable security, which in turn increases the risk of emergencies and their impact on public health.

The existence of three major zones in the country has led to three parallel health systems, with some variations in capacities and discrepancies in the working systems. Although all three zones can be considered in a phase of development, their stage of development differs, with Somaliland and Puntland relatively more developed than South Central zone. Each zone has a central unit responsible for emergencies within their MoH and this filters down to the intermediate (regional) and local (district) levels. Major support is received from partners like United Nations agencies and international NGOs. The Disaster Management Agency has the overarching response to emergencies, mainly natural events like floods and droughts.

Being subjected to many emergencies, the country has accumulated experience in dealing with them. However, the preparedness and response activities are neither organized nor systematized.

Recommendations for priority actions

- Train the Emergency Preparedness Unit at various levels and related stakeholders on hazards and resource mapping; and emergency response multihazard planning.
- Conduct risk profiling (hazards and resource mapping).
- Develop the multihazard health emergency preparedness and response plan.

Indicators and scores

R.1.1 Multihazard national public health emergency preparedness and response plan is developed and implemented - Score 1

There is no multihazard public health emergency preparedness and response plan. Preparedness activities are seldom in place and response is on individual and ad hoc bases.

Strengths and best practices

- Due to recurrent outbreaks of cholera, the MoH in Mogadishu developed a Cholera Emergency Preparedness and Response Plan.
- The draft plan addresses many issues for preparedness and response, with the main focus on cholera. The MoH in Mogadishu plans to discuss it with the three zones for rapid approval. The cholera plan could be used as a template for a more comprehensive multihazard preparedness and response plan, formalizing the existing cumulated knowledge.

Areas that need strengthening/challenges

- As the country frequently faces emergencies, this builds a form of cumulative experience to deal with emergencies. However, this is not well formalized or structured.
- Somali health officials seem to have a basic understanding of preparedness and response to emergencies. This should be strengthened by training staff working in emergency and outbreak fields at all levels, and personnel from relevant stakeholders.

R.1.2 Priority public health risks and resources are mapped and utilized - Score 1

While many assessments have been done for various hazards by different United Nations agencies and international NGOs, they were neither comprehensive nor well disseminated. Subject-matter experts are the main source of information on hazards so far.

Strengths and best practices

- Many stakeholders are present on the ground, conducting risk assessments based on their mandate and project interests. The results produced can be considered an initial snapshot of the current status of risks across the three Somali zones.
- Further, this could be a good opportunity to support future comprehensive risk assessments, especially if the Somali public health authorities assume the leadership role.

Areas that need strengthening/challenges

- Many staff at various levels of the MoH lack the technical capacity to conduct risk assessments and thereby develop the country risk profile.
- The Somali public health authorities need to assume more explicit leadership over the health sector: conducting a risk mapping exercise will provide an opportunity to develop that leadership.

Emergency response operations

Introduction

A public health emergency operations centre (EOC) is a central location for coordinating operational information and resources for strategic management of public health emergencies and emergency exercises. EOCs 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

Countries will have a public health Emergency Operation Centre (EOC) functioning according to minimum common standards; maintaining trained, functioning, multisectoral rapid response teams and "real-time" biosurveillance laboratory networks and information systems; and trained EOC staff capable of activating a coordinated emergency response within 120 minutes of the identification of a public health emergency.

Somalia level of capabilities

There are no EOCs in the three zones of Somalia. However, in Puntland and Somaliland the Emergency Preparedness and Response unit structure is relatively more developed than in South Central zone. They have such units at all levels with some working lines of command and information exchange. There are rapid response teams in the three zone at almost all levels. Nevertheless, these need more structured training and involvement of other disciplines like risk communication, chemical and radionuclear experts.

Response is usually activated at the regional (intermediate) level. A temporary ad hoc committee is the main mechanism to coordinate and lead the response at all levels. The response structure starts from the district level, rising to the regional and central response teams. The latter reports to the Director of Medical Services who in turn reports to Director General, then the Deputy MoH, who finally reports to the Minister. The long reporting chain hinders response effectiveness.

Recommendations for priority actions

- Appoint EOC coordinator(s) to act as a nucleus for EOCs in the future, to be trained in EOC procedures and functions to start the process of developing EOCs.
- Formalize the existing system for emergency response operations; list the system elements and their processes and get the required approvals and endorsement.
- Complete the case management protocols for all epidemic-prone diseases besides IHR hazards like chemical, radiation and food safety and train personnel on implementing them.

Indicators and scores

R.2.1 Capacity to activate emergency operations - Score 2

Although a defined system and procedures are in place to activate a response, this is not written nor formally approved. Emergency coordinators are available 24/7 through mobiles and email.

Strengths and best practices

- Usually emergency response activation is prompt and, in practice, information and decisions flow back and forth.

- Emergency coordinators are available through mobiles and email and can easily activate the response.

Areas that need strengthening/challenges

- There is no structured, sustained coordination mechanism involving all relevant stakeholders that enables prompt decision-making.

R.2.1 Emergency operations centre operating procedures and plans - Score 1

There are no written plans or procedures for EOCs.

Strengths and best practices

- Developing an EOC is foreseen in the draft Cholera Preparedness and Response Plan.

Areas that need strengthening/challenges

- There is no well-defined emergency operation plan and procedures or a level of activation of response.

R.2.3 Emergency operations programme - Score 2

The system and decision-making process have been tested in real emergencies. However, there is no system in place to formally evaluate the emergency response or to routinely extract lessons from these events.

Strengths and best practices

- Although no simulation or structured evaluation has been carried to test the system, the response monitoring part elicits some of the response gaps.

Areas that need strengthening/challenges

- Evaluation should be considered an integral part of response activities to extract lessons learnt and further improve the response.

R.2.4 Case management procedures are implemented for IHR-relevant hazards - Score 2

Case management guidelines are available for some priority epidemic-prone diseases.

Strengths and best practices

- Some epidemic-prone diseases like cholera and measles have case management protocols.

Areas that need strengthening/challenges

- A complete set of IHR-related case management protocols needs to be developed. These should include protocols for chemical and radionuclear cases.

Linking public health and security authorities

Introduction

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

Target

In the event of a biological event of suspected or confirmed deliberate origin, a country will be able to conduct a rapid, multisectoral response, including the capacity to link public health and law enforcement, and to provide and/or request effective and timely international assistance, including to investigate alleged use events.

Somalia level of capabilities

There is no legislation to enable the public health sector to call on the support of the security sector. There are no written agreements between the two sectors concerning linkages or collaboration. Nonetheless, collaboration does happen on an ad hoc basis and related to specific events.

Exercises were conducted by the MoH during its Ebola preparedness activities, with intersectoral collaboration with security authorities. No SOPs are in place for joint risk assessment, but events of public health significance are communicated by the emergency coordinator in the MoH to the Prime Minster. Based on the event, the Prime Minster establishes a temporary committee to support the public health investigation and response. The composition of the committee is decided based on the nature of the event and may include the security sector when needed. The police manage a hotline (88 for calls and text messaging) for citizens to report any event including public health events. The police involve the public health sector in the response to public health events when needed.

Recommendations for priority actions

- Formalize the existing mechanism of information sharing between public health and security sectors.
- Establish an overarching body to coordinate the response to emergencies including public health events and ensure the involvement of the security sector in this body. The Disaster Management Agency could play this role if its functions were expanded to coordinate response operations for public health events.
- Ensure the involvement of the security sector in the training conducted by the public health sector on emerging and remerging public heath events.
- Develop SOPs for joint investigation and response to public health events.

Indicators and scores

R.3.1 Public health and security authorities (e.g. law enforcement, border control, customs) are linked during a suspected or confirmed biological event - Score 2

The current system allows the public health sector to call for the support of the security sector in practice; however, this collaboration is not supported by legislation or written agreements.

Strengths and best practices

- The emergency coordinator in the MoH has access to the Prime Minster.
- Collaboration between the different sectors occurs when needed including the security sector. During floods, security forces support the Governor of each region to rescue citizens and have supported the response to acute watery diarrhoea outbreaks.
- Some security forces participate in training conducted by the MoH.

Areas that need strengthening/challenges

- No legislation exists to support collaboration between public health and security sectors.
- No written procedures trigger the need to request the support of the other sector.
- SOPs are lacking for joint investigation and response.
- No control exists over some points of entry (PoE), in particular the land crossings. This means no security sector support can be given to implement cross-border public health measures.
- There is no formal mechanism to share information on a regular basis between the public health and security sectors.

Medical countermeasures and personnel deployment

Introduction

Medical countermeasures (MCM) are vital to national security and protect nations from potentially catastrophic infectious disease threats. Investments in MCM 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

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

Somalia level of capabilities

Somalia suffers from a prolonged complex emergency, hampering its health system capacity to respond effectively. There is a huge deficit in necessary MCM and personnel to counter an emergency, requiring reliance on international assistance. The country received several batches of MCM and personnel from Turkey, the Kingdom of Saudi Arabia, United Arab Emirates, WHO/UNICEF, and international NGOs and from the Somali diaspora. The country has also sent some MCM and personnel, especially to the Republic of Yemen, creating practical experience in sending and receiving both MCM and personnel. However, this was done on an ad hoc basis through bilateral agreements or memoranda of understanding with the mentioned partners.

Recommendations for priority actions

- Formalize a mechanism to send and receive MCM and personnel during emergencies involving all relevant sectors and ensuring leadership from MoHs.
- Expedite approval of the National Health Professional Act for the Federal Government and ensure explicit articulation of procedures for receiving medical and health personnel.

Indicators and scores

R.4.1 System is in place for sending and receiving medical countermeasures during a public health emergency - Score 2

Despite several bilateral agreements and memoranda of understanding, there is no integrated plan.

Strengths and best practices

- Somalis are used to receiving and sending MCM and personnel through bilateral agreements and memoranda of understanding, which has created cumulative experiences and exposed gaps in the system.
- The drug policy drafted to govern medical supplies management may answer many issues with regard to MCM management.

- WHO and UNICEF are the main partners in managing MCM. In Puntland and Somaliland, MoHs are able to manage the supplies, which is not the case in South Central zone which tends to rely totally on WHO/UNICEF in the management of MCM.
- There is good coordination with the security sector and partners to ensure the security of MCM and that they reach the end beneficiaries.
- End distributors of MCM keep records of all supplies distributed, which are subject to audit during supervision as per requirements of the national team.

Areas that need strengthening/challenges

- The routine system for medical supplies management and importation is not well developed. The only measure in place is to check for drug expiry before importation.
- Despite the above control there are reports of importers changing the expiry date on out-of-date drugs.
- There is no well-defined budgeted regulatory authority responsible for medical supplies in the three zones.
- There is a lack of clear regulations, infrastructure and trained staff, which limits capacity to manage MCM.

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

There seems to be formal procedures and plans in Somaliland and Puntland, but not in Mogadishu and the South Central zone.

Strengths and best practices

- A Health Professional Council/Commission exists in Puntland and in Somaliland, but not in South Central zone.
- The Health Professional Council/Commission has special committees to regulate the reception of foreign medical personnel. In South Central zone a law is being drafted to create such a Council.

Areas that need strengthening/challenges

- The National Health Professional Council draft law for South Central zone has sections for temporary and limited registration that require the applicant to be resident in the country in order to be eligible to apply for registration. The law should be updated to ensure fast-track registration for foreign medical and health professionals during emergencies.
- Although there are regulatory bodies in Puntland and Somaliland the system is still in the development stage and needs time to address all issues for sending and receiving health personnel, such as liability, safety, and payments.
- Given that the three Somali zones are heavily affected by emergencies and suffer from staff shortages, priority should be given to joining some of the regional/international emergency response networks, such as the Global Outbreak Alert and Response Network.

Risk communication

Introduction

Risk communications should be a multilevel and multifaceted process that aims to help 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 outbreaks of diseases. This said, communication about risks is most effective when the social, religious, cultural, political and economic aspects associated with the event producing the risk are taken into account, and when there is proactive engagement with the affected population. Communications of this kind promote appropriate prevention and control action through community-based interventions at individual, family and community levels. Disseminating the information through the appropriate channels is essential. Communication partners and stakeholders in the country need to be identified, and functional coordination and communication mechanisms established. In addition, the timely release of information and transparency in decision-making are essential to build trust between authorities, populations and partners. Emergency communications plans should be tested and updated as needed.

Target

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

Somalia level of capabilities

Until recently, Somalia has not had a tradition of health promotion or health education. However, over the past few years, a network of health workers has been trained with the support of international donors (particularly UNICEF) in behaviour change communication/community engagement using the C4D approach. This network covers all three Somali zones down to the level of regions and districts.

C4D is a core component of several Somali health strategies, most notably in the area of vaccination but also in mother and child health and nutrition. The C4D communicators report to, and are led by, the MoHs. However, they depend on donors for their salaries and, to some extent, for technical support/strategy development. Somaliland and Puntland have public communication teams in their MoHs. In Mogadishu the C4D team in the MoH organizes press conferences for the Minister and handles the logistics of media enquiries (although it is always the political level that provides the information). There are, however, no trained specialists in emergency risk communication (ERC) in any of the zones. None of the MOHs has an ERC strategy, and there are no SOPs on how to coordinate ERC during an emergency.

While ERC may be a new concept to all Somali zones, there is a solid basis on which ERC capacity could be built:

- With appropriate training and support, the communicators in the C4D network could provide a substantial part of the ERC workforce needed, particularly at regional and local level. Indeed, C4D communicators have in some instances undertaken communication is support of an emergency response, most notably in the 2016 cholera outbreak.

- The public communication teams in Somaliland and Puntland have a workforce who could be trained to undertake ERC activities.
- There are Somali mass media mechanisms capable of reaching the nomadic populations in the most remote districts, most notably through local radio and SMS text messages. These are already used to communicate emergency messages, and could be used more systematically in the future.
- The development of the communication strand of the Comprehensive Multi-Year Strategy for Immunization 2016–2020 provides a solid evidence base on how to communicate health issues.
- Disease outbreaks and droughts are fairly frequent in the three Somali zones. Senior health officials therefore tend to have experience of operating during emergencies.

The success of the Somali Polio Eradication Initiative (almost 100% coverage) shows that behaviour change communication can be effective in the Somali context, with the right resources and the right adaptation. There is therefore optimism that, with the right support, Somali ERC strategies can be developed and implemented that will empower Somalis to protect and improve their health.

Recommendations for priority actions

- MoHs to develop ERC strategies.
- Establish and train MoH emergency risk communication teams including spokespersons, and integrate with existing C4D staff across all levels.
- Draft SOPs to coordinate with key stakeholders (other ministries, intergovernmental organizations, NGOs, etc.).
- Organize crisis simulation exercises to test strategies, SOPs and decision-making.

Indicators and scores

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

There are no formal government emergency risk communication arrangements in place in any of the Somali zones. In particular, the public health authorities have not developed ERC plans or SOPs defining roles, responsibilities and processes for risk communication during emergencies.

Strengths and best practices

- Informal systems to coordinate communication between public health authorities and other partners (other ministries, intergovernmental organizations, NGOs) seem to function reasonably well.
- The C4D strategy and network of trained Somali health workers could be built upon and adapted by the public health authorities to develop emergency risk communications strategies and structures.
- The success of the Polio Eradication Initiative shows that behaviour change communication and C4D can be effective in the Somali context.
- Studies carried out during the communication strategy for the Comprehensive Multi Year-Plan for Immunization System 2016–2020 provide a solid evidence-base for developing a strategy and structures.
- Health emergencies such as disease outbreaks and droughts are relatively common. Somali public health authorities therefore have many staff with experience of operating in emergencies.

Areas that need strengthening/challenges

- The complex political and security situation make developing a national ERC strategy and SOPs challenging. Work will need to be done in Mogadishu, Garowe and Hargeisa to ensure the ERC strategy and SOPs fit with the administrative situation of the three zones. There should also be an element of communication coordination between the zones when a hazard threatens all three.
- The Somali public health system relies heavily on donors for communication expertise. In particular, UNICEF and GAVI have been heavily involved in strategy development and technical support. A critical mass of communications expertise needs to be transferred to the Somali public health authorities and funded on a sustainable basis.
- Training of existing communication staff (C4D network, public communication teams/spokespersons) is essential in ERC, reinforced with additional staff where possible.

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

There is an informal but well-functioning system of communication coordination between key government departments, international partners and NGOs across the three zones and usually between regional and district levels. There is some coordination with the private sector, religious and civil society groups (e.g. youth organizations, women's groups). Since coordination systems are informal, they are not always consistent and there is no programme of exercises/drills to test them systematically.

Strengths and best practices

- The draft Acute Watery Diarrhoea/Cholera Preparedness and Response Plan 2017-2022 contains a common communication strategy to be agreed across all partners in the health cluster.
- Joint investigations of suspected cholera outbreaks are carried out by the ministries of health and water; and coordinated responses include communication.

Areas that need strengthening/challenges

- Coordination should include all partners and SOPs should be developed for communication coordination.
- SOPs should be tested regularly with a programme of simulation exercises.

R.5.3 Public communication - Score 2

Public communication teams and trained spokespeople are in place in the MoHs in Somaliland and Puntland. In South Central zone the C4D team at the MoH performs some press office functions (liaising with and gathering requests for information from journalists) but there is no spokesperson at present. Outreach tends to be reactive rather than proactive with a limited number of platforms used.

Strengths and best practices

- Cooperation with Somali mobile phone networks enable public health authorities to send text messages to mass populations: these messages can be targeted to a specific town or district if needed.
- Use of mobile telephones is high and network coverage can even reach nomadic populations; Somalis across the three zones listen to local radio, and BBC Somali is widely used and trusted.

Areas that need strengthening/challenges

- A media spokesperson in the MoH in South Central zone should be appointed and trained.
- The public communication teams in the each of the three Somali zones should be reinforced so that communication can be more proactive and cover more platforms.

- Internal capacity/expertise in MoHs should be enabled to produce information, communication and education materials, either by recruiting a specialist or training an existing staff member.
- Public communication staff should be trained in ERC.

R.5.4 Communication engagement with affected communities - Score 2

Social mobilization, behaviour change communication and community engagement are central to some key Somali public health programmes. The C4D strategy and network of trained health promoters reaches down to regional and district level in the three zones. Engagement with community leaders and civil society groups at district and regional level is a routine part of the response to outbreaks and hazards. Nonetheless, the C4D system at the level of districts and regions has no autonomy over financial or staff resources. It is therefore not a decentralized system as envisaged in level 3.

Strengths and best practices

- Regional and district medical officers routinely engage with community leaders (village and clan elders) when investigating a suspected outbreak or hazard.
- A network of staff trained in C4D reaches down to regional and district levels across the three zones.

Areas that need strengthening/challenges

- ERC strategies should be developed, integrating the existing system of community engagement at regional and district level.
- Training is needed for some or all C4D specialists and regional medical officers in ERC.
- Integration should be ensured between C4D and ERC networks.

R.5.5 Dynamic listening and rumour management - Score 3

Event-based surveillance of rumours is a routine function of regional and district-level medical officers. Rumours are therefore routinely investigated and managed, many of which turn out to be false and communication action is taken to dispel the rumour.

Strengths and best practices

- Surveillance of rumours circulating in communities is carried out on an ongoing and routine basis.
- Rumours in communities are systematically investigated.
- Local radio is an amplifier of rumours, and Somalis like to report them to this form of media.

Areas that need strengthening/challenges

- Public health authorities do not systematically monitor traditional mass media such as radio, particularly for rumours.
- The system for managing and responding to rumours should be developed as part of the Somali Emergency Risk Communication Strategy(s) and properly integrated with ERC response/strategy development.

OTHER

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 that will implement specific public health measures required to manage a variety of public health risks.

Target

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

Somalia level of capabilities

Somalia has 18 PoEs: four ports (Berbera, Bosaso, Kismayo and Mogadishu); six airports (Baidoa, Berbera, Bosaso, Hargeisa, Mogadishu and Kismayo); and eight ground crossings (Beled-Hawa, Dolo, Elwak, Ferfer, Galdogob, Lowya Adde, Tog-Wajale and Yeed). None of these is designated for IHR implementation. The country has not identified a list of ports authorized to issue ship sanitation certificates, and has no agreements with neighbouring countries on cross-border movements of people. Ground crossings have limited security services.

Roles and responsibilities among sectors at the PoEs are neither identified nor coordinated during routine times, although they function better in response to a public health event of international concern. Communication procedures for public health events between conveyances and public health authorities at PoEs and IHR NFP are not in place. Neither are facilities for assessing ill travellers and animals. Referral to health facilities for further assessment and management is in place for some PoEs but not through written agreements or procedures.

Food and water are provided at some of PoEs but no system exists to ensure their safety. Surveillance for public health events, and plans and SOPs for response to public health events of different origins are not in place. Field visits were not conducted to evaluate the environment at the PoE.

The country has limited skilled personnel to conduct a public health programme, including an inspection programme at PoEs. However, during the Ebola outbreak, two staff were identified in some PoEs – based on a risk assessment approach – and trained on the early detection and initial assessment of Ebola suspected cases.

The vector surveillance and control programme is focused on malaria, although PoEs and facilities around them are not part of the programme. Facilities to quarantine animals are not in place as Somalia does not import animals.

Recommendations for priority actions

- Designate an international port and airports to implement the following IHR requirements:
  - Train personnel at PoE and improve access to equipment for the early detection, assessment and initial response to ill passengers;
  - Expand the entomological surveillance and control programme to include PoEs and facilities using a risk assessment approach;
  - Develop a public health emergency plan for preparedness and response to all hazards;
  - Develop SOPs for communication and coordination between relevant stakeholders concerning the notification, assessment, response and referral to health facilities;
  - Designate a space at PoEs for the isolation of ill passengers and quarantine of imported animals.

Indicators and scores

PoE.1 Routine capacities are established at PoE - Score 1

The country has no designated PoE under the IHR.

Strengths and best practices

- Some personnel at selected PoEs have been trained in the early detection and management of suspected Ebola cases.
- Referral of ill passengers from PoEs to health facilities is in place.
- SOPs exist for the early detection and management of Ebola suspected cases.

Areas that need strengthening/challenges

- Procedures for communication and coordination between the different stakeholders are not in place.
- Roles and responsibilities for each sector at PoEs are not identified.
- Cross-border movement is not controlled.
- Skilled human resources to conduct public health programmes is inadequate.
- The public health programme is not properly implemented and monitored and a safe environmental at PoEs is not maintained.
- There are no generic guidelines or SOPs in place for the early detection and assessment of ill passengers.
- The referral of ill passengers to health facilities needs documentation.

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

No public health contingency plan to respond to public health emergencies of all hazards is in place at any PoE.

Areas that need strengthening/challenges

- A Public Health Emergency Response Contingency Plan needs to be developed as an integral part of the PoE Emergency Plan.
- Public health authorities need to be included in the emergency team/committee at airports and ports if the same structure exits.
- PoEs have no facilities for assessment and quarantine of either suspected ill travellers or animals.
- Simulation exercises to test the preparedness capacity are not being carried out.
- Trained personnel to develop plans and implement procedures during public health events of international concern are inadequate.

Chemical events

Introduction

States Parties should have surveillance and response capacity for chemical risk or events, with effective communication and collaboration among all relevant sectors.

Target

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

Somalia level of capabilities

There is substantial use of chemicals, particularly in the agro-pastoral, health and domestic sectors, but this is poorly managed and the country lacks any capacity to enforce regulations. Pesticides are of particular concern. The basic legislative infrastructure in place for response to events of chemical origin lacks complementary regulations for control of chemicals and hazardous substances produced intentionally or unintentionally. Moreover, existing legal measures do not address the whole life cycle of chemicals. Legislation is inadequate for the control of toxic chemical waste (including medical waste) and no capacity exists to monitor waste from offshore sources, along an extensive open coast line. Regulation of pharmaceuticals is in preparation.

A national chemicals profile outlining an administrative management infrastructure does not exist, and a national strategy and action plan to implement the Strategic Approach to International Chemicals Management (SAICM) has not been prepared. Somalia has not yet ratified the Basel, Rotterdam or Stockholm Conventions, the Paris Convention on chemical weapons or the Minamata Convention on Mercury; it does not participate in the International Conference on Chemicals Management and has not implemented the Global Health Security Agenda. The International Labour Organization conventions 170 and 174 are not in force. Some guides and procedures for sound chemicals management have been elaborated, but are only partially implemented. Capacity-building is needed to ensure implementation of the multilateral environmental agreements. Some access exists to international databases on chemicals (e.g. INTOX and INCHEM). Environmental monitoring of air and water and surveillance for chemicals from other media is very weak and does not cover the whole country.

An interministerial coordinating mechanism for consultation among stakeholders and management of chemical events does not exist. The MoH lacks toxicological capacity. Coordination with other IHR sectors is partial and communication on chemical risks needs strengthening. There remains a lack of awareness on chemical risks and chemical events and poor appreciation at decision-making levels of the implications of chemical emergencies, particularly in some regions. Educating the public and awareness concerning chemical risks is lacking and programmes for their identification, minimization and available actions to respond to emergencies are required. Further training of human resources in chemical risk assessment and communication is desirable, as well as strengthening training for response to chemical events both by first responders and the medical professions. Medical professionals often have poor knowledge of the diagnosis and patient management of diseases of chemical etiology.

Good laboratory capacity to identify chemical risks with SOPs does not exists at the national level and analytical toxicology capacity for exposed patient diagnosis and treatment remains weak or non-existent at most hospitals. Existing laboratory capacity to identify viral and bacteriological diseases could be expanded

for some toxicological testing. Access to pharmaceuticals and medical supplies for chemical emergency response is not in place.

A national centre for toxicovigilance and pharmacovigilance is urgently needed to provide 24/7 identification and surveillance of chemical risks, particularly acute exposures, with systematic collection of case data. Capacity is also needed to identify and survey chemical risks from chronic exposure that may lead to a chemical event. Limited capacity exists in identifying chemical risks associated with contaminated food, although capacity needs to be strengthened to analyse clinical toxicological samples and chemical samples in environmental media.

While the health sector cooperates with emergency services (coordinated through Ministry of Interior Security) for preparedness and response to chemical events and notification of those relating to IHR, there remain important gaps. These include transparency, systematic harmonized data collection and exchange of information on chemical events and their management, regular analysis of information to learn from past experiences, and epidemiological follow-up. Few, if any, industrial installations have chemical EPR plans for the periphery or the interior of the installation. An inventory of potential chemical risk sites throughout the country and mapping of potential hazards needs to be prepared and regularly updated. Such a mapping should evaluate the risks involved in chemical events and communicate them to relevant decision-makers throughout the country for specific action. Registration and tracking capacity need to be developed since there is currently no system to track important hazardous chemical consignments entering the country. Comprehensive chemical emergency plans need to be developed with SOPs that are regularly tested and improved through simulation exercises.

Recommendations for priority actions

- Establish an Interministerial Commission on chemical events.
- Prepare a chemicals management profile, identifying priorities for capacity-building.
- Strengthen human resource capacity of chemical emergency response and organize simulation exercises.
- Plan a poisons information centre and related medical and analytical facilities operating 24/7.
- Strengthen laboratory capacity to test for chemicals in water and food and establish a network with regional and global accredited laboratories.

Indicators and scores

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

Surveillance systems for chemical events are fragmented among different institutions, with inadequate identification of intoxications and incomplete laboratory capacity for confirmation of events. Response capacity to events is weak.

Strengths and best practices

- While Somalia lacks capacity to identify chemical risks in most of the country, and different institutions are involved, laboratory capacity for other areas of IHR could provide basic analytical toxicology capacity. The lack of real-time exchange of information among stakeholders, the inadequacy of the surveillance system for chemical events: and the lack of coverage for the whole country, are the basis of this score.

Areas that need strengthening/challenges

- An initial assessment is needed on the infrastructure for sound management of chemicals and waste, based on the Inter-Organization Programme for the Sound Management of Chemicals guidelines as proposed by the Strategic Approach to International Chemicals Management agreements.

- Capacity for surveillance and detection of chemical events could be achieved by setting up a poisons information centre and related medical and analytical facilities operating 24/7 with systematic data collection. WHO provides guidance materials for setting up such facilities.
- Responsibilities for detecting and responding to chemical events are divided among several sectors with little coordination and insufficient exchange of information. The Inter-ministerial Commission could serve as a mechanism to, inter alia: coordinate stakeholders; systematize collection and exchange of information on chemical events and epidemiological follow-up; establish an inventory and map potential hazards; communicate risks to the public and improve awareness of decision-makers on chemical risks; and ensure access to pharmaceuticals and medical supplies for emergency response. It should be legally constituted with an operational budget.
- Implementation of the multilateral agreements concerning chemicals and waste will require the strengthening of national chemical safety programmes, for which financial support mechanisms are available to parties to most of the agreements.
- The analytical capacity of toxicology laboratory facilities should build on existing laboratory services for other IHR areas, with the creation of a regional network of accredited laboratories. Capacity should also be available to test for chemicals in foods and environmental media.
- A national programme that evaluates health risks of chemical origin needs to be established. An inventory of potential chemical risk sites throughout the country and a mapping of potential hazards needs to be prepared and regularly updated, evaluating and communicating risks to relevant decision-makers throughout the country for specific action.
- A system to track and register significant hazardous chemical consignments entering the country needs to be developed.
- Laboratory capacity, qualified human resources and finances remain insufficient.

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

A national policy, action plan and legislation for surveillance, alert and response to chemical events does not exist.

Strengths and best practices

- There is some very limited capacity for management of chemical events, although it does not cover the whole country.
- Guidance for pesticide residue limits for food is available, but not implemented.

Areas that need strengthening/challenges

- A comprehensive health plan for preparedness and response to chemical incidents is needed.
- Legislation is not in place or in preparation, except for pharmaceuticals.
- A national toxicovigilance (poisons information) centre and related analytic and clinical facilities is needed with networks to all regions, and the systematic collection of case data in harmonized forms.
- Training of medical personnel in diagnosis and management of chemicals events should be undertaken, along with training of first responders that includes guidelines on management of exposed persons and the regular organization of simulation exercises.
- Access to pharmaceuticals and essential equipment for patient management should be ensured.

Relevant documentation

- None identified.

Radiation emergencies

Introduction

States Parties should have surveillance and response capacity for radionuclear hazards, events and emergencies.

Target

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

Somalia level of capabilities

The main sources of radiological hazards are associated with medical equipment and small-scale use of radioactive materials. With correct use of such equipment the hazard of exposure is low, but risks remain associated with misuse, criminal diversion as well as uncontrolled or illegal disposal of obsolete equipment and radioactive materials at sea, for example, that may wash up on the long Somali coastline. There is no nuclear power generation, nor nuclear reactors. In the future, uranium mineral extraction might be a potential source of hazardous material.

It appears that none of the Somali zones has legislative infrastructure to control radiological hazards, nor any competent administrative regulatory authority to manage such hazards, or for emergency preparedness and response to nuclear and radiological emergencies. An inventory has not yet been made of potential sources or the magnitude of these hazards. The highest level of hazard in Somalia is category III sealed sources used in hospitals and industrial applications that could require on-site protective actions.

Neither a policy, nor a national plan for response to nuclear and radiological emergencies has been drafted. No emergency exercises have yet been conducted, as the plans and procedures on emergency response need to be developed for the organizations involved. Implementation of any plans and regulations and putting them into practice will be challenging, in the absence of guidelines.

Somalia is not party to the Convention on Assistance in the case of a Nuclear Accident or Radiological Emergency, the Convention on Early Notification of a Nuclear Accident, or other important conventions and treaties concerning the safe and peaceful use of nuclear energy. There is no focal point for the WHO Radiological Emergency Medical Preparedness and Assistance Network (REMPAN).

No hazard assessment has been made as a basis for preparedness and response to a radiological emergency, commensurate with the hazards identified. No qualified experts in this field appear to be available in the country.

Laboratory facilities that can detect and measure samples for radioactivity, used for environmental safety and consumer product control, are not available. Further, no arrangements are in place for national and international transport of radioactive material, samples and waste management including those from hospitals and medical services.

In view of the lack of capacity in the field of radiation emergencies, Somalia should consider seeking international expert advice, such as from the International Atomic Energy Agency (IAEA). This agency could to propose approaches to meet the IHR requirements related to radiation emergencies, taking into consideration any existing capacity. Radiation hazards may be assessed according to IAEA technical documents, and classified in the emergency preparedness categories defined in IAEA Safety Standards Series No. GSR Part 7.

The main stakeholders are the Ministries of Health, Environment, Communication, Petroleum, Planning, and Interior Security.

Recommendations for priority actions

- Seek international expert guidance to identify existing capacity and propose approaches to establish IHR-related requirements.
- Undertake a survey of potential sources of radiological hazards and assess them.
- Develop a national policy and emergency plan for radiological emergencies and designate a competent regulatory authority.
- Identify a medical facility that could be developed to manage patients contaminated with radioactive substances and patients with overexposure.

Indicators and scores

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

National policies, strategies or plans for the detection, assessment, and response to radiation emergencies have not been established and monitoring mechanisms do not exist for radiation emergencies that may constitute a public health event of international concern.

Strengths and best practices

Since there is not yet any capacity for radiation emergencies, there are no strengths or best practices.

Areas that need strengthening/challenges

- An inventory of potential radiological risk sites throughout the country should be carried out and mapping of potential hazards prepared and regularly updated; the risks involved should be evaluated and communicated to relevant decision-makers for specific action.
- Capacity for surveillance and detection of radiological events is lacking and a programme to evaluate health risks of radiological origin throughout the country needs to be established.
- Responsibilities are divided among several sectors with no coordination or exchange of information. A national committee should be established, consisting of all relevant stakeholders, to manage radiological and nuclear emergencies. Once it is functional with an operating budget, an emergency centre for radiological emergencies can be set up.

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

No radiation emergency response plan exists and no services are available for managing exposed patients. Policies, strategies or plans for internal and international transport of radioactive material, samples and waste management including those from hospitals and medical services, are not yet established.

Strengths and best practices

Since there is not yet any capacity for radiation emergencies, there are no strengths or best practices.

Areas that need strengthening/challenges

- Arrangements should be put in place to provide the appropriate medical care required in radiological emergencies, and a hospital with equipment, trained personnel and guidelines to manage cases should be designated. Access to pharmaceuticals for patient management should also be ensured.
- National public health emergency response plans for medical response to radiation emergencies should be developed.
- Laboratory capacity, qualified human resources and finances remain insufficient.

Annex 1. Joint External Evaluation Background

Mission place and dates

The mission took place in Entebbe, Uganda on 17–21 October 2016. The team held multisectoral discussions with Somali colleagues who had travelled to Entebbe from Mogadishu, Garowe and Hargeisa.

Objectives

a) Assess the implementation of IHR public health capacities for surveillance and response to public health events including at points of entry.

b) Review all related documents.

c) Develop a report describing the progress and gaps in implementing the IHR capacities.

d) Recommend priority actions to update and finalize the national plan to achieve and maintain IHR capacities for global health security.

Limitations and assumptions

- The assessment was of one week's duration, which limited the amount and depth of information that could be managed.
- It is assumed that the results of this assessment will be made publicly available.
- The assessment is a peer-to-peer review, and not an audit. Thus, information provided by Somali colleagues was not independently verified, but was discussed and an assessment rating was mutually agreed between the host country and assessment team.

Mission team members

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- Ben Duncan, Specialist, Emergency risk communication, public policy, stakeholder relations and legal affairs, Edinburgh, United Kingdom

Key host country participants and institutions

To be added

Supporting documentation provided by host country

- Self-reporting on JEE assessment tool, Somali.
- PowerPoint® presentations prepared by Somali colleagues.

National legislation, policy and financing

Relevant documentation

- Public health law assessment.
- Final draft of National Professional Council Act (final draft for South-Central; operational in Puntland and Somaliland).
- Act on Exportation and Quarantine of Animals.
- Environmental analysis to support developing related environmental laws.

IHR coordination, communication and advocacy

Relevant documentation

- No documents on IHR coordination, communication or advocacy are available.

Antimicrobial resistance

Relevant documentation

- NPHRL Profile.
- Essential Medicines List.
- National Medicines Policy adopted by MoH.
- Somali Standard Treatment Guidelines (WHO).
- National TB treatment guidelines.
- Somaliland Waste Management Policy.
- Somaliland Hygiene and Sanitation Policy.
- Somaliland draft National IPC Plan.
- National drug authority (Somaliland) body.
- Guled A, Elmi A, Abdi B, Rage AMA, Ali F, Abdinur A et al. Prevalence of Rifampicin Resistance and Associated Risk Factors among Suspected Multidrug Resistant Tuberculosis Cases in TB Centers Mogadishu-Somali: Descriptive Study. Open Journal of Respiratory Diseases. 2016;6:15–24.
- Draft One Health Strategic Document for Somalia.

Zoonotic diseases

Relevant documentation

- Draft One Health Strategic Document for Somalia.

Food safety

Relevant documentation

- Somaliland Code on Food Safety.
- Draft Acute Watery Diarrhoea/Cholera Preparedness and Response Plan.

Biosafety and biosecurity

Relevant documentation

- No documentation available.

Immunization

Relevant documentation

- WHO and UNICEF estimates on immunization coverage.
- MoH EPI coverage data.
- WHO data on vaccine preventable disease incidence.
- Comprehensive Multi-Year Plan for Immunization Services 2016–2020 for South Central Somali, Puntland and Somaliland.
- Application for GAVI Health System Strengthening Support in 2016.
- Kamadjeu R et al. Measles control and elimination in Somalia: the good, the bad and the ugly. J Infec Dis; 2011:204(suppl_1): S312–7.

National laboratory system

Relevant documentation

- No documentation was available during the mission.

Real-time surveillance

Relevant documentation

- EWARN Epidemiologic Bulletin Week #39.
- Weekly EPI and Polio Update Week 41.
- Excel database for weekly/monthly surveillance data collection reportable diseases.
- Field manual for surveillance and response (not reviewed).

Reporting

Relevant documentation

- None identified.

Workforce development

Relevant documentation

- Somali Health Policy Directions and Priorities 2014.
- Human Resources for Health Policy 2015.
- The human resources for health strategic plan.
- In Somaliland, in-service training plan (not reviewed).

Preparedness

Relevant documentation

- Draft Acute Watery Diarrhoea/Cholera Preparedness and Response Plan 2017–2022.

Emergency response operations

Relevant documentation

- Draft Acute Watery Diarrhoea/Cholera Preparedness and Response Plan 2017–2022.

Linking public health and security authorities

Relevant documentation

- No documents were provided.

Medical countermeasures and personnel deployment

Relevant documentation

- National Health Professional Council draft law (South Central zone).
- Law No. 6 (Puntland).

Risk communication

Relevant documentation

- National Development Plan.
- GAVI Health System Strengthening Plan.
- C4D Strategy.
- GAVI Joint Appraisal Report on Comprehensive Multi-Year Plan for Immunization System 2011–2015.
- Comprehensive Multi-Year Plan for the Immunization System 2016–2020.
- Draft Acute Watery Diarrhoea/Cholera Preparedness and Response Plan 2017–2022.

Points of entry

Relevant documentation

- No documents were provided.

Chemical events

Relevant documentation

- None identified.

Radiation emergencies

Relevant documentation

- None identified.

WHO/WHE/CPI/2017.17