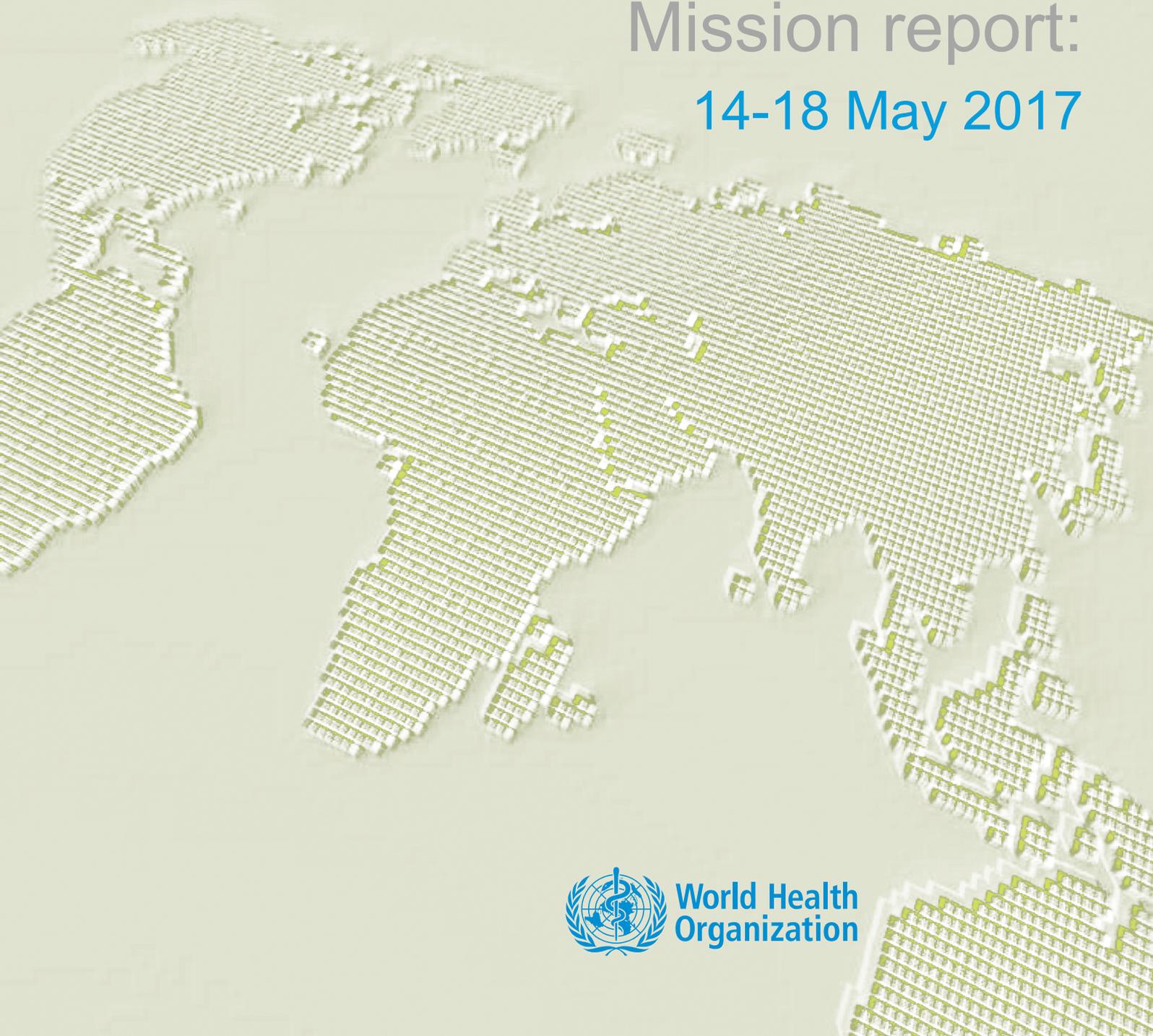


JOINT EXTERNAL EVALUATION OF IHR CORE CAPACITIES

of the

STATE OF KUWAIT

Mission report:
14-18 May 2017



World Health
Organization

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Abbreviations

AMR	antimicrobial resistance
BSL	bio safety level
CBRN	chemical/biological/radiological/nuclear
CVL	Central Veterinary Laboratory
EMT	emergency medical teams
EOC	emergency operations centre
EPI	expanded programme of immunization
EQA	external quality assessment
FAO	Food and Agriculture Organization of the United Nations
FETP	field epidemiology training programme
GAP	Global Action Plan
GCC	Gulf Cooperation Council
GLASS	Global Antimicrobial Surveillance System
GSO	GCC Standardization Organization
HCAI	healthcare-associated infections
HPAI	highly pathogenic avian influenza
IAEA	International Atomic Energy Agency
IHR	International Health Regulations (2005)
IPC	infection prevention and control
ISO	International Standards Organisation
JEE	Joint External Evaluation
MERS-CoV	Middle East respiratory syndrome coronavirus
MCV	measles-containing vaccine
MMR	measles, mumps and rubella
MoH	Ministry of Health
NIP	National Immunization program
NRL	National Reference Laboratory
NFP	National IHR Focal Point
OIE	World Organisation for Animal Health
PAAF	Public Authority of Agriculture Affairs and Fish Resources
PAFN	Public Authority for Food and Nutrition
PCR	Polymerase Chain Reaction
PHEIC	public health emergency of international concern
PHEOC	public health emergency operations centre
PHL	Public Health Laboratory
QA	quality assurance
RPD	radiation protection department
RVF	Rift Valley fever
SOP	standard operating procedures

Executive summary

The Joint External Evaluation (JEE) of Kuwait revealed overall and consistent high capacities across the 19 Technical Areas, evident throughout plenary discussion sessions and selected site visits, which were attended throughout the week by diverse external and national experts. The mission was held from 14-18 May 2017 in Kuwait City, Kuwait.

The JEE external team constituted multi-national experts representing international organizations, public health institutes, and neighboring countries, chosen for their recognized technical expertise.

Evaluation results were based on the interactive and collaborative discussions over Kuwait's self-assessment by utilizing the Joint External Evaluation (JEE) tool. The report catalogues the mutually agreed strengths, challenges, and priority areas across the technical areas presented with the aim to improve IHR implementation.

The following summarizes the key findings from assessed areas throughout the mission:

- All sectors periodically review their own legislation to determine the need for updated laws or policies, and legal advisors additionally ensure that there is no conflict of legislation. However, no national review of legislation has taken place in Kuwait in light of the IHR— despite the presence of a legislative official within each technical committee. Kuwait has also not taken measures to unify existing public health related legislation across sectors into a novel public health law, which would aid in identifying any existent gaps and additionally empower and inform all sectors and administrative levels, including the municipalities.
- Kuwait has a designated IHR NFP institution supported by clear terms of reference; however, standardized communication mechanisms are lacking and most information exchange, while efficient, is informal in nature. Reinforced by ministerial decree, the Undersecretary for Public Health presides over a high-level IHR platform. Nevertheless, an IHR sub-committee, convening on an ad-hoc basis, includes different representation from the high-level body yet lacks communication and coordination linkages, thus represents an opportunity for further coordination. The NFP function requires further advocacy across non-health sectors to improve effectiveness, and strengthened coordination amongst relevant ministries is needed.
- Kuwait formulated the national antimicrobial resistance committee in 2017 with multisectoral and academia involvement. The country has also adopted the GCC action plan for combating antimicrobial resistance. The country has laboratory capacity for the diagnostics of infections caused by AMR strains. Surveillance for AMR caused infections is well developed in the health sector but needs further development in the other sectors. The infection prevention and control programme is in place with surveillance for health care associated infection in all health-care facilities. Health staff at all levels are regularly trained on the different infection control related guidelines and procedures.
- Kuwait established an intersectoral national high committee for zoonoses with the representatives of relevant sectors in 2010. A list of priority diseases is defined and included in the active and passive surveillance system however further efforts are needed to formalize intersectoral collaboration for notification and data sharing including from human health and veterinary laboratories.
- Food Safety in Kuwait is overseen by a high-level committee comprised of all relevant stakeholders, responsible for producing national strategies to reduce risk. A comprehensive regulatory framework that includes outbreak investigation and control procedures, is in place. A network of focal points across ministries is also available to respond to public health events. However, the communication and information sharing of these focal points are neither institutionalized nor documented.

- Kuwait has a regulatory framework for biosafety with defined standards of biosafety that are applied to laboratories in both public and private sectors. A biosafety training programme is ongoing to train staff at all laboratories including on handling of dangerous pathogens. These were verbally communicated; however no support documentation were shared with the JEE team during the visit.
- The National Immunization Programme covers a targeted package of diseases in addition to specialized vaccines for target groups; however, improvements are still needed for high risk cohorts such as expatriates and healthcare workers. Routine childhood vaccines are administered free of charge, which is supported by national legislation. Continued communication and awareness raising is needed to counter a growing number of anti-vaccination voices in Kuwait.
- Kuwait has well established tiered health sector laboratory network under Ministry of Health (MoH) control and supervision. The network include other sectors such as military and prison laboratories. The national public health laboratory is the designated national reference laboratory for emerging and other priority diseases. The country also has a central veterinary laboratory. The national External Quality Assurance programme is obligatory for all public and private microbiology laboratories. However, veterinary and food safety laboratories depend on international collaborating laboratories to further confirm specimen testing. Specimen referral both nationally and internationally is well organized with trained staff on international standards of referral procedures at all levels.
- The country has a well-established indicator-based surveillance; however, no structured system exists yet for event-based surveillance, which is carried out on an ad hoc basis in response to media alerts, rumours or social media. The surveillance system in Kuwait is still paper-based including notifications system and registries, with the efforts made recently along with some of the GCC countries to move to electronic notification system (e-notification). Real time reporting within and across sectors is not in place. Surveillance data is analysed regularly at the central level; however, no feedback system is in place.
- A National Emergency Preparedness and Response Plan exists and is well tested and updated across sectors. Established plans and procedures for surge capacity are present across ministries, as well as the potential to reallocate emergency medical resources between administrative levels. Nevertheless, establishment of an integral Department of Emergency Management under the MoH would improve coordination and communication. Developing a national risk profile, including an all-hazard approach, would assure Kuwait is proactively prepared for emerging threats; these risks should be further prioritized and linked securely to specific resources.
- Kuwait possesses comprehensive emergency medical services, which are sustainably backed by training, personnel, and the resources required to respond to national emergencies. Exercising for the Emergency Operations Centre is systematically performed to maintain high levels of capacity – response time is well in advance of 120 minutes. Nevertheless, the role of the Emergency Operations Centre needs to be updated from a medical dispatch via an expanded mandate to include priority hazards, thus serving as a Public Health Emergency Operations Centre (PHEOC) to cover all multi-sectoral public health emergencies within the country. Case management guidelines for IHR related hazards and priority diseases are readily available, yet further updating to PHEOC hazards and subsequent training for all levels of staff needs to occur.
- The Directorate of Civil Defence incorporates diverse national sectors to preside over emergencies or disasters in Kuwait, and many large-scale drills and exercises are enacted annually to include health and security personnel. The structure and mechanism is flexible so that different multisectoral committees can be convened to specifically tailor a national response. Public Health and Security forces experience strong collaboration in the event of a communicable or zoonotic disease, and there are procedures in place for conducting joint risk assessments amongst these sectors. Points of Entry in Kuwait are additionally equipped with protocols linking these sectors in the case of a public health event at the border.

- Established experience and a formal plan are in place for the rapid cross border receiving and sending of medical countermeasures in the event of a public health emergency – recently there have been countermeasures sent within the GCC and internationally. This plan is regularly exercised and updated. On the other hand, despite significant experience in deploying national specialists over the years throughout the Region, Kuwait has no formal plan or procedures for sending and receiving health personnel. Kuwait has never received Medical Countermeasures nor Health Personnel from abroad in a real life emergency.
- Risk communication systems are established under the Ministry of Health but incorporate diverse national sectors and stakeholders involved in emergency response, with coordination supported via formal mechanisms. Roles and responsibilities concerning risk communication are established and agreed amongst ministries in the event of different scenarios. In Kuwait there is a permanent hotline, in addition to an emergency activated hotline, and communications are varied per the need, utilizing both traditional and social media outlets. Nevertheless, risk communication needs to be expanded to additional hazards, and further targeting of audiences and languages needs to be implemented. The role of the private sector and community-level organizations during emergencies needs to be better developed for their effective engagement. Evaluations to test the effectiveness of messaging should be instituted.
- Routine capacities at Kuwaiti Points of Entry (PoE) are well established, and site visits to Kuwait International Airport, Shuwaikh Seaport, and Nuasaib ground-crossing were conducted to augment the discussions. Routine capacities are well-established, medical services and referral procedures are available and practiced. Despite some vector control being performed, a systematic vector control programme, including surveillance of vectors of concern is needed. Emergency capacities are additionally strong across many hazards, but despite having numerous SOPs and guidelines, a formal institutionalized public health emergency plan is lacking at Kuwaiti Points of Entry. The PoE contingency plan has a comprehensive chapter to address medical emergencies, but this needs to be greatly expanded to address an all-hazards approach to health threats under the IHR.
- Kuwait possesses a large oil and gas industry, and preparedness to mitigate potential accidents has provided the country with a good capacity to manage a chemical event. A national plan for chemical accident response exists and is exercised regularly. However, the potential to expand this plan to all elements of chemical safety in accordance with the results of a chemical risk mapping would greatly improve national capacity. Improvements are furthermore needed concerning the surveillance of these chemical risks, in particular regarding poisonings, and the improved national multisectoral coordination for chemical safety.
- Kuwait has an established radiation protection department (RPD) at MoH responsible for supervision, control and safety of any activities associated with or can result in radioactive emissions in governmental and private sectors. There is an RPD designated focal point for coordination and communication with the IHR NFP. National policies, strategies for the detection, assessment, and response to radiation emergencies are established and a radiation monitoring mechanism exists for radiation emergencies that constitute a public health emergency of international concern (PHEIC) and it is a part of National Disaster Management Plan. Standards operating procedures for detecting and responding to radiation emergencies are also in place but need review and update. National policies and strategies for national and international transport of radioactive material, samples and waste management including those from hospitals and medical services have been established.

Kuwait scores

Technical areas	Indicators	Score
National legislation, policy and financing	p.1.1 Legislation, laws, regulations, administrative requirements, policies, or other government instruments in place are sufficient for implementation of IHR (2005)	3
	P.1.2 The State can demonstrate that it has adjusted and aligned its domestic legislation, policies, and administrative arrangements to enable compliance with IHR (2005)	4
IHR coordination, communication and advocacy	P.2.1 A functional mechanism is established for the coordination and integration of relevant sectors in the implementation of IHR	3
Antimicrobial resistance	P.3.1 Antimicrobial resistance detection	4
	P.3.2 Surveillance of infections caused by antimicrobial-resistant pathogens	3
	P.3.3 Health care-associated infection (HCAI) prevention and control programmes	5
	P.3.4 Antimicrobial stewardship activities	1
Zoonotic diseases	P.4.1 Surveillance systems in place for priority zoonotic diseases/pathogens	4
	P.4.2 Veterinary or animal health workforce	4
	P.4.3 Mechanisms for responding to infectious and potential zoonotic diseases are established and functional	3
Food safety	P.5.1 Mechanisms for multisectoral collaboration are established to ensure rapid response to food safety emergencies and outbreaks of foodborne diseases	3
Biosafety and biosecurity	P.6.1 Whole-of-government biosafety and biosecurity system is in place for human, animal and agriculture facilities	3
	P.6.2 Biosafety and biosecurity training and practices	3
Immunization	P.7.1 Vaccine coverage (measles) as part of national programme	5
	P.7.2 National vaccine access and delivery	5
National laboratory system	D.1.1 Laboratory testing for detection of priority diseases	5
	D.1.2 Specimen referral and transport system	5
	D.1.3 Effective modern point-of-care and laboratory-based diagnostics	5
	D.1.4 Laboratory quality system	3
Real-time surveillance	D.2.1 Indicator- and event-based surveillance systems	3
	D.2.2 Interoperable, interconnected, electronic real-time reporting system	3
	D.2.3 Integration and analysis of surveillance data	4
	D.2.4 Syndromic surveillance systems	4
Reporting	D.3.1 System for efficient reporting to FAO, OIE and WHO	4
	D.3.2 Reporting network and protocols in country	3
Workforce development	D.4.1 Human resources available to implement IHR core capacity requirements	3
	D.4.2 FETP ¹ or other applied epidemiology training programme in place	3
	D.4.3 Workforce strategy	3

1 FETP: Field epidemiology training programme

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

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

PREVENT

National legislation, policy and financing

Introduction

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

Target

States Parties to 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 a few legislations, regulations or other instruments in order to facilitate their implementation and maintenance in a more efficient, effective or beneficial manner. State Parties to ensure the provision of adequate funding for IHR implementation, through the national budget or another mechanism.

Kuwait level of capabilities

In 2012, Kuwait established a Higher Committee covering all national IHR-bound authorities via a ministerial decree. This effort has formalized previous established precedents where the Minister has convened and chaired multi-sectoral committees, for example, convening civil aviation, borders, customs, and agriculture during the 2009 H1N1 outbreak. The Higher Committee meets on an ad-hoc basis and is responsible for streamlining and harmonizing multi-sectoral efforts and legislation. Within this Committee, specific roles, responsibilities, and communication schemes are clearly defined, and sectoral involvement depends on the situation – nevertheless, someone from the MoH legal advisory department is always present. This Committee is also involved in reviewing notification reports. In addition, sixteen sub-committees were formed covering the departments of the MoH, which meet more frequently to implement and coordinate specific legislation.

A National IHR Coordination Centre exists, and both the IHR NFP function (supported by 5 persons) and the designated centre are fully supported via legal mandate. The NFP coordinates across a network of national liaison officers to follow up on IHR implementation in Kuwait. Cooperation is well established, in particular for events involving public health epidemics, further supported by additional legal frameworks and polices in conjunction with the Infection Control Directorate.

All sectors periodically review their own legislation to determine the need for updated laws or policies, and legal advisors additionally ensure that there is no conflict of legislation. However, no national review of legislation has taken place in Kuwait in light of the IHR– despite the presence of a legislative official within each technical committee. The Cabinet of Ministers and Higher Committee ensures this legal concordance

given that all sectors are duly represented within these governing bodies and are fully aware of their sector's legal parameters. If a law is changed, all relevant stakeholders are subsequently and systematically notified.

Concerning IHR compliance, the Ministry of Health carried out an internal legislative assessment and realigned their own policies while requesting other sectors to perform a similar internal review and revert back any changes in their legislation. There was no systematic follow-up with these national sectors as none had reported any conflicting legislation.

Kuwait has also not taken measures to unify existing public health related legislation across sectors into a novel public health law, which would aid in identifying any existent gaps and additionally empower and inform all sectors and administrative levels, including the municipalities.

Recommendations for priority actions

- Establish a committee involving legal advisors from different sectors to identify relevant legislation to ensure alignment with IHR.
- Establishing a mechanism to legally ensure public health is addressed in all IHR related legislation and consider creating a unified Public Health Law, if needed.
- Conduct advocacy activities to raise awareness on IHR and their implementation among the legal advisors of the different sectors.
- Establish an electronic platform to enable access and wide dissemination of relevant legislation for all sectors.

Indicators and scores

P.2.1 A functional mechanism established for the coordination and integration of relevant sectors in the implementation of IHR - 3

Strengths/best practices

- Extensive national legislation is in place to support IHR functions across relevant sectors; the IHR NFP function is well supported to coordinate across sectors and is supported with a legal mandate.
- GCC coordination mechanisms are well adhered to and adopted within Kuwait; for example, GCC Points of Entry share surveillance mechanisms, common purchase/procurement of pharmaceuticals and medical supplies, as well as control measures of infectious disease.
- The legislative system is flexible enough to adapt to new and emerging threats; for example, in response to MERS-CoV, there were binding directives signed under the MoH which enabled an effective response in the place of establishing new legislation, indeed a much slower process.
- The role of the private sector is included within legislation and the Public Health Directorate is in charge of all health care facilities in Kuwait and all the guidelines mention the role of the private sector.

Areas that need strengthening/challenges

- Despite the presence of a legislative official across sectors and committees, an exhaustive review of IHR related legislation at a national level has not yet been performed.
- The domain of Bio-safety and Security has only policies and SOPs, but currently legislation is being developed as there is much interest in this topic.
- Dissemination of legislation could be improved as the current practice of circulating updates or new legislation is done solely through a district manager and via internal circulars.
- No electronic corpus of legislation exists, or is readily accessible.

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

Strengths/best practices

- Kuwait has mechanisms to assess and streamline legislation through various higher governing bodies and committees.
- The MoH has carried out an internal review of related legislation, modified their policies, and liaised with national sectors to perform similar assessments for IHR compliance

Areas that need strengthening/challenges

- Ensuring that identified gaps are systematically addressed and followed up for incorporation/realignment, including all IHR-bound sectors.
- Developing legislation to further improve multi-sectoral coordination to support One Health activities in Kuwait.

IHR coordination, communication and advocacy

Introduction

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

Target

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

Kuwait level of capabilities

The IHR NFP office is present in the Ports and Borders Health Division, under the Public Health Department in MOH established in May 2017 with a ministerial decree. It includes 7 staff to guarantee 24/7 availability.

A national high-level IHR multisectoral and multidisciplinary committee was established by ministerial decree in 2012 led by the undersecretary for public health sector. Members of the committee represent public health, communicable diseases, zoonotic diseases, food safety, environmental health, the public health laboratory, points of entry, civil defence, the Ministry of Interior, and the Ministry of Exterior. In addition, an IHR subcommittee established with circular 2767/2012 includes representatives from different departments of the MOH. Some functions, roles and responsibilities of the IHR NFP are defined in both decrees which is confusing and without a clear channel of communication between the 2 committees or between the NFP and other Focal Points in the country. The committee meets on an ad hoc basis during events only.

The contact information of the IHR NFP representatives was provided to WHO and are continuously updated and annually confirmed.

During public health events there is generally good informal coordination among all the relevant sectors, these mechanisms are not documented but are being followed by practice. Coordination and communication between the public health sector and the animal sector have been tested through a zoonotic committee; further enhancement with sectors that deal with chemical and radiation events is required.

Kuwait complies with IHR notification mechanisms to WHO, OIE and FAO, sharing information on public health events with international concern in a timely manner.

The effectiveness of the IHR NFP functions is been evaluated by simulation exercises plus real life events but mainly with infectious diseases events (e.g. Ebola).

Insufficient awareness about IHR was observed during the preparatory workshop for the joint external evaluation mission. This can be attributed to the turnover of personnel and the lack of advocacy activities about IHR and their implementation which started after the workshop. It also appeared that the IHR NFP and its functions were not well known to personnel at the different administrative levels of each sector.

Recommendations for Priority Actions

- Activate the National high IHR multisectoral committee by ensuring periodic meetings and formal information sharing mechanisms that include feedback on the response to public health events occurring in the country.
- Identify the Focal points in the different concerned sectors in the country with clear documented roles and responsibilities and standard operating procedures (SOPs) to strengthen coordination and systematic and timely information sharing with the IHR NFP.
- Develop an action plan for IHR implementation based on the JEE outcomes with a monitoring and evaluation mechanism to ensure its full implementation.
- Strengthen coordination between relevant ministries on events that constitute public health emergencies of national/international concern with clear terms of reference and identified roles and responsibilities.
- Review and strengthen functional mechanisms for inter-sectoral collaboration between the animal and human health sectors.

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 3

Strengths/best practices

- An IHR NFP is designated at the national level with several staff to guarantee 24/7 availability.
- During public health events there is generally good coordination among all the relevant sectors.
- Kuwait complies with IHR notification to WHO, OIE and FAO, sharing information of public health events with international concern in a timely manner.

Areas which need strengthening/Challenges

- Develop Action Plan and SOPs for IHR implementation which define communication mechanisms and protocols.
- Advocacy and better planning between sectors is needed, in recognition of IHR as a national responsibility across all sectors.
- Strengthen coordination between relevant ministries on events that constitute public health emergencies of national/international concern with clear terms of reference and identified roles and responsibilities.
- Review and strengthen functional mechanisms for inter-sectoral collaboration between animal and human health surveillance units.

Antimicrobial resistance

Introduction

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

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

Target

Support work coordinated by the FAO, OIE and WHO for developing 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). This would include: (i) having a national comprehensive plan for each country to combat antimicrobial resistance; (ii) strengthening of surveillance and laboratory capacity at the national and international levels following agreed upon international standards developed in the framework of the Global Action Plan; and (iii) improved conservation of existing treatments and collaboration to support the sustainable development of new antibiotics, alternative treatments, preventive measures and rapid, point-of-care diagnostics with systems to preserve new antibiotics.

Kuwait level of capabilities

Early in 2017, Kuwait had formulated the national antimicrobial resistance committee with multisectoral members from Ministry of Health and other authorities in Kuwait including: Public Authority for Food and Nutrition (PAFN), Public Authority of Agriculture Affairs and Fish Resources (PAAF), Environment Public Authority, Kuwait University, Kuwait Institute for Scientific Research, Kuwait Foundation for the Advancement of Science, and Private Health Sector (Human and animal care). Kuwait had adopted the GCC action plan for combating antimicrobial resistance which was published in 2016.

Capacity for detection and surveillance of infections caused by AMR occurs in 7 clinical laboratories across the country. These laboratories have the capability to do wide range of testing for AMR pathogens including advanced molecular methods for typing and rapid detection. Hospital laboratories are in the process of international accreditation and receive proficiency testing through internal and external quality assurance. Each hospital shares its AMR data internally to be utilized by physicians and IPC team and reported to MOH.

Surveillance for healthcare associated infections is very well established in the healthcare facilities in Kuwait for more than 30 years. Strong infection control programmes are running in Al Farwaniyah and Ibn Sina hospitals with qualified personnel and good infrastructure. Limited AMS activities have been initiated recently at AlFarwaniyah and Ibn Sina Hospitals.

There is capacity to detect AMR in animal health but this is done on demand and reporting of animal AMR data is not being shared with public health, so surveillance is very limited. It is worthy to mention that there are no regulations to control antibiotics use in animal health in Kuwait.

Despite the fact that there was an administrative circular released in 1985 by MOH to control antibiotic prescriptions in public and private pharmacies, there is no national plan for antimicrobial stewardship in Kuwait.

In addition to that, no AMS programmes exist in private hospitals or primary health care centres. Limited data are available on antimicrobial utilization and cost at health facility levels. AMR stewardship programmes in the animal sector are lacking.

Recommendations for priority actions

- Development of a multisectoral plan to address the detection, surveillance of AMR in human and animal sectors is required.
- Establishment of network between stakeholders in relation to AMR.
- National plan for antimicrobial stewardship should be implemented in human and animal health.

Indicators and scores

P.3.1 Antimicrobial resistance detection - Score 4

Strengths/best practices

- There is a plan and it is implemented in all laboratories.
- All laboratories can detect and report AMR (7 labs are designated)
- Laboratories can perform rapid detection using molecular technology of all AMR pathogens.
- All laboratories have their internal quality manual and participate in national and external quality control programmes.

Areas that need strengthening/challenges

- A mechanism for national reporting of AMR data should be established for both the human and animal sectors to ensure appropriate containment of AMR in the future.
- A national plan for detection of AMR in animal health should be developed on an urgent basis to ensure one health approach to tackle AMR.
- AMR detection and reporting should be extended to include private hospitals.

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

Strengths/best practices

- Ongoing surveillance for target organisms (MRSA, *S. pneumoniae*, Enterococci, ESBL, CRE) for typing, extended susceptibility tests and epidemiology has been ongoing for more than 5 years.
- Surveillance for high risk areas in the hospital (like ICUs) is conducted on a weekly basis.

Areas that need strengthening/challenges

- Strengthen one health approach by collecting AMR data from human, animals and food.
- Enhance surveillance for AMR in animal sector.

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

Strengths/best practices

- There is an IPC directorate at MOH, which functions as a national body for infection control practice in healthcare facilities.
- Existing national plan for HCAI in all healthcare facilities.

Areas that need strengthening/ challenges

- Extend the IPC programmes to include the private hospitals

P.3.4 Antimicrobial stewardship activities - Score 1

Strengths/best practices

- Prescription for antibiotic is required for human by ministerial law (1985) but not for animals.
- Antimicrobial use is assessed at the level of the hospital through antimicrobial committee.
- Few hospitals in Kuwait have initiated antimicrobial stewardship activities.

Areas that need strengthening/challenges

- A national plan for antimicrobial stewardship should be formulated, approved and sentinel sites to be assigned for implementation on urgent basis.
- Point prevalence study for antibiotics utilization should be conducted
- A national plan for antibiotic stewardship in animal sector should be developed and implemented.

Zoonotic diseases

Introduction

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

Target

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

Kuwait level of capabilities

In Kuwait, the animal population is composed of 4592 horses, 807900 camels, 27500 cattle, 780208 sheep, 195052 goats, and 49 million chickens. The small size of the animal sector made its spread over the country limited. Kuwait is a typical importing country, where imports of live animals, animal products and processed products of animal origin cover most of the population's needs in animal protein.

Veterinary services started in 1956 and were delivered until 1970 through the Ministry of Health (MOH) and from 1971 to 1982 were delivered through the Ministry of Public Works. Since 1983 the Public Authority of Agriculture Affairs and Fisheries Resources (PAAF) is the responsible authority for veterinary services.

The Animal Health Department under the Animal Wealth Directorate of the PAAF is in charge of the supervision of terrestrial animal health of live animals. This department includes an Epidemiology Unit performing risk assessment dealing with issues such as Epidemiology, Emergencies, Contingency Plans and Disease Surveillance. The Animal Health Department also includes a Disease Prevention and Control Unit and a Quarantine and Border Protection Unit. The Department supervises 7 quarantine stations and, one public veterinary clinic that mainly serves the dairy cattle farms in Sulaibiyah Al Jahrah governorate. Most of animal health services are delivered by the private sector through 24 private hospitals and 3 private clinics in addition to private veterinarians in the industrial farms (poultry and dairy cattle) that are all operating under control of PAAF within a licensing procedure.

In addition to the Animal Health Department, the Animal Wealth Directorate also manages the Central Veterinary Laboratory, the Kuwait Zoo and Animal Production.

Fisheries inspection for aquatic animals, including crustaceans and molluscs is entrusted to another Directorate within the PAAF, while most food safety aspects such as the inspection of un-processed animal products such as fresh, chilled or frozen meat, fresh and chilled milk, table eggs and honey are entrusted to the veterinary department of the Kuwait City Municipality and the Ministry of Health.

The Municipality ensures the inspections of meat abattoirs (beef and mutton), the inspections of imported animal products, the food safety of products of animal origin and the inspection of facilities that handle these products for consumption purposes (wholesalers, retailers, hotels and restaurants).

Wildlife and insect control are under the Public Authority for Environment.

The MoH and the PAAF are responsible for the prevention and control of zoonotic diseases in humans and animals, respectively.

In 2010, Kuwait has established an inter-sectoral National High Committee for Zoonoses where relevant sectors are represented (MoH, PAAF and the Kuwait municipality). The Committee meets from time to time and when needed. Stakeholders for zoonoses identified include 1) MoH, 2) PAAF, 3) Kuwait Municipality, 4) Public Authority for Food Safety and Nutrition, 5) Public Authority of Environment and 6) Ministry of Industry and Commerce (Public Authority for Industry and Public Authority for Commerce).

Notifiable zoonoses in animals are Anthrax, Brucellosis, Tuberculosis, Bovine leptospirosis, Glanders, Leishmania, Fowl plague (avian influenza), Psittacosis (avian chlamydiosis), Rabies, and salmonellosis. The zoonotic diseases listed by the High committee for zoonoses includes Anthrax, Brucellosis, Glanders, Bovine tuberculosis, Rabies, Leishmaniasis, Leptospirosis, highly pathogenic avian influenza (HPAI), Echinococcosis/Hydatidosis, Tularemia, RVF, West Nile Fever, Crimean Congo Hemorrhagic fever, Equine Encephalomyelitis (E/W), Venezuelan equine encephalitis, Japanese Encephalitis, Bovine spongiform encephalopathy and Q Fever.

The veterinary services have prioritized 5 zoonotic diseases including brucellosis, bovine tuberculosis, Glanders, Notifiable Avian Influenza and Rabies in addition to MERS-CoV. Collaboration between the animal health and public health sectors is functioning through regular but informal communication and information sharing for surveillance and response to some diseases such as MERS-CoV and Brucellosis.

National surveillance plans on animals for these priority diseases are designed as active surveillance except for rabies where it is passive surveillance. Further efforts are needed to formalise surveillance systems for all priority zoonotic diseases from both sides with regular sharing of surveillance reports.

Veterinary Services have active surveillance and control programmes for brucellosis, bovine tuberculosis and Salmonellosis in poultry. There is annual census for animal populations and even an identification programme implemented. Priority zoonotic diseases are controlled within a national programme on the animal side and owners should report as per the veterinary law for notifiable diseases. A compensation plan in place encourages owners to report animal diseases. Indemnities are paid to animal's owners for compensation of slaughter for brucellosis in cattle and bovine tuberculosis.

More recently Veterinary Services were able to pick up an outbreak highly pathogenic H5N8 avian influenza in backyard birds. The outbreak was reported to OIE.

The coordination mechanisms between human and animal health authorities are established under the High committee for zoonoses. Kuwait has no formal policy for One Health. Kuwait has successfully dealt with MERS-CoV and glanders outbreaks. Sharing of information among different sectors, however, is not automatic and is based on good will and there are no written SOPs or national plan. Human health and veterinary sectors do not have a common reporting system. Veterinary laboratories and human health laboratories are not linked and don't share common reports except for MERS-CoV for which samples have been shared between the two laboratories.

The public health and animal health surveillance systems are not linked. With the exception of MERS-CoV and Brucella there are no interagency response teams for investigation of suspected outbreaks of zoonotic diseases.

The State of Kuwait is encouraged to improve exchange of sanitary information in live animals and animal products. The country is also encouraged to strengthen coordination, cooperation and communication among key stakeholders in animal production, animal health and public health sectors, and embraces One Health in addressing zoonoses.

Recommendations for priority actions

- Reinforce the role of the national zoonotic diseases committee for developing strategic planning and coordination under the umbrella of “One Health” for surveillance, preparedness, joint outbreak investigations, timely information sharing and public awareness.
- Request a PVS/OIE mission to assess all veterinary services (as per OIE definition)
- Develop capacity of public health and animal health workforce for early warning and detection of potential zoonotic events through regular joint training

Indicators and scores

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

Strengths/best practices

- Active/targeted surveillance being carried out for important zoonotic diseases that occurred recently as well as for endemic zoonotic diseases.
- The presence of a National Zoonotic Committee
- Priority zoonotic diseases identified include Brucellosis, Bovine tuberculosis, Notifiable HPAI, Glanders and Rabies.
- General surveillance carried out for endemic diseases while active surveillance carried out for emerging and important zoonotic diseases.
- General surveillance based on notification system is being carried out for zoonotic diseases that have not been recently reported.
- Data analysis is being carried out at regular intervals, and appropriately discussed in the technical meeting within the PAAF for decision-making.
- Communication and interaction regularly being made with the MoH for some specific diseases.
- Situational awareness reports were shared within the higher committee for zoonoses between all stakeholders.
- Regular submission reports to OIE
- Sanitary import requirements for zoonotic diseases for import of live animals

Areas that need strengthening/challenges

- No formal policy for One Health for coordination and joint planning and implementation of agreed programmes of zoonotic diseases.
- No formal linkages between public health and animal surveillance systems and no regular sharing of surveillance reports.
- No centralized computer information for epidemiological surveillance and data management for decision making.

P.4.2 Veterinary or animal health workforce - Score 4

Strengths/best practices

- Staff attend training, workshops, and seminars at regional and international level.
- A licensing procedure is in place for veterinarians belonging to both public and private sector.
- Animal health experts and veterinarians from the public sector are trained on the job for field epidemiology in country (but not private veterinarians and other veterinarians from Kuwait municipality).

Areas that need strengthening/challenges

- No joint planning or strategies for developing an overall zoonoses workforce capacity among sectors.
- Public Health training is required for animal health veterinary staff both public and private sector.
- Animal Health experts and veterinarian should be included in the FETP programme or related training.
- There is a lack of training in controlling zoonotic disease in animal populations to public health staff within the country.

P.4.3 Mechanisms for responding to zoonoses and potential zoonoses are established and functional - Score 3

Strengths/best practices

- Good collaboration between public health and animal health sectors for investigation of MERS-CoV and Brucellosis cases.
- Suitable control measures for these diseases applied on either side.
- Regular meetings or according to the situation of zoonotic diseases under the high committee for zoonoses.

Areas that need strengthening/challenges

- Interagency response teams for joint investigations of suspected outbreaks of zoonotic events.
- Formal working-level mechanisms for sharing information on outbreaks of zoonotic diseases.
- Design contingency plans for epidemic zoonoses that represent international/regional threat such as RVF among others.
- Improve public awareness for priority zoonotic diseases.

Food safety

Introduction

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

Target

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

Kuwait level of capabilities

Food Safety is a shared responsibility between Ministry of Health, municipalities and other government agencies such as PAAF and Borders and Ports Authority. Kuwait has recently created the Public Authority for Food and Nutrition (PAFN) for controlling and inspecting food companies, markets and retail outlets as well as supervising food importations, food standards and food testing laboratories.

For preventing food safety risks, both imported (except from GCC countries) and locally produced foods are controlled. Imported foods are under PAFN management. Import requirements follow the Codex alimentarius and the GCC standards. Conformity control of imported foods is performed at the border and in the market and based on health certificates and on random sampling using the national food control laboratory. For locally produced food the whole chain from harvest to processing, storage, handling and marketing is under continuous control. Licensing of processing plants is based on quality management of the process and testing of samples in the national laboratories.

In case of an event related to food, a comprehensive regulatory framework and procedures are in place to allow the deployment of effective detection, surveillance and control measures to be taken. Human, physical and financial resources are adequately made available including training.

The higher committee for food safety is the coordinating body in charge of risk assessment including risk profiling, risk management coordination and risk communication.

The local animal health sector is performing animal identification for traceability purposes to allow investigation and management procedures for risk management in the whole food safety continuum (from farm to fork) in case of activating a processed food recall procedure.

The domestic use of raw animal products such as milk, impacts the country's ability to address the prevention of food safety issues. Public awareness should be improved.

Food safety dedicated laboratories have adequate facilities, staffing, methods and funding that allow relevant food testing for all hazards from food (see technical area on National laboratory systems). There is a multisectoral national committee for food safety that involves all the food stakeholders- PAFN, MoH, borders and port authority, Environmental Public Authority, PAAF, Public Authority for Industries, Public Authority for Commerce, Kuwait Institute for Scientific Research, Ministry of Interior, Ministry of Foreign Affairs, Chamber of Commerce and the Union for food manufacturers and traders.

The committee reviews and discusses national food risks and makes decisions. Related information on imposing or lifting bans on food products based on international notification and to national food safety issues is shared with all stakeholders. Communication is performed only via committee members in person or via official memos/letters. Information is sent to the end consumer. Unfortunately, no clear educational material and advice to stakeholders across the farm-to-fork continuum is used.

Multiple levels of food safety mechanisms (control management system) have been implemented. There are several food safety standards. Following GCC and GSO standards and Codex Alimentarius, PAFN, and MOH are involved in control and testing of imported food. PAFN monitors the market place and takes random samples (Local food random sampling and food practice evaluation). Kuwait Ministry of Health, Environmental Public Authority, Public Authorities for commerce and industries evaluate food production facilities (including for processing quality assurance (QA) systems in place) at initial set up (initial licensing) and for renewal of license. Alerts by WHO and FAO are frequently monitored.

A national investigation team exists with staff trained for outbreak investigation (MOH) and field teams know focal points for food safety within other government agencies. In case of an event, local public health departments along with the local municipality departments respond. Responses are then reported to the central public health office (Communicable Disease Division and Environmental Health Division). When the issue is not resolved locally, the central offices are contacted for support. Staff identified to take part in the outbreak response teams are trained to undertake standardised outbreak investigations of foodborne diseases (interview using a questionnaire, developing a case definition and formal training to improve the understanding of case definition). At the end of the event a report after the initial investigation is written with all details of the outbreak including the circumstances of the outbreak, the symptoms and the possible source of the illness.

Recommendations for priority actions

- Identify the relevant information to be shared between stakeholders and the best way to channel this to ensure efficiency.
- Develop appropriate educational material for public awareness.
- Develop capacity for multisectoral risk profiling in food safety for appropriate risk management.
- Conduct national simulation exercises on food safety events.

Indicators and scores

P.5.1 Mechanisms are established and functioning for detecting and responding to food-borne disease and food contamination - Score 3

Strengths/best practices

- Comprehensive regulatory framework for food safety and for food outbreak investigation and control.
- Higher committee for food safety responsibilities defined and functions at an efficient level.
- The national committee for food safety is a nationwide interdisciplinary committee that discusses national strategies to reduce food risks.
- There is a national risk profiling for food performed by the national committee for food safety.
- Focal points are identified and contacted in case of food borne outbreak.
- Operational links are established between surveillance and response staff, food safety, animal health and laboratories.
- Rapid exchange of information is via phone, but lacking electronic data exchange.
- Conferences on food safety available.
- Training for staff frequently done.
- Good capacity within sectors (Laboratories, PAFN, MOH, PAAF).

Areas that need strengthening/challenges

- There is a provision for improvement for cooperation between all stakeholders especially those from agricultural sector (PAAF) that should be considered (risk based management for local produced food).
- Most communications are done either by phone or sometimes by fax. This allows room for improvement because there is need of rapid electronic data sharing and information dissemination.

Biosafety and biosecurity

Introduction

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

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

Target

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

Kuwait level of capabilities

Kuwait has a regulatory framework for biosafety. The MOH defines national standards for health care facilities and laboratories, both in the publicly funded and the private sectors. The regulatory framework includes structural criteria and requirements for comprehensive standard operating procedures for laboratories in the health sector, universal precautions and appropriate packaging of material for transportation, the need for separating clean and contaminated areas, workplace risk assessment, incident reporting and other biosafety measures. The premises and technical equipment in the laboratories visited appeared mostly appropriate, but in one laboratory visited, crowding raised concern on biosafety. Dedicated transport agencies with appropriate training are used for sample transportation.

Documented information on a regulatory framework for biosecurity was not available.

Polio, M. tuberculosis and MERS-CoV have been identified nationally as dangerous pathogens for which knowledge of the holding sites exists.

Biosafety training is ongoing: both training the trainers and training for staff has been carried out. All microbiology laboratories in the public and private sectors have to have nominated biosafety officers.

As regards biosecurity, according to information given verbally, training has been implemented on handling of these microbes in some, but not all, the relevant laboratories with the listed dangerous pathogens. Documentation on the training curricula or courses incorporating distinct sections on biosecurity was not available.

Polymerase Chain Reaction (PCR) –based tests are increasingly used.

Kuwait has a training programme in place, and training of trainers for biosafety has been carried out. Training for staff at facilities housing dangerous pathogens and toxins has not been fully completed.

Recommendations for priority actions

- Develop an annual action plan on training in biosecurity, and document the implemented training activities in a designated coordinating unit.
- Strengthen the mechanisms of monitoring the implementation of biosecurity-related processes in laboratories in all government sectors.
- Assess the needs for public education and training in biosafety and biosecurity.

Indicators and scores

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

Strengths/best practices

- A strong biosafety programme is in place.
- A list of three dangerous pathogens has been identified.
- National policy, tools and resources to support diagnostics other than culturing dangerous pathogens, such as PCR, are in place.
- MOH has a monitoring mechanism on auditing laboratories in the health care system, which can be used as a mechanism to supervise biosafety and biosecurity programmes in the public and private sector laboratories.

Areas that need strengthening/challenges

- Strengthen the mechanisms of monitoring the implementation of biosecurity-related processes in laboratories in all government sectors.
- Share intersectorally relevant regulations and standard operating procedures on biosecurity ensuring a comprehensive and coordinated national programme.
- Expand the list of agents/pathogens of concern based on internationally available risk agent/pathogen list, and establish an inventory of the expanded list, perform risk assessments and implement mitigation plans in the facilities housing those agents in all administrative sectors.

P.6.2 Biosafety and biosecurity training and practices - Score 3

Strengths/best practices

- Biosafety training is offered for laboratory staff.
- Polio, M. tuberculosis and MERS-CoV have been identified nationally as dangerous pathogens for which knowledge of the holding sites exists.
- Staff are trained about the transport of infectious substances according to international standards.

Areas that need strengthening/challenges

- Develop an annual action plan on training in biosecurity, and document the implemented training activities in a designated coordinating unit.
- Assess the needs for public education and training in biosafety and biosecurity.

Immunization

Introduction

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

Target

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

Kuwait level of capabilities

The National Immunization programme (NIP) started in the 1960s and further structured as an Expanded Programme of Immunization (EPI) programme in the 1980s under Department of Public Health, with new life-saving vaccines introduced recently including Rota and Varicella. The NIP now covers the following target diseases: hepatitis B, diphtheria, tetanus, pertussis, Haemophilus influenza type b, polio, pneumococcal infections in children and adults, rotavirus, measles, mumps, rubella and varicella. The programme also covers additional vaccines given to many risk groups and travellers. Routine childhood vaccines are administered free of charge to both local citizens and expats at primary health care level. The comprehensive National Vaccination Action Plan 2016–2020 is fully aligned with the WHO Global Vaccine Action Plan.

The measles, mumps and rubella (MMR) combination vaccine has long been in use in Kuwait with extensive catch-up and other supplementary measles and rubella immunization campaigns carried out to ensure the population is well protected.

The NIP childhood vaccines are compulsory by law, with immunization status check-ups scheduled upon school entry, during school years, and occupational and immigration processes. Through linkage of the birth and population registries, primary health-care centres have reliable data on their service area denominator population. Those living in the area who miss scheduled doses of vaccines are actively traced and followed up by the health centre staff. Vaccination coverage for MMR and other childhood vaccines has exceeded 95% for several years. Vaccination data health information is collected and analysed at the primary health-care centres, and monitored and analysed by EPI team at Public Health Department.

Kuwait has a centralized vaccine procurement and delivery system that reaches all public primary healthcare clinics and private sector. Vaccine demand and forecasting as well as the emergency stock are managed by the MOH. The whole cold-chain management is tested and monitored regularly by the EPI at Public Health Department.

Recommendations for priority actions

- Update national vaccine action plan and the operational policy.
- Establish adverse events system following immunization.
- Improve electronic network at all levels.

Indicators and scores

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

Strengths/best practices

- The EPI is a well-defined structured system in the country, mostly maintaining high coverage at national and district level.
- An active National Immunization Technical Advisory Group exists, as well as excellent technical expertise on vaccinology.
- The Government is committed to introduce new vaccines such as rotavirus and varicella to prevent significant mortality and disease burden.

Areas that need strengthening/challenges

- High turnover rate in nursing staff for vaccination activities.
- The growing of anti-vaccine groups that appeared clearly in the last campaign in 2017, resulted in 18% MMR vaccine coverage.

P.7.2 National vaccine access and delivery - Score 5

Strengths/best practices

- The infrastructure and cold chain are robust, including continuous supervision, monitoring and evaluation.
- A well functioning central procurement system with a six-month emergency stock of vaccines has prevented stockout situations.
- Active collaboration exists within GCC countries to assure vaccine in the case of stockouts.
- Active follow-up and outreach activities ensure all children receive full EPI coverage.

Areas that need strengthening/challenges

- Immunization coverage of high-risk groups (expatriates, Healthcare workers, unidentified nationality) needs to be improved.
- The growing of anti-vaccine groups.
- The EPI programme is paper-based at all levels.

DETECT

National laboratory system

Introduction

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 bio surveillance with a national laboratory system and effective modern point-of-care and laboratory-based diagnostics in all administrative sectors supporting public health.

Kuwait level of capabilities

The State of Kuwait's laboratory system in the publicly funded health-care sector under the MOH consists of a central Public Health Laboratory (PHL), clinical microbiology laboratories in 6 general hospitals and 13 specialty hospitals at the national level, and one environmental laboratory. There are approximately 15 private hospitals with clinical microbiology laboratories, and they have satellite laboratories. Microbiological testing for all infectious diseases is free of cost in the public sector, and in private sector for a number of infectious diseases of high public health importance. The military and prison system have their own laboratories, which are linked to the tiered health sector laboratories under the MOH.

MOH circulars or orders have appointed the PHL as the National Reference Laboratory (NRL) for a number of diseases including influenza (National Influenza Centre NIC), HIV, Bacillus anthracis, poliovirus, zika virus, and MERS-CoV. The PHL is also the national laboratory for enteric bacteria: the Food Safety Laboratory in PHL implements screening of imported food, water testing from various sources, and is involved by MOH order in all outbreak investigations, with a broad range of tests available, as well as some molecular typing. The National Central TB Laboratory, the only laboratory carrying out culturing for mycobacteria, is under the Public Health Authority of MOH. No NRL has been officially nominated for Antimicrobial Susceptibility Testing nor for some diseases covered in the national vaccination programme, but Mubarak Al Kabeer Teaching Hospital laboratory functions as an informal reference laboratory for MRSA and a number of other bacteria.

The Food Safety Laboratory function of screening imported food will transfer from PHL to the Public Authority for Food and Nutrition, but the other PHL functions, e.g. testing both human samples and food in outbreak investigations will stay at PHL. A large number of samples are sent to PHL for testing microbes, for which it has been nominated as the NRL. For other microbes such as salmonella, hospital laboratories voluntarily send isolates for confirmation and typing.

The Central Veterinary Laboratory (CVL) under the PAAF is the only veterinary laboratory in the country with a broad range of tests available, but there are a few small laboratories integrated in the private veterinary clinics and private poultry companies. Testing, implemented with SOPs according to OIE guidelines, covers the majority of core tests for IHR purposes, but B. anthracis and rabies testing is currently not implemented for safety reasons. The laboratory avails of international reference laboratories when testing is not available locally. Collaboration with the PHL virology and bacteriology laboratories takes place regularly.

A specimen referral system within the country exists in the health care sector for a number of high interest microbes through circulars by the MOH. The logistics of specimen referral both nationally and to international regional reference laboratories is well organised in the health and veterinary sector, with staff trained for the purpose. International standards are followed in packaging.

In the health care sector, laboratory tests based on nucleic acid amplification are available for a range of microbes both in the public and private clinical microbiology laboratories, and in the public health laboratories. In the PHL, sequencing is implemented. Point of care testing is being introduced, and a national committee monitors that the quality of this testing is ensured. Also in the CVL, molecular testing is available for several microbes.

Kuwait is at an early stage of planning to introduce interlinked laboratory information systems, to facilitate efficient real-time exchange of data between laboratories and transmit case based notifications to the epidemiologic surveillance system.

MOH implements a national external quality assurance (EQA) programme, and participation is obligatory for all publicly funded and private clinical microbiology laboratories. A number of the laboratories in the health care sector, including the PHL, also participate regularly in international EQA schemes. There is a national mandatory licensure system for private laboratories. The publicly funded laboratories under MOH are subject to regular monitoring visits. Most of the private microbiology laboratories and a number of public hospital laboratories are accredited according to national or international standards and the PHL is in the accreditation process. The CVL is not accredited, and it does not participate in formal EQA programmes, but frequently submits test material to international collaborating laboratories to confirm its results, both negative and positive.

The PHL and CVL liaise frequently with each other.

Recommendations for priority actions

- Develop a regulatory framework for national microbiological reference laboratories (NRL), covering all reference laboratory functions to support key communicable disease control programmes.
- Assess the efficacy of the national quality monitoring system of both public and private sector microbiology laboratories to ensure high standards across government administrative sectors.
- Strengthen the mechanisms for collaboration between human, veterinary, environmental and research laboratories.
- Develop the laboratory information systems to provide electronic exchange of data in real time between different tiers of the health sector.
- Develop a mechanism to support laboratory accreditation.

Indicators and Scores

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

Strengths/best practices

- The laboratory system in place in the health care and veterinary sectors is capable of detecting most of the ten core tests identified by the IHR, and agreements are in place for having the remaining tests carried out in international reference laboratories.
- The country has a rigorous system for procurement, with fast track mechanisms in urgent situations if necessary, ensuring business continuity.
- Areas which need strengthening/Challenges
- Develop a clear and comprehensive regulatory framework for national microbiological reference laboratories (NRL) across all governmental sectors, including the public and private sectors, to support key communicable disease control programmes.
- Strengthen the mechanisms for collaboration between human, veterinary, environmental and research laboratories.
- Develop the laboratory information systems to provide electronic exchange of data in real time between different tiers of the health sector and intersectorally.
- Ensure the sustainability of the testing capacities in all government sectors to cover the priority diseases under IHR.

D.1.2 Specimen referral and transport system - Score 5

Strengths/best practices

- Laboratory sample and specimen referral systems for priority diseases are well established for high priority diseases.
- Specimen transportation logistics mechanisms are well-developed.
- International transport regulations are being followed and people trained.

Areas which need strengthening/Challenges

- Based on the clear regulatory framework for NRLs, complete the nomination of NRL functions for essential microbial pathogens across all governmental sectors, defining their terms or reference according to international standards
- Monitor that all laboratories in health care, whether public or private, comply with the requirements to submit specimens or isolates to all the nominated reference laboratories.

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

Strengths/best practices

- All health care facilities of the public sector are linked to the next level of health facility.
- Tier or level specific diagnostic testing arrangements exist in all governmental sectors.
- Kuwait is proficient in classical diagnostic techniques including bacteriology, serology, has introduced PCR based testing in a large number of laboratories, and has the capacity to carry out molecular typing in some laboratories.
- Point-of-care based diagnostics are being introduced in health care according to nationally agreed criteria.

Areas which need strengthening/Challenges

- Ensure that all laboratories in the dynamically changing public and private sectors support and comply with the development of clear level –specific testing strategies, including point of care diagnostics.

D.1.4 Laboratory Quality System - Score 3

Strengths/best practices

- All health care laboratories participate in a national EQA system.
- A number of the health care sector laboratories participate in international external quality assurance schemes.
- System of licensing of private microbiology laboratories in the health care facilities under MOH is in place.

Areas which need strengthening/Challenges

- Assess the efficacy of the national quality monitoring system of both public and private sector microbiology laboratories to ensure high and equal standards across government administrative sectors, in the absence of a mandatory licensure system for public sector laboratories.
- Ensure that microbiology laboratories contributing to public health outside the health sector (veterinary, food safety) participate in EQA system(s).
- Develop a mechanism to support laboratory accreditation for ensuring high laboratory standards.

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; and improved country and regional capacity to analyse and link data from and between strengthened, real-time surveillance systems, incorporating interoperable, interconnected electronic reporting systems. This would include epidemiologic, clinical, laboratory, environmental testing, product safety and quality, and bioinformatics data; and advancement in fulfilling the core capacity requirements for surveillance in accordance with IHR and OIE standards.

Kuwait level of capabilities

Kuwait has surveillance for priority communicable diseases and syndromes. There is a list of notifiable diseases and syndromes. Weekly reporting is done, and monthly and annual summaries of the accumulated data are made. Once a week, a review of data from the previous week is made. Veterinary reporting is carried out through a separate system; the two systems should be further integrated with regular exchange of data related to zoonotic diseases.

Indicator-based reporting has been made routine over a long period of time. No structured system exists yet for event-based surveillance, which is carried out on an ad hoc basis in response to media alerts, rumours or identified social media.

The communicable disease group conducts periodic training through lectures, circulars and by active surveillance of staff during their visits to health sites; however due to high turnover, there is a need for constant training of healthcare workers.

The surveillance system in Kuwait is still paper-based including notifications system, registries and notification forms, with efforts made recently along with some of the GCC countries to move to electronic notification system (e-notification).

The system has performed well in recent years. Examples include identification of cholera and the control of potential panic during the outbreak in the Republic of Iraq.

Kuwait has a functioning indicator-based surveillance system; however event-based surveillance is not fully implemented in the country and will require to develop SOPs and guidelines for event based surveillance and to train all relevant stakeholders.

Recommendations for priority actions

- Formalize the establishment of event based surveillance through developing the related national guidelines and SOPs.
- Improve electronic surveillance (e-notification) in integration with all healthcare establishments including non-MoH and other relevant stakeholders.
- Map the existing surveillance officers and redistribute them based on the demand and equip them with the necessary training.
- Review and update early warning system (for group A national surveillance system including for Acute Respiratory Illness).

Indicators and scores

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

Strengths/best practices

- Indicator-based surveillance system(s) are in place to detect public health threats.
- A standardized form exists for data collection (immediate/as soon as possible/weekly).
- Results of surveillance data are regularly published (weekly/monthly/annually).

Areas that need strengthening/challenges

- Further developments and training in event-based surveillance.
- Surveillance system is still paper-based and needs to introduce e-notification and to be integrated to all health care facilities.
- Ongoing training on surveillance to healthcare works and other stakeholders.

D.2.2 Interoperable, interconnected, electronic real-time reporting system - Score 3

Strengths/best practices

- Reporting protocols and plans followed by all the reporting sectors (specially the public health sectors).
- Regular training programmes are done continuously.
- Continuous follow up and evaluation from the central Department of Disease Control and other public health officials.

Areas that need strengthening/challenges

- Establish electronically (computerized) programme for timely reporting of PHEICs.
- Continuous simulation programmes for testing the efficiency of the reporting process.

D.2.3 Analysis of surveillance data - Score 4

Strengths/best practices

- Dedicated and experienced staff that conduct weekly, monthly, and annual reporting of surveillance data.

Areas that need strengthening/challenges

- Feedback system to the health care facilities and to other stakeholders needs further strengthening.
- Laboratory and veterinary reports need to be integrated into the system.

D.2.4 Syndromic surveillance systems - Score 4.

Strengths/best practices

- Syndromic surveillance system is in place with clear SOPs.

Areas that need strengthening/challenges

- No regular system exists for sharing surveillance data among all interested parties.

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.

Kuwait level of capabilities

The country has designated an IHR NFP, which is currently operational. The Focal Point for OIE and INFOSAN focal point are established under the Agriculture authority. The IAEA focal points are established under the Kuwait Institute for Scientific Research.

The Terms of Reference for the high national IHR committee is identified in the decree. This committee is supposed to play a major role in the coordination and communication between the IHR NFP and their respective ministries/departments and thus in the implementation of the IHR. However, this is not maintained.

Information sharing related to zoonotic events or foodborne diseases from the IHR NFP to OIE and INFOSAN focal points is in place. However, it's neither based on written protocols nor supported by an IT platform for the timely sharing of information.

The National Technical committee for Coronavirus was established in 2013 but unfortunately the pathway and channel of reporting to the NFP and WHO is not mentioned in its terms of reference.

The coordination mechanisms between human and animal health authorities are established under the High committee for zoonosis. Sharing of information among different sectors is based on good will and there are no written SOPs or national plan. The human health and veterinary sectors do not have a common reporting system. Veterinary laboratories and human health laboratories are not linked and don't share common reports except for MERS–CoV for which samples have been shared between the two laboratories.

The use of the decision instrument (annex 2 of the IHR) is applied only on infectious diseases. However, this instrument is not known to the sectors; hence notification of related events of potential international concern to WHO is not followed.

The IHR NFP reports infectious disease of potential concern to WHO in a timely way. The national focal points of FAO, OIE and IAEA are also mandated to report to their respective agencies on notifiable events. Mechanisms for information exchange among the different sectors are in place but not formally standardized.

Kuwait has an ability to conduct risk assessments for all health events; however capacity to assess the risk of events of unknown origin or of chemical or radiation nature may not be sufficient.

Recommendations for Priority Actions

- Establish a national all health hazards electronic platform for timely reporting of potential PHEICs with access to all relevant national stakeholders.
- Enhance the reporting between the IHR NFP and the focal points in the relevant sectors through a protocol for a communication pathway for reporting acute public health event(s) for effective alert and response systems.
- Enhance the awareness and use of Annex 2 of the IHR, particularly among all concerned authorities in the country.
- Conduct simulation exercises to test the capacity for timely reporting of PHEIC events to WHO through the IHR NFP.

Indicators and Scores

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

Strengths/best practices

- The IHR NFP is defined in the country with defined functions, and focal points for FAO, OIE and IAEA are also available.
- Reporting requirements to WHO, OIE and IAEA are known to their national focal points.

Areas which need strengthening/Challenges

- Terms of reference of each focal point are not identified and the pathway of reporting is not clear
- IHR NFP is responsible for several areas of work in addition to IHR.

D.3.2 Reporting network and protocols in country - Score 3

Strengths/best practices

- The Terms of Reference for the high national IHR committee is identified by decree.

Areas which need strengthening/Challenges

- Lack of clear functions for the members of the high national IHR multisectoral Committee. This affects the proper implementation of IHR capacities and lack of awareness of decision instrument and its use, practicality among the non-health sector.
- There is a lack of regular and formal information sharing mechanisms that include feedback on the response to public health events occurring in the country.

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

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

Kuwait level of capabilities

Kuwait has long invested in education as a whole, and in staff development. The entire human resources system is financed by the Government and senior decision-makers fully support human resource capacity strengthening in the country. The training of public health, biostatisticians, and information systems personnel is the responsibility of the training and development department with the co-ordination of Kuwait Institute of Medical Specialization. The appropriate number of personnel at various levels and specialities exists.

Recommendations for priority actions

- Develop a public health workforce strategy for all entities.
- Roll-out full FETP training courses for public health workers (physicians and non-physicians and for Veterinarians) or establish cross-border training opportunities.

Indicators and scores

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

Strengths/best practices

- Human resources capacity is available at different levels of the health system.

Areas that need strengthening/challenges

- Further strengthen multidisciplinary teams in order to work together, within and outside of the MOH.

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

Strengths/best practices

- Resources are available for learning and development.
- Masters and PhD graduates in epidemiology/public health are available

Areas that need strengthening/challenges

- Few local FETP/Public Health/ applied epidemiology graduates, especially from other entities.

D.4.3 Workforce strategy - Score 3

Strengths/best practices

- There is adequate staffing and plans to expand the public health workforce.

Areas that need strengthening/challenges

- More opportunities are needed to train staff at Master and PhD levels in public health, including all relevant entities such as veterinarians, health inspectors etc.
- Increased opportunities with other GCC countries to develop a critical mass of trained staff in key areas

RESPOND

Preparedness

Introduction

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

Target

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

Kuwait level of capabilities

Overall, Kuwait has robust multi-hazard preparedness and response capabilities that are tested regularly through simulation exercises and evaluated. Emergency preparedness coordination between government departments and using a whole of society approach may lead to improved preparedness capabilities.

Recommendations for priority actions

- Develop a national multi-hazard risk profile and resource map to regularly accommodate emerging threats.
- Conduct an inter-ministerial annual planning exercise involving relevant ministries and departments per priority hazards identified.
- Establish a marine ambulance operations and service centre.

Indicators and scores

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

Strengths/best practices

- The National Emergency Preparedness and Response Plan is regularly updated and exercises, such as inter-ministerial simulations, are held at least once a year.
- Plans and procedures exist for the reallocation of emergency medical resources at the national and intermediate levels.
- Surge capacity has been identified across ministries and departments to respond to a set of emergency scenarios.

Areas that need strengthening/challenges

- Preparedness for high-risk hazards may be improved by further formalizing and strengthening inter-ministerial command, control and coordination planning.
- A Department of Emergency Management has yet to be established under the Ministry of Health.
- The whole of society approach can be further mainstreamed across preparedness plans.

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

Strengths/best practices

- Public health risks and resources are assessed and mapped for IHR-relevant hazards and are updated at various levels according to a monthly to yearly review cycle.
- Emergency stockpiles for response to priority biological, chemical and radiological risks are prepositioned and critical stock levels are monitored and updated on a weekly to monthly basis.
- Requisite experts and funding have been proactively identified per IHR-relevant hazard.

Areas that need strengthening/challenges

- A national risk profile that centralizes the identification of priority risks and associated response resources would assist in the proactive identification of emerging threats and engagement of relevant coordination mechanisms.
- The scope of public health risks should be further expanded using an all-hazards approach and relevant risks should be further prioritized and linked to specific resources (such as those that can be deployed from a marine, ground and air ambulance services) in plans that will enable dynamic resource management.
- The unified emergency communications system for emergency response personnel and risk-relevant authorities should be tested (plans, processes and procedures) per high-risk hazard.

Emergency response operations

Introduction

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

Target

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

Kuwait level of capabilities

Kuwait has an efficient and effective array of Emergency Medical Services with the requisite infrastructure, information systems and training and exercise plans to support its operation. However, the scope of its designated Emergency Operations Centre (EOC) needs to be expanded to become a veritable Public Health Emergency Operations Centre (PHEOC) and the requisite policies, plans and procedures need to be formalized across a range of priority hazards and in conjunction with the relevant governmental and non-governmental partners.

Recommendations for priority actions

- Expand the mandate of the Emergency Medical Dispatch Centre to become a fully functioning Public Health Emergency Operations Centre (PHEOC).
- Increase the efficiency and capabilities of the emergency operations centre.
- Strengthen the technical capacities of emergency operations centre personnel.

Indicators and scores

R.2.1 Capacity to activate emergency operations – Score 3

Strengths/best practices

- Procedures have been identified for when and how to activate the Emergency Operations Centre (EOC) according to different emergency versus non-emergency scenarios.
- The national EOC is very well capacitated with the requisite infrastructure and information systems, as well as medical and non-medical equipment.
- EOC focal points are available on a 24/7 basis to respond to any request for emergency medical services.

Areas that need strengthening/challenges

- The mandate of the EOC should be expanded from an Emergency Medical Dispatch service to a fully operational Public Health Emergency Operations Centre (PHEOC).
- EOC staff will benefit from expanded training on emergency management principles and PHEOC SOPs.
- Levels of EOC activation should be identified with the requisite policies, plans and procedures to support the identification of activation escalation / de-escalation triggers.

R.2.2 EOC operating procedures and plans – Score 3

Strengths/best practices

- Job titles and associated training and exercise curricula are documented for the range of personnel working in the Emergency Medical Service centre.
- EOC plans describe the structural and operational elements for Incident Management Structure-equivalent roles.
- Plans and procedures are available at the national and sub-national levels with standardized data management systems for emergency medical resources.

Areas that need strengthening/challenges

- EOC plans and procedures should be expanded to include response to the full range of relevant public health hazards with a concept of operations and standardized data collection and reporting systems.
- The Incident Management System structure would benefit from further formalization and training to ensure timely command, control and coordination of emergency response across the range of high-risk hazards.
- EOC scaled levels of response should be documented in plans describing the resource requirements for each level and procedures for acquiring additional resources.

R.2.3 Emergency operations programme – Score 3

Strengths/best practices

- Functional exercises have been completed within the past year to test EOC operations capabilities.
- Emergency Medical Services and associated resources are able to respond well in advance of 120 minutes to a range of health-related hazards.
- Emergency medical personnel and resources have been activated on a large scale through at least two simulations over the past year.

Areas that need strengthening/challenges

- The EOC should seek the necessary mandates to enable it to establish the requisite plans and procedures for a coordinated, multi-sector response to a range of prioritized public health emergencies.
- Evaluations of multi-sector/ministerial coordination exercises should be systematically applied for continuous EOC policy, plan and process improvement.
- The EOC should develop the capacity to monitor indicators related to priority public health hazards and integrate indicator assessment per public health hazard in coordinated training and exercise curricula.

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

Strengths/best practices

- Case management guidelines for IHR-relevant hazards (namely, radiological, chemical, zoonotic and food safety) and priority epidemic-prone diseases are available at relevant health system levels.
- The care of potentially infectious patients is managed according to standard guidelines and SOPs.
- Staff are trained in the case management of specific IHR-related emergencies.

Areas that need strengthening/challenges

- Staff should receive training for an expanded range of prioritized IHR-relevant emergencies and this should be standardized in a multi-sector fashion for all response-related personnel.
- Case management guidelines should be expanded across the range of PHEOC-relevant hazards.
- As the scope of relevant hazards are updated, case management guidelines will need to be further linked to requisite human and material resources.

Linking public health and security authorities

Introduction

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

Target

In the case 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, such as to investigate alleged use events.

Kuwait level of capabilities

The Directorate of Civil Defence is the coordinating entity in Kuwait responsible for the management of emergencies and disasters. The Directorate incorporates the involvement of diverse national sectors at the senior under-secretary level through convening multisectoral committees, and can effectively adapt the response dependent on which sectors' participation is required as per the emergency. The Directorate can furthermore convene novel committees as necessary to address emerging public health risks, for example the Committee established to respond to MERS-CoV events.

In addition, there are 14 established emergency contingency plans involving diverse hazards and health consequences, and representation of the MoH is included within these events involving health. Periodic information exchange and reporting occurs between the security forces and diverse sectors during peacetime.

Large-scale multi-sectoral exercises are routinely held across sectors within Kuwait, for example the Shamil 3 multi-series exercise performed once a year. Joint drills and exercises are also regularly conducted involving health and security personnel covering varied scenarios, (e.g. a terrorist event at the Avenues Mall, and an emergency evacuation of a petroleum company) with the frequency of circa 40 times a year. A table-top exercise is first performed with all stakeholders followed by an actual drill or simulation to practically test roles and responsibilities; lessons learned are widely circulated, and follow-up capacity building is offered.

Furthermore, Public Health and Security Forces collaborate in the event of either communicable or zoonotic disease, and there are formal procedures for applying both animal and human quarantine. In addition, for potential events of both public health and security significance there are procedures in place to conduct a joint risk assessment amongst sectors. Protocols are additionally in place to liaise with security personnel at Points of Entry (PoE) in Kuwait in the case of a public health event at the border or air/seaport.

Recommendations for priority actions

- Establishment of a Crisis and Disaster Management Centre to streamline activities and response
- Elaborate and expand the joint training programmes involving health and security personnel to include all-hazards modules

Indicators and scores

R.3.1 Public health and security authorities (e.g. law enforcement, border control, customs) are linked during a suspect or confirmed biological event - Score 5

Strengths/best practices

- Strong operational linkages amongst the public health and the security sector are supported by a comprehensive body of legislation, resolutions, and specific SOPs to ensure efficient response during an emergency.
- Simulation exercises, drills, and table-tops are frequently conducted to test available plans, which are in turn updated accordingly
- Mechanisms for information exchange exist between stakeholders, and periodic reporting is present in peacetime.
- Effective and rapid information exchange occurs between the security and health sectors; for example, a unique communication channel line is established in the event of an emergency through which senior level sectors can efficiently communicate in real-time.
- There is a dedicated spokesperson for each Ministry, yet in the event of an emergency, communication with the public is streamlined through the Ministry of Interior who is the paramount communicator.

Areas that need strengthening/challenges

- There is a need to further elaborate modules and streamline joint training for both public health and security personnel to cover all potential hazards and risks across all institutional levels.

Medical countermeasures and personnel deployment

Introduction

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

Target

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

Kuwait level of capabilities

Kuwait has a formal plan in place for the rapid cross-border receiving and sending of medical countermeasures in the event of a public health emergency. The plan is furthermore tested and updated every 12-18 months with improvements then incorporated.

Within this plan, there are procedures in place for the fast-tracked procurement of medical countermeasures which were effectively exercised, for example, while acquiring Tamiflu during the 2009 H1N1 pandemic and personal protective equipment (PPE) during the recent Ebola crisis. To better facilitate this process, an integrated database outlining established suppliers, their location, and their potential turn-around/response time is utilized in the event of rapid procurement.

Kuwait has only one pharmaceutical company which supplies solely antibiotics, all other medical countermeasures come from outside the country. Procurement is centralized nationally, and warehouse stocks represent a 7-month supply.

There is also demonstrated experience in sending medical countermeasures abroad during a public health emergency, both within the GCC (Potassium Iodine Tablets to Saudi Arabia) and internationally (medical assistance to Myanmar).

Kuwait has no plan for both sending and receiving health personnel in the event of a public health emergency, but has significant experience in deploying specialists over the years throughout the region via various avenues/platforms. Internationally, Kuwaiti health personnel of varying medical specialities have been deployed to Iraq, Turkey, Lebanon, Libya, and Iran. These specialists are updated within a roster for emergency deployment and can be officially requested through the MoH.

Kuwait also participates in the GCC Common Procurement, as well as benefits from Regional agreements and mechanisms in place for resource sharing – including procurement and human resources. Kuwait has never received medical countermeasures nor health personnel from abroad.

Recommendations for priority actions

- Improving the logistics capacity and management for medical countermeasures including the establishment of (two) sub-store facilities
- Institutionalize the plan for sending and receiving health personnel for public health emergencies, and insure functionality through drills and exercises

Indicators and scores

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

Strengths/best practices

- Existent human resources are well trained in the event of tracking/distributing medical countermeasures, and emergency task forces can be readily formed with full logistical, financial and manpower capacities.
- Extensive experience in procurement of medical countermeasures and an integrated database to ensure logistical capacity.
- Considerations for medical countermeasures are addressed in additional preparedness plans, for example within the Pandemic Preparedness Plan (PIP) and those from the Committee addressing MERS-CoV.
- Plans and procedures are in place for the procurement and distribution of animal countermeasures in coordination with the General Authority for Agriculture and Fisheries.
- Agreements are in place with the Kuwait Red Crescent Society and Ministry of Defence for the transferring and receiving of medical countermeasures during a shortage or public health emergency.

Areas that need strengthening/challenges

- Lack of adequate storage space to accommodate the demand of pharmaceutical and medical equipment - storage space shortage has resulted in some reduction of warehouse stock.
- Pharmaceuticals and medical materials are mostly procured/imported from abroad.

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

Strengths/best practices

- Health personnel and various medical specialists have been deployed to support numerous public health emergencies over the years.
- Through GCC collaboration, The Central Emergency and Crisis Management Committee of the MoH can request additional health personnel in the event of a public health emergency.

Areas that need strengthening/challenges

- Harmonized plans, procedures, and SOPs to support both the deployment and receiving of health personnel are needed to ensure a timely and effective response.

Risk communication

Introduction

Risk communications should be a multilevel and multifaceted process which aims at helping stakeholders define risks, identify hazards, assess vulnerabilities and promote community resilience, thereby promoting the capacity to cope with an unfolding public health emergency. An essential part of risk communication is the dissemination of information to the public about health risks and events, such as disease outbreaks. For any communication about risk caused by a specific event to be effective, the social, religious, cultural, political and economic aspects associated with the event should be taken into account, including the voice of the affected population.

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

Target

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

Kuwait level of capabilities

Risk communications capacities and functions are undertaken in a formalized system and structure with designated health focal points. Multiple traditional and social media communications modalities are used across the emergency management cycle to communicate relevant messaging. However, further formalization of plans with more extensive coordination between all public health stakeholders and at all levels – with a concerted focus on community engagement and social mobilization mechanisms – will help to strengthen Kuwait's risk communications capacities.

Recommendations for priority actions

- Mainstream risk communications policies, plans, and procedures across all IHR core capacity areas and, via the IHR NFP, with requisite ministerial and other organizational levels.
- Create community engagement units at district level to facilitate community participation during emergencies.
- Involve the private sector and community organizations through all levels of risk communication.
- Conduct process, impact and outcome evaluation of communication channels and public messages delivered during emergencies.
- Establish a system for rumour gathering and analysis and evidence-based strategies to address those rumours.

Indicators and scores

R.5.1 Risk communication systems (plans, mechanisms, etc.) – Score 4

Strengths/best practices

- Formal risk communications systems exist under the direction of the MoH and they engage in a multi-sectoral and multi-stakeholder manner.
- Risk communications has been integrated into simulation exercises and has been functional in recent health emergencies, namely, those relating to mass casualty and epidemic-prone disease events.
- An inter-ministerial committee, including other organizations involved in emergency response, has been established within the past year.

Areas that need strengthening/challenges

- There is no official national communication plan for emergency situations and a paucity of trained personnel.
- Dedicated financial resources do not exist at all levels to facilitate ongoing and emergency scaling of risk communications activities.
- Testing of risk communication strategies during emergencies is conducted at local and intermediate levels and not on a national level.

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

Strengths/best practices

- There are formal government arrangements to coordinate communication within the MoH
- Information sharing related to risk communications occurs between non-MOH ministries and a limited number of non-governmental stakeholders responsible for emergency response.
- Risk communications systems are in place to coordinate with specific international stakeholders and response agencies during an emergency.

Areas that need strengthening/challenges

- Participation of private sector and civil society organizations in emergency communications exercises can be made more frequent and expanded in scope.
- Communication coordination is tested through simulation exercises at least once a year but with a limited number of governmental departments and does not involve all internal and partner stakeholders.
- Effective, regular communication coordination is not undertaken by all partners at all levels.

R.5.3 Public communication – Score 4

Strengths/best practices

- All governmental stakeholders involved in emergencies undertake continuous public outreach through traditional and social media.
- Responsibilities and roles concerning risk communication are agreed upon among several ministries according to different emergency scenarios.
- Designated and trained public spokespersons are present and receive training according to international guidelines on risk communications.

Areas that need strengthening/challenges

- Given Kuwait's demographic characteristics, risk communications messaging should be made more available across a range of hazards for non-English and non-Arabic speakers.
- Comprehensive target audience analyses should be conducted to better understand audience language(s), trusted information resources and preferred communication channels.
- The risk communications service should establish a formal platform for the sharing of experiences and new strategies with partner organizations to continually improve communication response.

R.5.4 Communication engagement with affected communities – Score 3

Strengths/best practices

- Cooperation between the MoH and private sector partners (e.g., Kuwait Petroleum Corporation), community-based organizations and religious leaders exists at different levels.
- Misinformation regarding public health risks are addressed in a timely manner.
- Standard practices for developing information education communication materials with the involvement of community and key stakeholders are in place, with requisite consultation mechanisms (namely, general and hazard-specific hotlines and community-level surveys).

Areas that need strengthening/challenges

- The role of private sector and community organizations during emergencies should be better defined and the requisite resources and training should be provided to ensure their effective and efficient engagement.
- District-level units should be established for community engagement during emergencies and these should be integrated with national-level mechanisms.
- The Health Media Office should expedite the establishment of district-level community engagement units to scale up community participation in risk communications activities.

R.5.5 Dynamic listening and rumour management – Score 3

Strengths/best practices

- The MoH has a designated a permanent hotline (151) to address public concerns and complaints and an additional hotline (132) is activated during emergencies.
- There is a dedicated team within the MoH (Health Media Office) that is responsible for addressing rumours, in cooperation with experts from the MoH, other departments and ministries and international organizations, such as the WHO.
- Routine and event-based systems for listening and rumour management have been established through the Health Media Office.

Areas that need strengthening/challenges

- Processes and coordination mechanisms should be established to enable the regular monitoring of rumours and to facilitate dynamic listening.
- A formal platform for hazard-related listening and rumour management should be established and integrated into the decision-making and response actions for public communications.
- Evaluation exercises should be undertaken to assess the effectiveness of risk communications messaging and feedback loops should be established to Risk Communications Domains 1 through 4.

OTHER IHR-RELATED HAZARDS AND POINTS OF ENTRY

Points of entry

Introduction

All core capacities and potential hazards management 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 the core capacities at the designated international airports and ports (and where justified for public health reasons, a State Party may designate ground crossings) which will implement specific public health measures required to manage a variety of public health risks.

Target

States Parties 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.

Kuwait level of capabilities

The State of Kuwait has 10 recognised points of entry; one international Airport, three Ground crossing and six Sea Ports, that support international traffic:

- Kuwait International Airport – a major international airport and the hub airport of Kuwait Airways;
- Three Dry Cargo Ports: Shuwaikh, Shuaiba and Doha
- Three Oil terminals: Ahmady, Alzoor and Minaa' Abd-Ullah.
- Three Ground Crossings – Salmi, Abdally and the visited ground crossing Nuasaib, which has a crossing with Kingdom of Saudi Arabia.

Shuwaikh port lies on the south shore of Kuwait Bay. It is considered the main commercial port in the country. It is one of the busiest ports in the Middle East, with twenty-one deepwater berths. It handles the bulk of merchant shipping trade and all types of vessels including liners, tramps, container, Ro-Ro, barges, fishing trawlers and small passenger ships. It has a total area of 3.2 million square meters and 1.2 million square meters of water basin area.

Kuwait International Airport is operated and regulated by Kuwait Civil Aviation Authority. It has 24/7 medical services provided by MoH with well trained professional medical personnel for Public Health hazard response and strong communication and coordination with IHR NFP. There are procedures in place for transfer of ill passengers to the private and government hospitals in the city and nearby with fully equipped ambulances. The airport terminal is equipped with thermal cameras for screening of arriving passengers from areas that have suspected cases of communicable diseases of concern.

The airport Rescue and Fire Fighting (RFF) centre is well equipped with modern ambulances and trained staff to address public health emergencies.

Shuwaikh Port is operated, run and regulated by the Kuwait Maritime General Corporation. The medical services are provided by MoH 24/7 headed by one Administrator with a physician and a Public Health officer, well trained in response to Public Health threats. A referral system is in place for the safe transfer of ill travelers to appropriate medical facilities. The port is designated for issuing Ship Sanitation Control Certificates and Ship Sanitation Control Exemption Certificates, according to WHO standards.

The Kuwait International Airport Aerodrome Emergency Plan, the Shuwaikh Port Emergency Contingency Plan and Nuasaib Ground Crossing Contingency Emergency Plan are well developed for response and include medical emergency conditions with communicable disease response but don't include the other public health hazards. Points of entry into Kuwait possess numerous SOPs, guidelines, and internal procedures with defined and approved procedures regarding the management of infectious disease. Nevertheless, a public health emergency plan for points of entry, which considers an all hazard approach is lacking.

There are procedures for vector control on a regular basis by specialised team from the MoH, and the cargo terminal has representation from the Ministry of Agriculture and MoH for inspection of food, plants and animals. However, there was also no evidence that there was systematic surveillance of vectors and reservoirs at PoE or programmed inspection of conveyances (ships and aircraft). Although vector control is performed, an integral vector control programme at points of entry is required.

The points of entry provide appropriate medical access as well as equipment/transport for further management of sick travelers. Trained personnel for the inspection of conveyances are available at all designated Ports (Airport, Sea Ports and Ground Crossings).

Recommendations for Priority Actions

- The National Health Emergency Plan needs to be developed and disseminated to all key stakeholders and integrated with other emergency plans to provide an effective Public Health hazard response when required at each PoE.
- PoEs need to be risk assessed for likely vector reservoirs, a suitable inspection programme implemented to control assessed risks and the necessary controls implemented.
- Develop standards quarantine place for animals at PoE.
- Basic and recurrent training should be provided to MoH personnel that are involved in PoE inspection and oversight.
- Enhance the reporting and communication between stakeholders at each PoE and the IHR NFP.

Indicators and Scores

PoE.1 Routine capacities are established at PoE - Score 4

Strengths/best practices

- The State of Kuwait has a strong and established medical system that can respond quickly to emergencies and there are clear working practices in place to deal with ill travellers reported to a PoE.
- The isolation place at the Airport is not as recommended by WHO however the standard isolation place for suspected ill infected travellers is under construction and will be finalized and effective by November 2017 in the new airport.
- Sufficient resources seemed to be in place to deal with expected emergencies for the type and level of traffic at the Seaport, Airport and Ground Crossing.
- A regular programme for vector control is implemented at all PoE which is supervised by the operator and the regulator.

Areas which need strengthening/Challenges

- Greater emphasis now needs to be placed upon surveillance at PoE that can help inform about the level of potential risk that may be presented and ensure appropriate resources and responses can be applied. There is not necessarily a need for a large financial investment, but more of a co-ordination of inspection processes for routine processes. Specifically, a programme of assessment and monitoring for vectors and potential reservoirs should be implemented (the newly published WHO guide upon surveillance of vectors at seaports, airports and other points of entry can provide guidance about this).
- Continuous training for all personnel at all PoE for other public health threats such as radiation, nuclear and biological threats needs to take place.
- Develop communications, co-operation and electronic reporting with all stakeholder at all PoEs.

PoE.2 Effective Public Health Response at Points of Entry - Score 2

Strengths/best practices

- Strong medical capacity and capability exists in State of Kuwait and there is well established practices in response to any public health hazards in form of SOPs, guidelines, procedures, work flow charts, contact lists, and for transportation at PoE.
- Medical facilities at all visited PoE were modern and well developed with diagnostic equipment and trained medical officers.
- The contingency emergency plan at the visited PoE includes a comprehensive chapter to address medical emergencies.
- The visited PoE has procedures for transfer of ill travellers to appropriate medical facilities.
- The PoEs have strong communication and coordination among all stakeholders at each PoE and with MoH IHR NFP

Areas which need strengthening/Challenges

- All PoE Emergency Contingency Plans must be reviewed to include all hazards of Public Health threat and disseminated to all stakeholders.
- The animal quarantine places need more development at each PoE.
- Ensure availability of trained qualified personnel to evaluate the effectiveness of PoE in responding to public health events.

Chemical events

Introduction

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

Target

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

Kuwait level of capabilities

Kuwait has ratified the following chemical safety and management conventions and treaties: The Chemical Weapons Convention; Convention 170 on the use of Chemicals at Work; Convention 174 on Prevention of Major Industrial Accidents; Basel Convention on the Control of Trans-boundary Movements of Hazardous Wastes and Their Disposal; Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade; Stockholm Convention on Persistent Organic Pollutants; The Strategic Approach to International Chemicals Management (SAICM); Minamata Convention on Mercury; and Convention 174 on Prevention of Major Industrial Accidents.

Generally speaking it is noted that several capacities are present in the country but not properly documented, on the other hand the capacity of managing chemical events is much better than the monitoring and surveillance capacity.

Similar to other countries of the region, Kuwait's capacity to detect and respond to chemical events has improved considerably during the recent years in preparation for potential use of chemical weapons. This is in addition to the preparedness for handling anticipated accidents related to the oil and gas industry. However the surveillance capacity of poisonings, as well as the coordination between the different related sectors still needs further strengthening. A national committee to manage chemical accidents exists in Kuwait, with a national plan of action for responding to chemical accidents. The plan is being exercised on a regular basis. There is a need to widen the scope of this committee to cover all issues related to chemical safety rather than just chemical accidents. Better chemical risk mapping is still needed, and both event-based and indicator-based surveillance systems are needed.

Recommendations for priority actions

- Establish/activate a multi-stakeholder committee to coordinate the management of chemical safety (not only events) at the national level.
- Strengthen the event based as well as indicator based surveillance systems through proper documentation of existing procedure and practices.
- Establish a functional poison centre (prevention, diagnosis and management of poisoning).

Indicators and scores

CE.1 Mechanisms are established and functioning for detecting and responding to chemical events or emergencies - Score 3

Strengths/best practices

- Reasonable system for detecting chemical accidents exists.
- Registry of chemical poisonings exists.

Areas that need strengthening/challenges

- No chemical profile is available.
- Event-based as well as indicator-based surveillance of chemical poisoning are weak.
- A functioning poison centre does not exist.

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

Although most of needs to demonstrate capacity level 5 are there, capacity level 4 does not exist. Therefore it was agreed if a priority action on 4 is implemented in a year or so, the level can jump to 5 immediately

Strengths/best practices

- Kuwait has ratified international agreements on chemical safety.
- A multi-stakeholder national Committee for responding to chemical accidents exists and exercises the national plan on a regular basis.
- Good infrastructure for handling chemical accidents exists.
- Chemical safety at the workplace is regulated.

Areas that need strengthening/challenges

- Several agencies are involved in handling chemical events with a weak coordination mechanism in place.
- National multi-stakeholder mechanism to coordinate chemical safety (not accidents) need to be established.

Radiation emergencies

Introduction

State parties should have efficient mechanism for surveillance and response capacity for radio-nuclear hazards/events/emergencies. It requires effective communication and collaboration among the sectors responsible for radio-nuclear management.

Target

State parties should have surveillance and response capacity for radio-nuclear hazards/events/emergencies. It requires effective communication and collaboration among the sectors responsible for radio-nuclear management.

Kuwait level of capabilities

The Radiation Protection Department of the MoH is the primary national body with responsibility for radiation safety, security and surveillance. This national body is responsible for supervision, control and safety of any activities associated with or can result in radioactive emissions, as well as the actions related to the use of ionizing radiation sources, materials, devices and radioactive substances in governmental and private sectors. The RPD was established, equipped and resourced with qualified Radiation Protection Officers (RPOs) to ensure safe operations and guidance on potential hazards from radioactive sources in the health sector.

The duties of the Radiation Protection Department include:

- Setting plans and executive programmes in the field of radiation for the purpose of safeguarding radiation workers and the general public as well as the protection of the local environment from radiation hazards.
- Measurement, determination and evaluation of the radioactive materials present in the environment.
- Measurement of radioactive materials concentration in food, consumable items and water.
- Development of guidelines for work in the field of using ionizing radiation equipment, radioactive materials.
- Development of the specifications of radiation sources and sites.
- Establishment of scientific qualifications and experience for personal work in the radiation field.
- Inspection of premises and employees involved in the use of radiation sources on regular and unexpected basis to ensure the implementation of required guidelines and safety precautions outlined in the license.
- Monitoring, registration and evaluation of the radiation exposure of workers, regular calibration of instruments used in radiation measurements.
- Development and enhancement of work procedures in the area of radiation protection to achieve safety from radiation hazards.

The public health department is the focal point designated from the national authorities for radiological and nuclear events, and for coordination and communication with the MoH and IHR NFP.

The Kuwait Institute for Scientific Research is the focal point to communicate with the IAEA, and it is the committee whose responsibility is to coordinate with international agencies for signature/ratification of international conventions as well as trainings and technical support.

A national radiological and nuclear plan exists and the general procedures for evaluation and response is available and implemented involving national policies, strategies, samples and waste management including those from hospitals and medical services.

An early notification monitoring system exists in the RPD, National Guard and Kuwait Institute for Scientific Research and there is cooperation with GCC countries for notification of environmental detection.

The RPD has an MoU and cooperation with the following bodies to carry out its responsibilities: Environmental Public Authority, Fire Department, Medical Emergency Department, Customs General Department, Civil Aviation, Ministry of Information, Kuwait municipality, Port Public Authority, Ministry of Electricity and Water, Public Authority of Agriculture and Fish Resources, Border Protection Department, National Guard, Mubarak and Al-Addan Hospitals, and the Nuclear Medicine Division.

Recommendations for Priority Actions

- Establish a mechanism of systematic information exchange between radiological competent authorities and human health surveillance units about urgent radiological events and potential risks that may constitute a public health emergency of international concern.
- Develop written SOPs evaluated and updated for the management of radiation emergencies (including risk assessment, reporting, event confirmation and notification, and investigation).
- Allocation of additional human and financial resources would be needed due to the expansion and increased use of radiation in medical, industrial and other sectors.
- National authorities responsible for radiological and nuclear events should designate a focal point for coordination and communication with the MoH and/or IHR NFP.

Indicators and Scores

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

Strengths/best practices

- A national committee for radiological emergencies and response is established and in place, which contains contact points of all authorities contributed to any suspected radiological emergency.
- Established emergency plans are revised and updated regularly and adequate resources are ensured for surveillance, laboratory analysis, hazard assessments and organization of exercises or drills.
- Systematic information exchange is established between radiological competent authorities and human health surveillance units about urgent radiological events and potential risks that may constitute a public health emergency of international concern.
- Coordination is set up with various bodies for risk assessments, risk communications, planning, exercising, monitoring and including coordination during urgent radiological events and potential risks that may constitute a public health emergency of international concern.
- Mubarak and Al Adan Hospitals receive all cases of radiation emergencies.
- The case management regarding radio–nuclear hazards is clear in the Emergency plan.

Areas which need strengthening/Challenges

- Develop written SOPs evaluated and updated for the management of radiation emergencies (including risk assessment, reporting, event confirmation and notification, and investigation).
- The emergency plans should be revised and updated regularly and adequate resources are ensured for surveillance, laboratory analysis, hazard assessments and conduction of exercises or drills.
- Establish a mechanism of systematic information exchange between radiological competent authorities and human health surveillance units about urgent radiological events and potential risks that may constitute a public health emergency of international concern.

RE.2 Enabling environment is in place for management of Radiation Emergencies - Score 4

Strengths/best practices

- A radiation emergency response plan exists (could be part of national emergency response plan).
- National policies, strategies or plans for national and international transport of radioactive material, samples and waste management including those from hospitals and medical services are established.
- Coordination with relevant stakeholders is in place (national and subnational levels of all relevant sectors like health, environment, emergency services, reference laboratory etc).
- Radiation emergency response drills are carried out regularly, including the requesting of international assistance (as needed) and international notification.

Areas which need strengthening/Challenges

- Effective, regular communication coordination with all partners required by all preceding levels, and their coordination tested by a simulation exercise or tested by a real health emergency.
- The enlisted medical facilities (Mubarak and Al-Addan Hospitals) for treating the contaminated individuals or victims of radiation emergencies should be supplied with adequate resources and well trained personnel.
- Allocation of additional human and financial resources are required due to expansion of nuclear power program and increased use of radiation in medical, industrial and other sectors.

Annex 1: JEE background

Mission place and dates

The mission took place in Kuwait city, Kuwait, on 14-18 May 2017. The team held multisectoral discussions and site visits in the capital city of Kuwait and in a few other locations.

Objectives

- Assess the implementation of the IHR public health capacities for surveillance and response to public health events including at points of entry.
- Review all related documents.
- Develop a report describing the progress and gaps in implementing the IHR capacities.
- Recommend priority actions to update and finalize the national plan to achieve and maintain IHR capacities for global health security.

Mission team members:

- Francis Grenier, Health Emergency Information and Risk Assessment, WHO Health Emergency Programme, WHO Regional Office for the Eastern Mediterranean, Egypt – Team Lead
- Ahmed El Idrissi, Senior Animal Health Officer, FAO Rome – Team Co-Lead
- Idris Al Abaidani, Director of Disease Surveillance and Control, Ministry of Health, Oman
- Fatima Al Attar, Consultant and Director of IHR Office, Ministry of Health, United Arab Emirates
- Jessica Barry, IHR Consultant, United States
- Hicheme Bouzghaia, PVS Pathway Expert, OIE, Tunisia
- Mohammed Genedy, Director General for the Communicable Diseases Control Department, Ministry of Health and Population, Egypt
- Ahmed Al Hakawi, Consultant, King Fahd Medical City, Kingdom of Saudi Arabia
- Khalil Khalil, Head of Aviation Medicine Department, National Civil Aviation, Jordan
- Wael El Kholy, Professor of Medical Protection of Radiation Effects, Supervisor of Safety Sector of Radioactive Sources and Radiation Facilities, Egyptian Nuclear and Radiological Regulatory Authority (ENRRA), Egypt
- Mazen Malkawi, Advisor, Centre for Environmental Health Activities, WHO Regional Office for the Eastern Mediterranean, Jordan
- Ali Okhowat, Technical Officer, Health Emergency Operations, WHO Health Emergency Program, WHO Regional Office for the Eastern Mediterranean, Egypt
- Petri Ruutu, Emeritus Professor, National Institute for Health and Welfare, Finland
- Dalia Samhoury, Technical Officer, Epidemiology Surveillance and IHR, WHO Regional Office for the Eastern Mediterranean, Egypt

Preparation and implementation of the mission

- Prior to the visit, several communications took place with assessment team members and experts in Kuwait to review the agenda, responsibilities, and logistics.
- A national training was conducted on 16- 17 April to provide national stakeholders with the information and resources necessary to participate successfully in the JEE process; and to provide guidance on self-reporting requirements and responsibilities.
- Background documents were collected and shared with the JEE team along with the complete JEE tool for review.
- A one-day orientation was provided to the JEE experts on the process, tool, objectives and expected outcomes, and to discuss and finalize the agenda of the mission.
- Meetings with the relevant stakeholders and field visits were conducted to validate the collected information and to reach a consensus on the scores and priority actions.
- A debriefing meeting was held with senior officials and with national technical teams involved in the evaluation to present the outcomes of the JEE, best practices and priority actions.

The JEE process

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

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

Limitations and assumptions

Assumptions

- The results of this assessment will be made publicly available.
- The assessment is not an audit, and while information provided by Kuwait was cross-checked and validated by the team as far as possible, everything could not be independently validated.
- This is a peer-to-peer review. Information provided by Kuwait was discussed and an assessment rating was mutually agreed between the host country and assessment team.

Limitations

- The assessment was of one week's duration, which limited the amount and depth of information that could be managed.
- Some background documents were only available in the local language. While the national team could summarize the content of these documents, a review of the background documents was limited.
- The evaluation meetings were conducted at the national level. Having peripheral level represented might have affected the scores, particularly as no field visits could be conducted, due to the short duration of the mission.

Key host country participants and institutions

- Dr. Majeda Alqattan, Assistant undersecretary for public health, Ministry of Health, Kuwait
- Kuwait co- lead representative:
- Dr. Sami Alnasser, Head of ports and boarders health, Ministry of Health, Kuwait
- Dr. Sondos Alqabandi, public health specialist, Head of the national international health regulations centre, Ministry of Health, Kuwait
- Kuwait Ministry of Health, Public Health Department
- Kuwait Ministry of Health, Feeding and nutrition Department
- Kuwait Ministry of Health, Radiation Prevention Department
- Kuwait Ministry of Health, Ports and Boards Health Division
- Kuwait Ministry of Health, Control of Communicable Diseases Division
- Kuwait Ministry of Health, Occupational Health Department
- Kuwait Ministry of Health, General Medical Laboratories Department
- Kuwait Ministry of Health, Medical Emergencies Department
- Kuwait Ministry of Health, Medical stores Department
- Kuwait Ministry of Health, Infection Control Department
- Kuwait Ministry of Health, Public Health Laboratory Department
- Kuwait Ministry of Health, International Health Relation Department
- Kuwait Ministry of Health, Legal Affairs Department
- Kuwait Ministry of Interiors
- Kuwait General Directorate of Civil Defence
- Ministry oh Health, Media Office
- Kuwait Institute of Scientific Researches
- Kuwait Ministry of Defense
- Kuwait National Guard
- Kuwait Municipality
- Kuwait General Administration of Customs
- Kuwait Environment Public Authority
- Kuwait Public Authority for Food and nutrition
- Agriculture and Fisheries Authority

Supporting documentation provided by host country

National legislation, policy and financing

- Health System profile for Kuwait 2006
- Country cooperation strategy 2011-2016
- Risk-communication plan (National Emergency Committee), 2015
- Minister Decree to form IHR committee, 2012
- Ebola Case investigation algorithm
- Ebola Virus Disease Plan, 2014
- Kuwait National Guideline for Management of MERS-CoV, 2013
- National Law 10, 1964 on Zoonotic Diseases (Royal Decrees).
- List of Notifiable Diseases
- Strategic stockpiling plan during emergencies 2015.
- GCC guidelines on Point of Entry 2017
- Detailed plan the division of Health Port
- Infection Prevention and Control Recommendations for Hospitalized Patients with Known or Suspected Ebola Haemorrhagic Fever, 2014
- Interim Guidance on Infection Prevention and Control During Health Care for Patients with Novel Coronavirus (nCoV) Infection, 2013.
- Pneumonia (Ventilator-associated [VAP] and non-ventilator-associated Pneumonia [PNEU]) Event.
- Surgical Site Infection (SSI) Event
- Identifying Healthcare-associated Infections (HAI) for NHSN Surveillance
- Bloodstream Infection Event (Central Line-associated Bloodstream)
- Infection and Non-central line-associated Bloodstream Infection
- Guidelines for Prevention of Health Care Associated LRTI, 2006
- Farwania Hospital Microbiology Laboratory, Kuwait, Antibiogram, 2015
- Guideline for Isolation Precautions: Preventing Transmission of Infectious Agents in Healthcare Settings, 2017
- Minister Decree 2017 to establish NFP IHR

IHR coordination, communication and advocacy

- Ministerial decree in 9/ 2012 for establishment of a national high-level IHR multisectoral and multidisciplinary committee.
- Ministerial circular 2767/2012 for establishment IHR subcommittee within MOH.
- Work Plan for Implementation of International Health Regulation (2005) in Kuwait National IHR Focal Point Ministry of Health – Kuwait 2014 – 2016.
- Standard operating Procedures for (IHR / WHO) Ebola.

Antimicrobial resistance

- GCC strategic plan
- SOPs, QCs for laboratory procedures
- Antibiograms
- National antibiotic policy
- IPC guidelines
- *Ministerial law (1985) FOR antibiotic prescription in human.*

Zoonotic diseases

- Law No 10, 1964, Preventive procedures against contagious animal diseases and 1985 annexed to law 10.
- Law No 18 2015 Practice veterinary medical profession in the GCC countries.
- Law No 2 2013 Regulation of veterinary quarantine in GCC countries
- Law No 112 2015 regulation of animal welfare in GCC countries
- Ministerial decision No 146 1989 Approval conditions for registration of veterinary medicine.
- Decision No 96, 2008 Compensation of farmers owning cows and calves suffering from tuberculosis and contagious abortion.
- Contingency plan for notifiable avian influenza
- Veterinary law 1964 and 1985 for diseases prevention and control measures on notifiable diseases.
- OIE PVS mission and gap analysis of VS.
- Surveillance report for bovine tuberculosis and brucellosis
- Annual report for OIE 2016
- Zoonotic committee formation order by MoH.
- Compensation order for Brucellosis and Bovine tuberculosis
- GCC quarantine regulation
- GCC animal welfare regulation
- GCC veterinary profession practice 2015

Food safety

- Food safety regulations;
- GCC and GSO standards and Codex Alimentarius.
- Law No.112 of 2013 establishing the Public Authority for Food and Nutrition
- Ministerial decree No (dated 2016 creating the High Committee for Food Safety and Nutrition)
- SOP for food poisoning event management
- Standardized questionnaire for food poisoning epidemic event.

Biosafety and biosecurity

- Ministry of Health, Safety Operational Policy (Laboratory Safety Manual), 2016
- Ministry of Health, Laboratory Safety training policy, 2016
- Ministry of Health, Sabah Al Ahmad Urology Centre, Laboratory Safety Plan, 2017
- Ministry of Health, Hazard mapping and control measures
- Kuwait University Health Sciences Center, Laboratory Safety Manual, 2017
- Waste Management Policy (source unknown)
- Medical Waste Management Refresher Workshop, 2017

Immunization

- Vaccination Coverage data.
- Vaccination Coverage Survey in 2013.
- JFR for last 3 years
- National Guidelines for Vaccine Cold chain.

National laboratory system

- Farrwaniya Hospital Laboratory Operational Policy and Standard Operational Policy Manuals 2016
- External Quality Assurance round results from several laboratories
- Point of Care Multidisciplinary Committee policy document
- MOH document on laboratory inspection, including inspection form
- Communications between PHL and WHO reference laboratories on EQA test results

Real-time surveillance

- Ministerial Legislations and laws according to National Decree 1960 and updated regularly according to our situation and needs.
- Ebola Guidelines
- MERS-Cov Decree and guidelines

Reporting

- Circular of establishment of the National Technical committee for Coronavirus 2013
- Kuwait National Guidelines for Management of Novel Corona-virus (MERS-CoV) 2013 by National Technical committee for Coronavirus.
- Guideline for SARI Diagnosis and Management 2013.
- Protocol of EBVD Management 2014.
- Law No 10, 1964, Preventive procedures against contagious animal diseases and 1985 annexed to law 10.
- Contingency plan for notifiable avian influenza
- Veterinary law 1964 and 1985 for diseases prevention and control measures on notifiable diseases.
- Annual report for OIE 2016
- Zoonotic committee formation order by MoH 2010.

Workforce development

- Health system profile

Preparedness

- Central Emergency Management and Health Crises Committee of the Ministry of Health Decree, 71/2015.
- Decision of the Council of Ministers, High Committee for Civil Defense, 215/2012.
- Excerpt of Daily Hospital Bed Vacancy Statistics, Department of Emergency Management.
- Epidemic Control Contingency Plan, State of Kuwait, 2016.

Emergency response operations

- Hospital Health Plan for Response to Disasters and Crises, Central Committee on Medical Emergencies, Ministry of Health.
- Sample Hospital Emergency and Crisis Management Plan
- Managing Medical Emergencies, Department of Emergency Management
- Summary of Motor Vehicle Accidents 2002 – 2016: Emergency and non-Emergency Transport to Hospitals.

Linking public health and security authorities

- Decision of the Council of Ministers to form the Supreme Committee for Civil Defence, No. 215/2012
- Decision to form a committee of dangerous factors under the chairmanship of civil defence with government agencies to face the chemical hazards No. 114 - Council of Ministers
- Ministry of Health's Infection Prevention Department Isolation/Quarantine Policies
- Decision of the Formation of the MERS-CoV Committee
- Emiri Law on Communicable Diseases - 8/1969 (Articles 4, etc.)
- Emiri Law on Zoonotic Diseases - 10/1964 (Articles 4, 5, 6, etc.)

Medical countermeasures and personnel deployment

- Emergency Medical Warehouse Management Plan and site-map.
- Medical assistance to Myanmar: List of materials and correspondence between the Kuwaiti Red Crescent and the Ministry of Health.
- Official Correspondence - Executive Office of the Council of Ministers of Health of the GCC countries to determine the materials and quantities of the GCC common purchase.
- Administrative Decision No. 1916/2013 - Formation of a Committee to combat MERS-CoV.

Risk communication

- Ministry of Health Plan for Emergency Situations.
- Committee on Risk Factors: Plan of Action.
- Risk Communication Plan of the Health Media Office, Ministry of Health.
- Simulation Exercises of Emergency Situations, Department of Medical Emergency Services and General Defense.
- National Corona Virus Outbreak Plan

Points of entry

- Kuwait International Airport Emergency Plan
- آلية الاجراءات بالمطار في حالة وجود اشتباه بحالة معدية APM Terminal Port Emergency Plan
- اجراءات العمل القياسية للتعامل مع حالات الاشتباه بالايبولا بالمطار
- Operational Policy of Ports and Borders Health division 2
- ارشادات ومطويات للوقاية من الكورونا
- استراتيجية قسم مكافحة الحشرات والقوارض الطبية في الموانئ المنافذ
- Infectious Disease Procedures
- SOPs for Sick Passenger on Board
- SOPs for Affected Arriving Passengers

Chemical events

- Prime Ministerial Decree number 114 for establishing committee for hazardous agents
- Prime Ministerial Decree number 215/2012 for formation of higher committee for civil defense
- Ministerial Decree number 198/2010 on chemical safety in occupational health
- Ministry of Health Plan of Action for Hospitals in Response to Emergencies and Chemicals
- Ministry of Health Public Health Emergency Plan

Radiation emergencies

- The IAEA evaluation and certification (findings)
- Reports of exercised and drills
- Legislations mentioned (copy of them)
- Nuclear and Radiological Emergency Management System Plan (NandREMA Plan)

