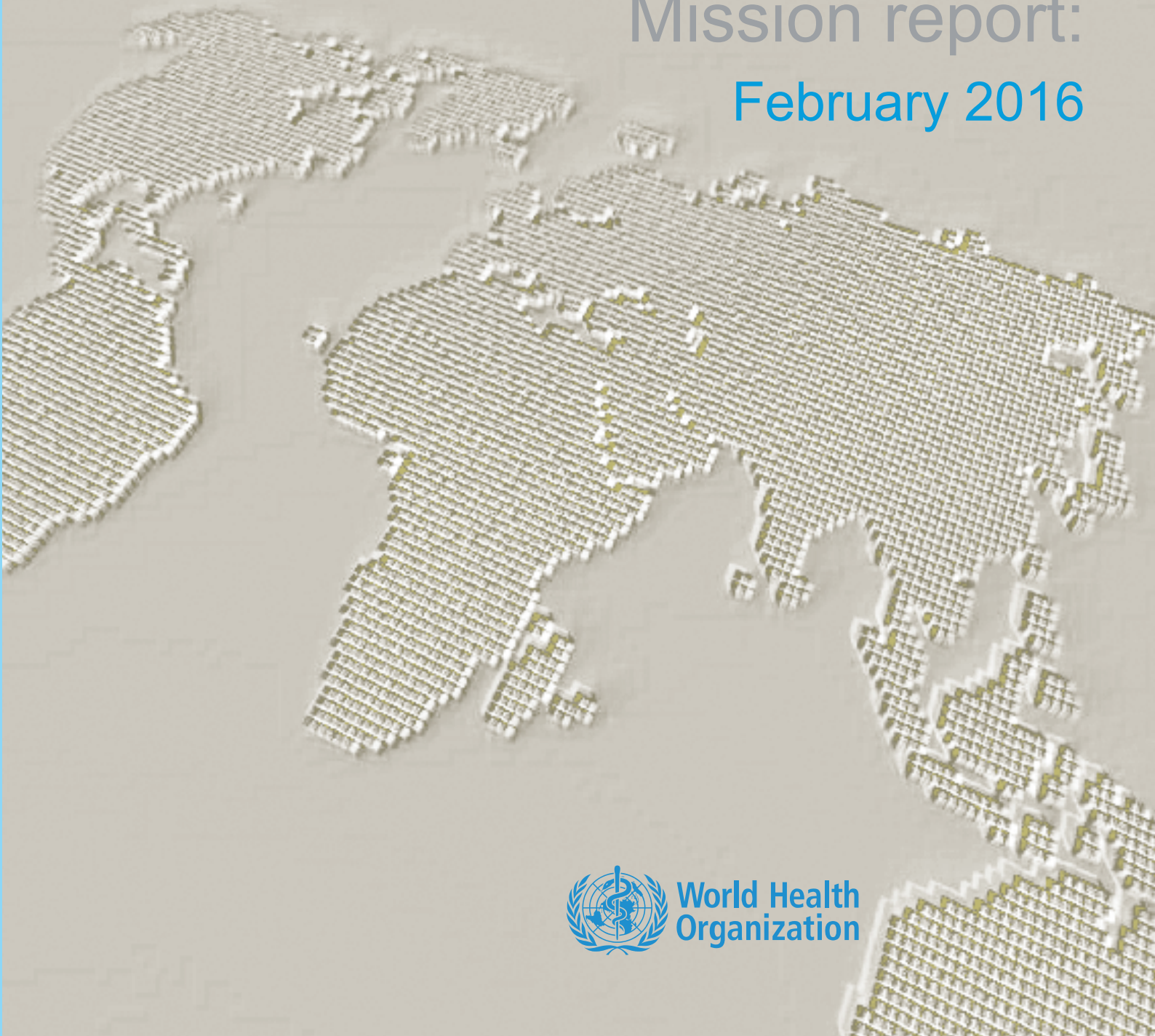
JOINT EXTERNAL EVALUATION OF IHR CORE CAPACITIES

of the

UNITED REPUBLIC OF TANZANIA

Mission report:

February 2016



World Health Organization

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Contents

Executive summary

This evaluation was a joint exercise between a team of experts from the United Republic of Tanzania (Tanzania) and an external team of experts, using the World Health Organization (WHO) International Health Regulation (IHR) (2005) joint external evaluation (JEE) tool. The multisectoral team of experts and advisors (representing international organizations) participated in the week-long evaluation which took place during 22–26 February 2016, in Dar es Salaam, Tanzania. Tanzania is the seventh country to volunteer for the JEE, and the first country where the new JEE tool was used. This evaluation was done in Tanzania Mainland, excluding Zanzibar in this first phase.

Tanzania first completed a self-assessment using the JEE tool. The results of this evaluation, including the self-assessed scores for the 19 technical areas, were then presented to the JEE team. The JEE team and the country team then participated in a facilitated discussion to jointly evaluate Tanzania's current strengths, areas which need strengthening and priority actions; scores were developed through a process of consensus. This report presents the capability scores, supporting information and specific recommendations for priority actions.

The results of the evaluation and observations of Tanzania's IHR implementation were presented to the Chief Medical Officer Muhammad Bakari Kambi, who represented the honourable Permanent Secretary for the Ministry of Health Community Development, Gender, Elderly and Children (MoHCDGEC) Mpoki Ulisubisya, at Dar es Salaam, Tanzania on 26 February 2016.

Findings from the JEE

Overarching issues and priority actions

Tanzania is showing great commitment in implementing the "One Health" approach throughout its health system. However, priority should be given to further developing the structure for coordination, using a process of interagency consensus building to agree on priority activities, and committing to a defined plan of action that will lead to true implementation of a One Health approach.

Another important theme during the evaluation has been the cholera outbreak that started in August 2015 with 16 000 cases and case fatality rate of 1.6%. This epidemic has been a real life exercise for Tanzania. The lessons learned from this outbreak, together with the recommendations and priority actions from this evaluation can serve as the foundation for the development of a national roadmap that will enable Tanzania to effectively prevent, detect and respond to infectious diseases and other threats in the future. Discussions regarding lessons learned should include all levels – national, regional and district – to ensure a coordinated approach and commitment at all levels.

A number of excellent in-depth evaluations have been done previously, including internal IHR self-assessments, and Tanzania is to be commended for this commitment to improvement. The results of those evaluations have been incorporated in the priority actions in this evaluation. In addition, a number of good initiatives are underway; some internal and some with key partners and donors. Linking these initiatives in a coordinated manner will increase their effectiveness and impact, and maximize the use of resources. Tanzania has a tremendous amount of local talent and human resources. The JEE team strongly urges Tanzania to convene a working group with key internal and external partners to review the three priority action recommendations for each technical area and develop a plan for funding and implementation.

Looking forward, the JEE team encourages Tanzania to take full advantage of resources which are available at no cost, such as repeating the World Organisation of Animal Health Performance of Veterinary Services (OIE PVS) and gap analyses at appropriate intervals, exploring the possibility of laboratory or veterinary education twinning projects, hosting a Food and Agriculture Organization (FAO) Crisis Management Centre visit, good emergency management practices (GEMP) training. A JEE evaluation could be repeated annually internally to demonstrate progress; an external evaluation could be performed again in several years' time.

Tanzania scores

Capacities	Indicators	Score
National legislation, policy and financing	P.1.1 Legislation, laws, regulations, administrative requirements, policies or other government instruments in place are sufficient for implementation of IHR (2005)	2
	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)	3
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	1
	P.3.2 Surveillance of infections caused by antimicrobial-resistant pathogens	1
	P.3.3 Health care-associated infection (HCAI) prevention and control programmes	3
	P.3.4 Antimicrobial stewardship activities	1
Zoonotic diseases	P.4.1 Surveillance systems are in place for priority zoonotic diseases/pathogens	2
	P.4.2 Veterinary or animal health workforce	2
	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 food-borne diseases	2
Biosafety and biosecurity	P.6.1 Whole-of-government biosafety and biosecurity system is in place for human, animal and agriculture facilities	2
	P.6.2 Biosafety and biosecurity training and practices	3
Immunization	P.7.1 Vaccine coverage (measles) as part of national programme	4
	P.7.2 National vaccine access and delivery	4
National laboratory system	D.1.1 Laboratory testing for detection of priority diseases	3
	D.1.2 Specimen referral and transport system	2
	D.1.3 Effective modern point-of-care and laboratory-based diagnostics	3
	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	3
Reporting	D.3.1 System for efficient reporting to FAO, OIE and WHO	2
	D.3.2 Reporting network and protocols in country	2
Workforce development	D.4.1 Human resources available to implement IHR core capacity requirements	3
	D.4.2 FETP[1] or other applied epidemiology training programme is in place	4/2
	D.4.3 Workforce strategy	2/3

[2] FETP: field epidemiology training programme

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

PREVENT

National legislation, policy and financing

Introduction

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

Target

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

Tanzania level of capabilities

Tanzania has achieved considerable progress in this area and the laws and policies that have been put in place have facilitated performance of IHR activities in an efficient, effective and beneficial manner. A review of the Public Health Act to incorporate IHR (2005) was done in 2009. In 2010, Tanzania reviewed relevant existing legislation, regulations, administrative requirements and other governmental instruments to determine if they were appropriate for revision in order to facilitate full and efficient implementation of the IHR. Some of policies and acts were updated and included the newly updated Integrated Disease Surveillance Response (IDSR) Guidelines, but some still need more work to address not only IHR issues but also the "One Health" (multisectoral) approach.

Polices and acts addressing various aspects of the IHR were enacted at the national level and adopted (details below). A key element of the national IHR policy included defining implementing structures as well as their organization, roles and responsibilities. Specific health sector policies, plans and acts have been established (such as National Health Policy 2007, Health Sector Strategic Plan IV, Public Health Act 2009). An IHR core capacities evaluation was carried out in 2010 with gaps identified and recommendations provided. This has facilitated the allocation of resources within the national budget to support the implementation of IHR and development of national IHR core capacities for surveillance and response to public health risks and potential public health emergencies of international concern (PHEIC), as well as cross-border public health surveillance, response systems and networks.

Sustainable financing is critical for developing IHR core capacities and implementing national and international IHR strategies. This aspect has been addressed with specific budgets available in times of emergency. The MoHCDGEC has allocated a budget to support IHR activities and a National Emergency and Disaster Fund is under the Prime Minister's Office. The current cholera outbreak is serving as a test for the national system and policies that are in place.

Recommendations for priority actions

- Operationalize Tanzania's One Health approach in consensus with public health, animal health, wildlife, security and other relevant sectors.
- Share roles and responsibilities of the IHR Technical Working Group and replicate it at subnational levels.
- Review supply chain management because it is one of the key mechanisms enabling the government to implement policy.

Indicators and scores

P.1.1 Legislation, laws, regulations, administrative requirements, policies or other government instruments in place are sufficient for implementation of IHR (2005) – Score 2

Strengths/best practices

- A review of national laws regulations policies was conducted and some guidelines were updated – Public Health Act 2009 and IDSR Guidelines 2011.
- Specific health sector policies, plans and acts were established – National Health Policy 2007, Health Sector Strategic Plan IV, Public Health Act 2009.
- IHR core capacities Evaluationevaluation was carried out in 2010 with gaps identified and recommendations provided.
- Current cholera outbreak is serving as a test for the system and policies.

Areas which need strengthening and challenges

- Update remaining key acts, policies and guidelines to address IHR and the One Health approach.
- Implementation or use of regulations and policies are not as clear at the subnational level.
- There is lack of adequate funding for early rapid response at the subnational level, which results in the system being overwhelmed by the time funds become available,.
- There is minimal sharing of information and data on a routine basis.

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 3

Strengths/best practices

- There is high-level commitment and leadership for full implementation of the IHR.
- The national IHR focal point is accessible 24 hours/7 days; a trained epidemiologist who works closely with the chief veterinary officer reports to OIE.
- The national IHR focal point person is an epidemiologist trained under the Field Epidemiology and Laboratory Training Programme (FELTP). The staff includes an epidemiologist (Zanzibar), epidemiologist and Head Points of Entry (Tanzania Mainland), a laboratory director (National Health Laboratory-

Quality Assurance and Training Centre (NHL-QATC)) and a focal food expert for International Food Safety Authorities Network (INFOSAN).

- The FELTP is currently training a veterinarian for the first time since its inception in 2008.
- There is budget allocation in the MoHCDGEC to support IHR activities.
- The National Emergency and Disaster Fund is under the Prime Minister's Office.

Areas which need strengthening/challenges

- Implementation or use of regulations and policies are not clear at the subnational level.
- Functions of the national IHR focal point have not been evaluated for effectiveness.
- Lessons learned from the OIE review of legislation could be used to strengthen the implementation of IHR.

Relevant documentation

- National Disaster Management Act 2015 (Disaster Management Agency under Prime Minister's Office)
- National Disaster Management Policy 2004 (under review)
- National Operational Guidelines; 2003
- Tanzania Emergency Preparedness and Response Plan; 2012
- Emergency Communication Strategy for Disaster Prone Areas; 2012
- National Health Policy 2007
- Health Sector Strategic Plan IV
- Public Health Act 2009
- Health sector all hazard emergency preparedness and response plan final draft; 2015
- East African Community (EAC) Cross Border Framework for Surveillance and Response in place; 2011
- EAC Ebola and other viral haemorrhagic fever contingency plan
- South African Development Community and Great Lakes Initiative
- One Health Strategic Plan, 2015

IHR coordination, communication and advocacy

Introduction

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

Target

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

Tanzania level of capabilities

Partnership between different sectors is particularly useful to build coherent alert and response systems to cover all public health threats. Coordination of nationwide resources is important for efficiency. Implementing the IHR requires the participation of various ministries, administrative levels, partners and stakeholders. Tanzania put together an IHR Technical Working Group in 2012 with all responsible ministries as members, thus making it a national multisectoral, multidisciplinary coordination committee. Tanzania One Health Strategy was finalized in 2015.

Recommendations for priority actions

- Review multisectoral, multidisciplinary coordination and communication mechanisms during the current outbreak for effectiveness and action.
- Seek approval from stakeholders for the terms of reference of the Technical Working Group for finalization.
- Replicate Technical Working Group functions at the subnational level.

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 operational OIE contact point is within the Ministry of Agriculture, Livestock and Fisheries and is accessible 24 hours/7 days.
- The national IHR focal point hosts a trained epidemiologist and works closely with the chief veterinary officer who reports to the OIE. The national IHR focal point person is an epidemiologist trained under

FELTP. Till date the national IHR focal point does not have a veterinarian, but the FELTP is currently training a veterinarian for the first time since its inception in 2008.

- Staff members include an epidemiologist (Zanzibar), epidemiologist and Head Points of Entry (Tanzania Mainland), laboratory director (NHL-QATC) and a focal food expert (INFOSAN).

Areas which need strengthening and challenges

- Despite an IHR Technical Working Group, performance of the national IHR focal point is hindered by poor quality and lack of timeliness of information received and obstacles caused by poor coordination with other levels and sectors.
- Finalization of the terms of reference for the Technical Working Group would enable smooth operation of the national IHR focal point across all sectors
- Evaluation and documentation of current outbreak should be completed and cross-checked with existing preparedness and response plans.

Relevant documentation

- JEE tool

Antimicrobial resistance

Introduction

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

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

Target

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

Tanzania level of capabilities

Antimicrobial resistance is a major problem in Tanzania with high levels of inappropriate use of antimicrobials in the human and animal health sectors.

Excellent work done has been done on resistance to antimalarial drugs, and there are systems in place for monitoring HIV and tuberculosis resistance (8.5% new cases resistant to one drug, 1.1% multidrug-resistant cases). There is, however, no process for systematically collecting data on the prevalence of antibiotic resistance in common pathogens. Several studies have shown high and increasing resistance: Streptococcus pneumoniae to trimethoprim sulphamethexazole in children under five years of age increased from 25% in 2006 to 80% in 2012, leading to changes in the protocols for treatment of acute respiratory infections in children; Escherichia coli from urinary infections were 90% resistant to ampicillin and 30–50% resistant to other common antibiotics; and extended-spectrum beta-lactamases (ESBL), which causes resistance to all beta-lactam antibiotics, were found in 25–40% of E. coli infections (community and hospital) with more than 50% occurring in children.

There is an excellent situation analysis, covering the situation and drivers of resistance in human and animal health that has been developed by a multisectoral group. However the awareness of antimicrobial resistance among the public, most health professionals, farmers and agricultural extension workers is very low. A focal point for antimicrobial resistance has been identified in the MoHCDGEC and the Tanzanian Government has set a timeline for the completion of the National Action Plan. There is no mention of antimicrobial resistance in the One Health Action Plan.

Recommendations for priority actions

- Increase political engagement, awareness within the health system and actions as antimicrobial resistance is a major threat to human health in Tanzania.
- Develop a national action plan to address antimicrobial resistance. This should align with the Global Action Plan on Antimicrobial Resistance, incorporating action by all relevant sectors, particularly from health, veterinary and agriculture sectors. The first step would be for the Government to nominate a national task force and convene a multisectoral group with high-level leadership. The Global Antibiotic Resistance Partnership (GARP) situation analysis will provide an excellent starting point.
- Improve systems for surveillance and data collection to inform policy and clinical decisions.
- Strengthen laboratory capacity through the involvement in WHO/National Institute for Communicable Diseases (NICD) external quality Assessment (EQA) programme. As a part of the action plan there should be a strategy for surveillance, and identifying those laboratories best placed to systematically collect and analyse data. This should build on existing capacity and interest, and include public and academic institutions.

Indicators and scores

P.3.1 Antimicrobial resistance detection – Score 1

National, zonal and regional hospital laboratories can undertake culture and sensitivity tests, but these are done infrequently as clinicians tend to treat empirically and reagents are not always available. There have been projects to collect data and undertake quality assurance for specific pathogens but these efforts were not sustained.

Strengths/best practices

- Laboratories are relatively well equipped and there is significant capacity (see national laboratory system section).

Areas which need strengthening and challenges

- Laboratory supplies should be maintained to allow regular reliable culture and sensitivity tests to be performed at regional and zonal laboratories.
- Culture and sensitivity testing should be incorporated into quality control mechanisms so that capacity for reliable testing is developed and sustained.
- Links with animal health laboratories, particularly around quality assurance should be established.

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

Data on pathogens is captured through the IDSR, but this does not incorporate sensitivity patterns. No national plan for surveillance or systematic collection of data on resistance patterns of priority antimicrobial-resistant pathogens has been approved.

Strengths/best practices

- Numerous studies have been synthesized into an excellent situation analysis with support from GARP.
- There is capacity in public, mission and private hospitals as well as research laboratories.
- A guideline adopted from WHO on antimicrobial resistance laboratory surveillance is in draft form.

Areas which need strengthening and challenges

- A systematic approach to surveillance of resistance patterns to common pathogens in humans needs to be developed. This could be through routine data collection, sentinel sites or point prevalence surveys.
- Systematic surveillance or studies of resistance patterns of key pathogens in animals should be undertaken.

P.3.3 Health care-associated infection (HCAI) prevention and control programmes – Score 3

- Policies and guidelines exist but implementation is inconsistent.
- Studies suggest significant HCAI and rising levels of methicillin-resistant Staphylococcus aureus (MRSA).

Strengths/best practices

- A clear plan and numerous supporting policies and guidelines for infection prevention and control exist.
- There are infection prevention and control committees in health facilities across the country (although not always well resourced, active or that effective).
- There has been substantial recent investment and action through a maternal health programme.
- There are ongoing improvements in waste management programmes.

Areas which need strengthening and challenges

- Standard operating procedures (SOPs) for all elements of infection prevention and control should be developed and monitored.
- The focus on consistent rigorous adherence to infection prevention and control must be increased to ensure that staff and patients are effectively protected.
- All health facilities need to have provision of adequate and appropriately maintained water supply and sanitation.
- Health waste management needs to be strengthened.

P.3.4 Antimicrobial stewardship activities – Score 1

Although there has been ongoing activity in several important components of a stewardship framework, no framework for drug stewardship has been approved, and control of use is weak.

There has been engagement on this issue at an academic level, but the systems, structures and processes to control use in the animal health sector are weaker than in the human health sector. Antibiotics are freely sold and used, often as a supplement or for mass prophylaxis.

There are high levels of inappropriate use of antibiotics in the human and animal health sectors. Antibiotics can be purchased widely without prescription, and regulation of public sector pharmacies through the Pharmacy Council of Tanzania is difficult and poorly resourced. Studies have shown that public sector consultations generated 2.3 prescriptions per patient, and one study showed that 62% of all patients attending a clinic received a prescription for an antibiotic. The Tanzania Food and Drugs Authority is interested and active in the area, but constrained by resources and access to reagents.

Strengths/best practices

- There have been recent attempts to collect data on the consumption of antibiotics in the animal sector by OIE with similar plans for the human health sector.

- The Government has regularly updated the essential drugs list and prescribing standard treatment guidelines.
- There have been regular studies of prescribing practices in public and private facilities.
- The Tanzania Food and Drug Authority is an effective agency with strong leadership and an interest in antimicrobial resistance.
- Stock-outs of first-line drugs are regularly monitored.

Areas which need strengthening and challenges

- The Pharmacy Council of Tanzania needs to have a stronger, clearer role in managing the prescribing of antibiotics and sales in public and private sectors.
- The Medical Stores Department should ensure that first-line drugs are widely available to allow adherence to treatment guidelines.
- There should be clarity on indications for antibiotic use in agriculture; if possible with tighter control of use for growth promotion.

Relevant documentation

- Situation analysis and recommendations: Antibiotic use and resistance in Tanzania, Global Antibiotic Resistance Partnership, June 2015

Zoonotic diseases

Introduction

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

Target

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

Tanzania level of capabilities

Global data sets (1940–2004) have shown that 58% (800) of human pathogens (1415) are zoonotic and 80% of animal pathogens are multi-host. In addition, 60% (335) of all emerging diseases are zoonotic; with the majority of these (72%) originating from wildlife. The data also showed that zoonotic diseases will continue to emerge in hotspot areas which are regions where human population is dense and growing and where biodiversity is high, as in Tanzania. The diverse ecosystems in Tanzania with un-fenced protected areas that facilitate free human–livestock–wildlife interaction predisposes human and animals to be at risk for zoonotic diseases. This is exacerbated by poor knowledge about zoonotic diseases and various socio-cultural norms including eating raw meat, drinking raw milk and blood among pastoral communities that favours transmission of zoonotic diseases. Tanzania has identified 23 zoonotic diseases of interest from a consultative process but these diseases are not ranked in order of importance. The zoonotic diseases considered of greatest public health concern based on ministerial and donor interests are: Rift Valley fever, avian influenza, anthrax and brucellosis.

The public health system reports zoonotic diseases on an immediate and weekly basis through the IDSR, while the animal health sector reports zoonotic diseases on an immediate, weekly and monthly basis through the MoLFD. Both systems have some elements of event-based reporting which are not well established. Routine reporting of zoonotic diseases from both sectors is still suboptimal and requires improvement.

Disaster management guidelines are also not well elaborated at the subnational level, due to frequent staff changes, high turnover, etc. There is a need to regularly review and make provision of budget for operations and funds for emergency response to zoonotic disease events.

Tanzania has a new One Health Strategic Plan that will facilitate the process of integrating the One Health approach in public health, animal health, wildlife/ecosystem health and other related sectors. Currently, the sectors involved in animal and human health share some information and participate in joint events when needed. The One Health Strategic Plan intends is to foster more formal collaboration between these sectors.

Recommendations for priority actions

- Expedite the operationalization of the One Health Strategic Plan by setting up a physical office, staffing the One Health Coordination Unit (OHCU), appoint the One Health Steering Committee and technical working groups, and ensure that regulations are in place to allow operations.

- Strengthen veterinary/animal workforce through training and recruitment of more veterinary officers and paraprofessionals with at least one veterinary officer per district.
- Urgently establish, through legislation or memorandum of understanding, a formal mechanism for information sharing between animal and human health sectors and linkages between laboratories to leverage on available expertise and diagnostic capacities. Linkages should take into account existing governance structures across all levels (national to subnational).
- Reporting for zoonotic diseases needs to be improved by empowering local communities on how to recognize diseases using simple tools/aids, retraining of field staff, transitioning the reporting systems from paper-based reporting to digital platforms that are user friendly.
- Existing legislations/regulations for both animal and wildlife sectors need to be improved to reflect the One Health approach.

Indicators and scores

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

Strengths/best practices

- A provisional list of priority zoonotic diseases is available with 23 diseases considered to be of public health importance.
- Surveillance systems are in place to detect and report on priority zoonotic diseases in both the human and animals sectors (including wildlife). Surveillance is mostly passive and indicator based. Disease specific active surveillance is employed for a few diseases.
- Disease reporting is obligatory for both human and animal health sectors with daily, weekly and monthly reports received at the national level for priority zoonotic diseases.
- Control plans are available for two zoonotic diseases – Rift Valley fever and avian influenza.

Areas which need strengthening and challenges

- Zoonotic diseases reporting is low in both human and animal surveillance systems. The animal health sector needs special attention given the current estimates of underreporting of up to 90%.
- Surveillance is almost entirely paper based in the animal sector resulting in reduced reporting and challenges in data management. There is a need to shift to electronic reporting.
- There is no process of sharing of laboratory reports between public health and animal health laboratories and changes in regulations and/or authorizations may be required to facilitate this sharing.
- Surveillance systems for animal and human health sectors are not linked or interoperable. Linkages between these surveillance systems will ensure that information gets shared in real time.
- Only two of the 23 priority zoonotic diseases have control plans, so there is a need to develop control plans for more zoonotic diseases to enable better response.
- The zoonotic diseases list is not ranked and has not been updated to incorporate recent emerging and re-emerging pathogens like Ebola and Middle East respiratory syndrome corona virus (MERS-CoV).
- The current legislation of public and animal health sectors should be revised to reflect a One Health approach.
- The existing workforce needs additional and on-the-job training on basic epidemiology including developing tools to support outbreak investigations procedure.

P.4.2 Veterinary or animal health workforce – Score 2

Strengths/best practices

- Adequate veterinary/animal health workforce is established at the national level and some regional levels.
- Sokoine University of Agriculture trains animal health professionals with 40-60 high quality veterinary doctors graduating each year. Specialized curricula on "veterinary public health" and "preventive veterinary medicine" are also offered at the university.
- There are six livestock training institutes that offer diploma and certificate level training in animal health.
- Plans are in advanced stages to include veterinary officers in the Tanzania FELTP in 2016 with Muhimbili University offering degrees in "applied epidemiology".

Areas which need strengthening and challenges

- There is a shortage of animal health personnel especially in the public sector at the subnational level. Recruitment of additional veterinarians and veterinary para-professionals is needed.
- Veterinarians and field officers have not received adequate in-service training on disease control, surveillance and the One Health approach; "continuing animal health education" would help bridge this gap.
- Curricula of all tertiary institutions should be reviewed for conformity with required standards and incorporation of the One Health approach in the training.
- There is need to conduct a census of animals in the country to provide better estimates of personnel/animal ratios and for deployment of staff.
- There is a need to employ more wildlife veterinarians so that there is one for each protected area as opposed to the current situation where wildlife veterinarians are serving an entire zone.
- There is a need to have a specific degree programme for wildlife health instead of using conventional veterinarians to address wildlife health issues after attending short-term courses on wildlife health.

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

Strengths/best practices

- Tanzania One Health Strategic Plan 2015-2020 that was endorsed in December 2015. It established the OHCU domiciled within the Prime Minister's Office – Disaster Management Department. In this Plan, the OHCU will be a secretariat to the higher level One Health Steering Committee that will guide the implementation of One Health activities through technical working groups.
- Human, animal and ecosystem health teams have participated in real zoonotic events or joint exercises for Rift Valley fever preparedness following the predicted El Nino event in 2015.
- Disaster Management Policy is in place and elaborated guidelines are available at all levels of government. This provides a key opportunity to expedite the operationalization of the One Health Strategic Plan.
- Tanzania has various One Health networks or platforms, such as the South African Centre for Infectious Disease Surveillance (SACIDS), Afrique One and One Health Central and Eastern Africa (OHCEA) that can be used to strengthen the national One Health agenda..

Areas which need strengthening and challenges

- There is no memorandum of understanding between the animal, human and ecosystem health sectors to streamline joint activities between the sectors.
- Regular scheduled meetings between human and animal sectors need to be established.
- There is no plan for advocacy and communication on One Health at all the three levels of governance. This needs to be developed and implemented.
- Existing legislations and regulations in human and animal health sectors have not been reviewed adequately to accommodate issues on the One Health approach.

Relevant documentation

- OIE-PVS evaluation report of the veterinary services of Tanzania
- PVS Gap analysis: preparation of a plan to strengthen the veterinary services of Tanzania
- The United Republic of Tanzania One Health Strategic Plan 2015–2020
- National Rift Valley Fever Emergency Preparedness and Response Plan (NRVF-EPRP)
- National Multisectoral Avian Flu Preparedness and Response Plan
- Regional Plan of Action for the Prevention and Control of Human and Animal Transboundary Diseases in East Africa: 2007–2012
- Standard Methods and Procedures (SMPs) for Control of Brucellosis in the Greater Horn of Africa
- SMPs for control of Rift Valley fever (RVF) in the Greater Horn of Africa
- Integrated Disease Surveillance and Response (IDSR) Guidelines 2nd edition, 2011

Food safety

Introduction

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

Target

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

Tanzania level of capabilities

Consumers expect that the food products they purchase have been subjected to proper production, processing, distribution, preparation, storage and handling, and are safe for human consumption. As food safety hazards can be introduced at any stage of the food supply chain, effective controls throughout the food chain are essential to avoid adverse human health effects and economic consequences of food-borne illness, injury and food spoilage.

Tanzania should identify and train adequate number of people to take part in food safety control including food-borne disease outbreak investigation and response. The staff involved in food-borne disease surveillance and response need to know who the focal points are for food safety and animal health, and the key laboratories that would be required to test clinical and/or food samples collected during field investigations.

Tanzania should establish an effective (formal or informal) mechanism for rapid information exchange between all stakeholders during suspected food-borne disease outbreak investigations. In addition, a risk profiling of food safety problems should be conducted to help identify opportunities for authorities to implement appropriate risk-management strategies. The country should establish a functioning communication mechanism between all food safety stakeholders. Materials and a communication mechanism should be in place to deliver information, education and advice to stakeholders across the farm-to-fork continuum.

At the continent level, the African Union Commission is working to establish the African Union Food Safety Management Coordination Mechanism (AUFSMCM) and Rapid Alert System for Food and Feed (RASFF).

Food safety capability and capacity building is recognized as an important priority in Tanzania. The national food control system is fragmented across different governmental institutions. However the food control system responsibilities rely heavily on the MoHCDGEC, in particular the Tanzania Food Drug Authority (TFDA) established since 2003 as the food safety regulatory body. Other food safety players include the Department of Plant Health Services and Post-Harvest Monitoring and the Department of Veterinary Services (Ministry of Agriculture, Livestock and Fisheries), the offices of health inspectors in the districts and regions (President's Office – Regional Administration and Local Government), the Tanzania Bureau of Standards (TBS), the Tanzania Atomic Energy Commission, the Government Chemist Laboratory Agency

and food commodity boards.

A food-borne surveillance system is implemented by the TFDA in seven of 25 regions with limited number of food inspectors. However, the Tanzania Food, Drugs and Cosmetics Act 2003 established by the TFDA, recognizes inspectors under the local government. Regulations made under the Act and a number of guidelines are used in ensuring effective enforcement of the law. Food inspectors are trained to enforce food legislation and conduct inspection based on perceived risk using risk-based food inspection guidelines.

Food safety hazards identified in Tanzania are mainly associated with microbial contamination of food and water due to poor sanitation. In 2014/2015 of the total 7349 reported cases 7332 (99.7%) were due to water-borne diseases. This indicates potential low awareness of food safety issues and lack of knowledge.

Chemical hazards identified include pesticide residues, additives and aflatoxins. Following an evaluation carried out by TFDA showing significant aflatoxin contamination in some isolated places in Tanzania and in particular for maize and peanuts, a draft strategy was developed and shared with the ministries responsible for agriculture, health, livestock and trade for allocating resources to implement their respective activities.

Recommendations for priority actions

- Develop a national food safety strategy and plan of action with inputs from all stakeholders to ensure more widespread adoption of the One Health approach.
- Establish a formal integrated, trans-disciplinary, cross-sectoral and interdepartmental collaboration among all food control players.
- Update the food-borne disease surveillance system by integrating early warning and rapid alert capabilities and introducing the new system throughout the country.

Indicators and scores

P.5.1 Mechanisms for multisectoral collaboration are established to ensure rapid response to food safety emergencies and outbreaks of food-borne diseases – Score 2

Strengths/best practices

- TBS in the National Codex Contact Point and food standards setting is coordinated by the TBS based on Codex or ISO standards.
- There is laboratory capacity to test for microbial hazards, heavy metals, pesticides and veterinary drug residues although most of the laboratory facilities are located in Dar es Salaam, Mwanza and Arusha and a few are accredited.
- A food-borne surveillance system has been implemented by TFDA in seven regions.
- Guidelines for Investigation and Control of Foodborne Diseases exist.
- Coordination of food-borne diseases surveillance is defined from ward to national levels in the Guideline for Investigation and Control of Foodborne Diseases.
- Food-borne inspection is done using relevant regulations and risk based inspection guidelines.
- Some food inspectors are working under the Local Government Authorities to which some TFDA functions have been delegated.
- Tanzania is an INFOSAN focal point and OIE delegate and participates regularly in international meetings.

Areas which need strengthening and challenges

- A national food safety policy/strategy and plan of action needs to be developed.
- Coordination among food safety players should be improved.
- Mapping of risks associated with food safety needs to be completed.
- More food inspectors need to be trained.
- Appropriate food control infrastructures need to be established and maintained.
- Preparedness in addressing emerging and re-emerging food-borne diseases needs to be strengthened.
- Coordination among food safety stakeholders is limited and should be improved.
- Food safety awareness needs to be improved among stakeholders and the public in general.

Relevant documentation

- Publications related to food safety: http://www.who.int/foodsafety/publications/all/en/
- Tanzania Food, Drugs and Cosmetics Act Cap 219 of 2003
- Presentation on food safety done during the JEE mission

Biosafety and biosecurity

Introduction

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

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

Target

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

Tanzania level of capabilities

Tanzania is making progress towards the "One Health All Hazards" approach. While laboratory accreditation and testing and training in biosafety are adequate, biosecurity needs strengthening. Sharing of equipment, reagents and personnel between animal and human laboratories particularly for molecular biology work should be easier. Consideration should be given to those with relevant training to be registered to allow them to work in specific areas of medical laboratories. It is important that regional and district laboratory capacity are strengthened and linked more closely with epidemiological/surveillance data.

Recommendations for priority actions

- Improve sustainable laboratory capacity in districts and regions; including guidance, SOPs, reagents, equipment, personnel and biosafety and biosecurity training.
- Allow registration of personnel with relevant training so that they can work in specific areas of medical laboratories.
- Map out current capacity for biosecurity (including sample storage, documents, guidance and required legislation) and incorporate these into formal and in-service training.

Indicators and scores

P.6.1 Whole-of-government biosafety and biosecurity system is in place for human, animal and agriculture facilities – Score 2

Strengths/best practices

- Accredited national human health (NHL-QATC) and veterinary laboratories (TVLA) demonstrate good biosafety and are developing biosecurity measures.
- There is a wide range of laboratories at MoHCDGEC, animal health agencies, universities, and partners with personnel trained at different levels of proficiency – certificate (two years), diploma, advanced diploma and degree.
- Laboratory biosafety manuals, SOPs, Good Laboratory Practice Guidelines, and personal protection equipment are in place.
- Laboratories undergo regular EQA.
- Biosafety officers are appointed in each laboratory.

Areas which need strengthening and challenges

- Sustainable laboratory capacity in districts and regions needs to be strengthened with improved guidance, SOPs, reagents, equipment and personnel, as well as biosafety and biosecurity training.
- A baseline evaluation of the current state of affairs for biosecurity should be mapped out, including sample storage, available documents and guidance.
- Biosecurity legislation does not exist and needs to be developed.
- Personnel with relevant training should be considered for registration to allow them to work in specific areas of medical laboratories.
- Using available resources, a map with location of trained staff should be developed (MoHCDGEC, academic/research/partner agencies, private laboratories) to enable/ensure surge capacity.
- Effort should be made to retain trained laboratory equipment engineers and future rollout training to build up capacity.

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

Note: Biosafety training is more advanced than biosecurity training

Strengths/best practices

- Laboratory personnel are trained to diverse levels of proficiency: certificate (two years), diploma, advanced diploma and degree.

Areas which need strengthening and challenges

- Biosecurity should be incorporated into training, both formal and in-service, with an overseeing body to implement and monitor.
- Personnel with relevant training should be considered for registration to allow them to work in specific areas of medical laboratories.

Relevant documentation

- JEE tool
- Country evaluation pre-visit
- Notes taken during evaluation – discussions with senior laboratory staff, visits to the National Health Laboratory Quality Assurance and Training Centre and Tanzania Veterinary Laboratory Agency; and SOPs within the laboratories.

Immunization

Introduction

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

Target

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

Tanzania level of capabilities

The Tanzanian immunization programme provides a solid platform for future preventive interventions that may need delivery of vaccines as a preventive measure. This is a mature immunization programme with countrywide coverage of immunization services. The country's immunization multi-year plan is aligned to the Global Vaccine Action Plan and works with supportive partners like Global Alliance for Vaccine Initiative (GAVI), WHO and United Nations Children's Fund (UNICEF) to mention but a few. The programme has attained high level immunization coverage for diphtheria-tetanus-pertussis (DPT3) of 97% and for measles of over 80%. The programme has the potential of taking on other under-used vaccines.

Recommendations for priority actions

- Intensify surveillance in high-risk districts for both measles and polio.
- Strengthen adverse events following immunization (AEFI) monitoring system both in capacity and coverage including establishing a national committee.
- Implement local strategies to have sufficient immunization staff available to reduce waiting for caretakers.

Indicators and scores

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

Strengths/best practices

- There is an Expanded Programme for Immunization (EPI) Comprehensive Multi-Year Plan 2016-2020 that is aligned to the Global Vaccination Action Plan.
- Outreach services are in place to extend to hard-to-reach populations using the Reaching Every District (RED) Strategy.
- Public perceptions of immunization are monitored and addressed.
- Zoonotic concerns are managed; rabies vaccinations are in place.
- 90% of the country's 12-month-old population has received at least one dose of measles vaccine.
- Immunization of the target group is mandatory.

Areas which need strengthening and challenges

- Local strategies should be put in place to have sufficient immunization staff available to reduce waiting for caretakers.
- Need to increase coverage for the second measles dose and polio in poorly performing districts.
- Surveillance for both measles and polio should be intensified in high-risk districts.

P.7.2 National vaccine access and delivery – Score 4

Strengths/best practices

- The Government procures cold chain equipment in more than 80% of the districts making immunization services available to more than 80% of the target population.
- The cold chain equipment status is monitored and maintained regularly using the cold chain inventory tool.
- The Government procures basic vaccines (such as Bacille Calmette-Guérin, oral polio vaccine, measles and tetanus toxoid) that are accessible to over 80% of the districts.
- There is a systematic vaccine delivery mechanism to health facilities through regional and district tiers from the central level.

Areas which need strengthening and challenges

- Outreach services should be amplified to increase access to identified populations situated far away from immunizing health facilities.
- The AEFI system will need strengthening both in capacity and coverage, including a national committee.
- The identified infrastructure gaps need to be implemented at the district level to increase accessibility to vaccines.
- Waste management needs concrete feasible solutions to protect the public.

Relevant documentation

- Country immunization presentation at JEE mission
- Tanzania reports to WHO on vaccine coverage
- Public Health Act of 2009

DETECT

National laboratory system

Introduction

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

Target

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

Tanzania level of capabilities

There is a functional public health laboratory network with a high quality national health laboratory and quality assurance training centre – the NHL-QATC – at the apex and four zonal reference laboratories at Bugando, Kilimanjaro Christian Medical Centre (KCMC), Mbeya and Muhimbili National Hospital Laboratory. The NHL-QATC is capable of conducting testing for seven of the 10 priority areas: bacteriology, virology, serology, parasitology, biochemistry, haematology and molecular (including reverse transcription polymerase chain reaction (RT-PCR) isolation and sequencing), and has ISO 15189 international accreditation for laboratory competency and quality. All four zonal laboratories also are ISO 15189 internationally accredited. There are two biosafety level 3 laboratories and one other laboratory currently undergoing an upgrade to allow handling/diagnosis of viral haemorrhagic fevers, such as Ebola and Marburg. The zonal/regional laboratories are capable of conducting RNA/DNA PCR, tuberculosis culture and sensitivity, microbial confirmatory testing, antimicrobial sensitivity testing, standard biochemical testing and serology. At the district level, the laboratories are capable of conducting microscopy, biochemical, haematological and rapid diagnostic tests, while the health-centre level laboratories conduct specimen collection, microscopy and rapid diagnostic tests. Personal protective equipment is available and tracked through an inventory system at the Medical Stores Department and stock management is coordinated through the NHL-QATC. All laboratory staffs have been trained on how to don and doff personal protective equipment in scenarios of highly infectious pathogens (such as Ebola) and further trainings have been conducted in basic biosafety and biosecurity.

Tanzania is part of the East Africa Public Health Laboratory Network Project that is supported by the World Bank and being implemented in all the EAC member states to address cross-border and cross-country issues. There is a well-established laboratory information management system that links the national, zonal and regional laboratories for rapid turnaround times for results. An EQA system for priority diseases is in place and is coordinated by NHL-QATC. Tanzania mainland has four internationally certified biomedical engineers for preventive maintenance and repair of biosafety cabinets.

In the animal health sector, the TVLA, Central Veterinary Laboratories (CVL) and Centre for Infectious Diseases and Biotechnological (CIDB) are producing animal health vaccines. The TVLA is linked and serves as a reference to the seven zonal centres/laboratories, and collaborates with the Directorate of Veterinary Services in sample collection especially during outbreaks. Parasitic zoonotic diseases are notifiable every monday or immediately.

Recommendations for priority actions

- Establish formal linkages and formalize information sharing between human and animal health laboratories routinely and periodically to improve linkages between both sectors.
- Link laboratory and epidemiology data from both human and animal health sectors.
- Improve the timeliness of sample transport, including strengthening the capacity of laboratories in the regions and exploring additional collaboration with private transport companies provided biosecurity and biosafety concerns are appropriately addressed.
- Train and re-train zonal/regional and district level health workers.

Indicators and scores

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

Strengths/best practices

- The NHL-QATC is housing the Network Information Centre which is WHO accredited.
- Algorithms are in place for HIV and viral haemorrhagic fevers (such as Ebola and Marburg), and the national and zonal laboratories are equipped with the necessary equipment.
- The MoHCDGEC has upgraded the Mbeya Referral Hospital Laboratory to level 3 and is planning to upgrade NHL-QATC to a level 3 laboratory. Mbeya Referral Hospital is capable of testing and confirmation for Ebola and Marburg. Previously, samples for viral haemorrhagic fevers were tested at the Uganda Virus Research Institute.
- Staff training is ongoing in collaboration with development partners.
- Maintenance contracts are available for most laboratories, however these are lacking for some sets of equipment.

Areas which need strengthening and challenges

- The robust laboratory network should play a more important role in antimicrobial resistance surveillance.

D.1.2 Specimen referral and transport system – Score 2

Strengths/best practices

- Laboratory SOPs are available for the specimen referral network under the laboratory component of IDSR; however, there are challenges in peripheral areas.
- Though not systematic, there is evidence of isolates of cholera being referred to the National Public Health Reference Laboratory for confirmation.
- Each laboratory has developed SOP for sample/specimen management and transport through the EMS courier that is supported by MoHCDGEC and partners.

Areas which need strengthening and challenges

- While a network of laboratories is functional in both human and animal health, there are several missed opportunities such as their involvement in antimicrobial resistance surveillance and tracking.
- There is limited analysis, feedback and information sharing between human and animal health from the laboratory surveillance systems that should be regularized and periodically conducted (weekly, monthly quarterly and annually) as part of a broader laboratory information management system.
- There is a need to improve the availability of laboratory reagents and supplies, especially at lower levels.

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

Strengths/best practices

- Tanzania started with Pima machines for CD4 estimation but has now initiated the evaluation of two other points-of-care: PCR tests for HIV viral load testing and HIV early infant diagnosis.
- There is a procurement process for media and reagents; however the system has long lead times.

Areas which need strengthening and challenges

- There is a need to reduce lead times in the procurement of laboratory reagents and supplies.

D.1.4 Laboratory quality system – Score 3

Strengths/best practices

- The MoHCDGEC through the national reference laboratory sends blinded samples to regional and districts laboratories for proficiency testing and maintenance contracts have been established with lower level laboratories.
- The national and zonal laboratories are all ISO 15189 accredited and the TBS is ISO 17020 accredited.

Areas which need strengthening and challenges

- The national and zonal laboratory quality assurance system should be used to support other member states in the region, under the East Africa Public Health Laboratories Networking Project.

Relevant documentation

- Country presentation on national laboratory system

Real-time surveillance

Introduction

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

Target

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

Tanzania level of capabilities

While indicator-based surveillance system is being implemented in the whole country under the IDSR, event-based surveillance is currently not formally in place. The revised IDSR (2010) Guidelines incorporate community- and event-based reporting and emphasizes strengthening of event-based reporting. Unstructured information, including: mobile phone text messaging (SMS), Internet news, online discussion sites, media reports or rumours can provide detailed local and near real-time data on potential disease outbreaks and other public health events. It is recommended that the country should establish robust IDSR systems including event-based surveillance everywhere.

Recommendations for priority actions

- Disseminate WHO standard IDSR guidelines and training materials, especially to the district levels and new established regions.
- Establish rapid IDSR assessments/evaluation, including a capacity and training needs assessment, followed by the development of strategic and annual operational plans for IDSR.
- Establish and sustain robust early warning systems (E-WARNS) and early detection systems (E-DS) for public health emergencies (known and unknown) that should include: (i) robust weekly surveillance system backed by robust outbreak investigation and response capacity as well as periodic performance measurement and feedback; and (ii) event-based surveillance as an early warning system for prompt rumour/signal/event tracing, verification, notification and response.

Indicators and scores

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

Strengths/best practices

- Tanzania has a robust indicator-based surveillance (IDSR) system with priority diseases in line with IHR (2005). Notifiable diseases are reported immediately using case investigation forms and line lists and then daily until the outbreak is over. Electronic (e-IDSR) has been initiated in phases, riding on the already established DHIS2 system, currently in place in 10 of 25 zones.
- Sentinel surveillance for specific infections is carried out for influenza and research institutes such as Ifakara Health Research Institute (IHI) have a sentinel panel of districts.
- A community based IDSR is initiated which is being rolled out in phases in 10 of 25 zones. The country has established a curriculum for community health workers, and the first batch of training was started in 2015. It is expected that with this cadre in place, community surveillance activities will be outlined in their roles and responsibilities.
- Through EAC/ East, Central and Southern African Health Community, the country has a framework for cross-border surveillance and response initiatives.
- In the e-IDSR, there is a mechanism for data validation. However, this is limited to the paper-based system.
- Regional health officers, district health officers, IDSR regional and district focal persons are all trained for the IDSR (trainings last five days). Some staff also undergo a three-month basic epidemiology course delivered by FELTP. At health facility level, the IDSR trainings draw three people from each facility (clinicians in charge, laboratory technician in charge and a nurse) for the three-day training.

Areas which need strengthening and challenges

- In selected new regions and districts, there is a need to train health workers in IDSR (in service).
- The revised IDSR should be included in the pre-service training curricula of health institutions.
- Weekly, monthly, quarterly and annual monitoring of the implementation and performance of IDSR as well as conducting mid-term and end-term evaluations of the health security and emergencies plans.
- Coverage of e-surveillance should be scaled up to include the entire country.
- Periodic data quality audits for IDSR and Health Management Information System at all levels should be institutionalized.
- Linkages and data sharing with animal health surveillance should be institutionalized.

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

Strengths/best practices

- Initiatives for using M-health exist, where mobile phone SMS text messages are sent to district focal persons who verify and send them to the national epidemiology staff. These SMS text message alerts are used for initiation of response across all levels.
- The e-IDSR is shared across in the DHIS2 and the national health website.
- The national level shares data with the WHO using a standardized excel sheet; and there is electronic reporting using the e-EAIDS net web portal for the EAC.

Areas which need strengthening and challenges

- There is a need to improve formal sharing of information/data across ministries and sectors.

- There is a need to establish and sustain interoperable interconnected electronic reporting systems.

D.2.3 Integration and analysis of surveillance data – Score 4

Strengths/best practices

- An IDSR national coordinator is in place to provide technical support to the reporting regions and districts.
- Data are analysed and a weekly bulletin is produced and shared with Ministry of Health and Social Welfare leadership, but not shared regularly at the lower levels.
- Public reporting of infectious diseases events is done during the epidemic phase through press releases, and also by holding talks on television and radio.
- Regular disease related programmes have been initiated from 2016 on television and radio for broadcasting information (the earlier one was in January 2015).
- Plans are underway to utilize newspapers for dissemination.

Areas which need strengthening and challenges

- There is inadequate laboratory surveillance information sharing in the IDSR system and hence laboratory data do not feed into the surveillance system.
- There is a need to improve the central mechanism for integrating data between clinical case reporting and the laboratory; like in the vaccine preventable diseases programme, in which they is use of unique numbers as identifiers.
- Strengthening feedback mechanism to lower levels.

D.2.4 Syndromic surveillance systems – Score 3

Strengths/best practices

- Syndromic surveillance is part of IDRS, but could be expanded.

Areas which need strengthening and challenges

- Tanzania needs to strengthen syndromic surveillance as part of IDSR as there is no syndromic surveillance and reporting system beyond that described in the national IDSR system, which covers 31 diseases and syndromes reported on an immediate, weekly or monthly basis.

Relevant documentation

- JEE tool
- Country presentation on real-time surveillance

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.

Tanzania level of capabilities

Tanzania has a One Health Strategic Plan (signed in December 2015) aimed at ensuring that there is coordination of One Health activities and decisions, and a multisectoral and multidisciplinary technical working group has been instituted.

The Ebola viral disease outbreak in West Africa was the first encounter that tested the country's system. During 24–28 November 2014, the Government of Tanzania held a Workshop for Preparedness for Public Health Risks and Emergencies to strengthen systems for surveillance and response to public health risks and emergencies to ensure functionality and coordination. The workshop involved more than 70 participants from various ministries, government institutions, UN partners and other International organizations and five subcommittees where formed that aimed to oversee the preparedness and response mechanisms as well as the restructuring of the coordination body. A PHEOC was proposed which was finalized during the cholera outbreak in 2015. At least nine suspected patients were detected in 2014/15, one through Port Health Surveillance system and the rest through the human IDSR surveillance system; and all were negative. The country follows the adopted resolutions by WHO and has not passed any other legislations on reporting PHEIC to WHO.

There is a national IHR focal point within the MoHCDGEC and is operational. Food safety issues are reported to the national IHR focal point that has a Food Safety Person as one of the five constituents. Further, national OIE focal point on food and safety issues is nested within the MoLFD. The national IHR focal point person is trained as an epidemiologist (FELTP) and has undergone trainings for IHR organized by WHO. The OIE focal person is locally trained via regional (EAC/SADC) and OIE workshops, which are organized on an ad hoc or regular basis.

Through the EAC, Tanzania has signed a cross-border framework for surveillance and response (between Burundi, Kenya, Rwanda and Uganda) and developed a web portal for reporting and sharing information on notifiable diseases (functional since October 2015). For trade-sensitive diseases, including zoonotic diseases, the country has jointly developed standard procedures and methods for surveillance. The framework was developed to enhance operational procedures of undertaking surveillance so as to ease trade among member states within East Africa and the Greater Horn of Africa. The memorandum of understanding is in the final stages of development.

Recommendations for priority actions

- Establish and sustain formal mechanisms for exchange of information between national IHR and OIE focal points to ensure that public health and animal health systems work harmoniously to limit each reporting separately and to improve joint decision-making through disaster management committees (multisectoral) cascading from the central level to the regions, districts, divisions, wards and villages, and coordinated under the Prime Minister's Office.
- Fast track policies to facilitate the national IHR focal point core and expanded functions and strengthen core capacities that have not yet been implemented as they are placed within individual sectors which does not help the national IHR focal point persons in their expanded function.
- Finalize all existing draft protocols and institutionalize networking between human and animal health and use information technology to enhance communication between national IHR and OIE focal point persons (public health, animal health and wildlife, security agencies).
- Improve information sharing between and among sectors, including security agencies and the private sector. In addition, facilitate joint national action planning, implementation, monitoring and evaluation/ reviews.

Indicators and scores

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

Strengths/best practices

- The national IHR focal point exists within the MoHCDGEC and the OIE contact point exists within the MoLD. Food safety issues are reported to the national IHR focal point that has a "food safety person" and the OIE has a focal point on food and safety issues nested within the MoLD.
- All national IHR focal point persons are trained (epidemiology, FELTPs, veterinary, animal health and wild life surveillance) for IHR organized by the WHO. The OIE focal person is locally trained via regional (EAC/SADC) and OIE workshops. The national IHR focal point includes the Ministry of Health and Social Welfare, Tanzania Mainland (epidemiology and laboratory) and Ministry of Health Zanzibar, TFDA and Port Health Authority. The OIE focal point includes the MoHCDGEC, and TFDA.
- Protocols for public health surveillance exist and there is a Plan of Action 2015/2017.
- For cross-border surveillance and disease control, a draft memorandum of understanding was established after series of consultative meetings (Burundi, Kenya, Rwanda and Uganda), and is in the final stages of development. Tanzania has also developed a web portal for reporting of notifiable diseases.
- For trade sensitive diseases including zoonotic diseases, Tanzania has jointly developed standard procedures and methods for surveillance. The framework enhances operational procedures for undertaking surveillance so as to ease trade among member states within East Africa and Great Horn of Africa.

Areas which need strengthening and challenges

- Tanzania should limit informal consultations with WHO and instead use formal communication with WHO under Article 8 of the IHR, even when an event does not require reporting.
- Coordination and communication should be improved between the national focal point and regional economic blocs (EAC, ECSA, SADC, and Common Market for Eastern and Southern Africa). Cross-border information flow and reporting should be strengthened using regional economic bloc governing bodies to increase IHR resources.

- Periodic tabletop exercises should be conducted to test real-time reporting and sharing of information.
- Linkages between public health, animal health and the private sector should be improved.
- The terms of reference for the multisectoral and multidisciplinary technical working group should be fast-tracked for approval, as should approvals and resource mobilization for the priority actions for this indicator.

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

Strengths/best practices

- In 2014, the Government of Tanzania held a Workshop for Preparedness for Public Health Risks and Emergencies to strengthen systems for surveillance and response to public health risks and emergencies to ensure functionality and coordination. The Workshop involved more than 70 participants from various ministries, government institutions, UN partners and other international organizations and five subcommittees where formed that aimed to oversee the preparedness and response mechanisms as well as the restructuring of the coordination body.
- A PHEOC was proposed and finalized during the cholera outbreak in 2015.
- The consultation was through the National Task Force Meeting, chaired by Permanent Secretary and Co-Chaired by WHO Representative. Ministry of Health and Social Welfare was given a lead role and mandate by the Prime Minister's Office. Members were present from various sectors – disaster management, Ministry of Education, Ministry of Defense, Ministry of Agriculture, Ministry of Foreign Affairs, Office of President, university representatives.
- The country follows the adopted resolutions by WHO.

Areas which need strengthening and challenges

- There is a need for better-defined protocols for communication and linkages between the national focal points.

Relevant documentation

- Country presentation on reporting

Workforce development

Introduction

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

Target

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

Tanzania level of capabilities

The "Human Resource for Health Strategy 2015-2020" guides the workforce development for the human health sector. Health workforce development is key to health security and emergencies. Lack of knowledge, skills and adequate equipment was a major source of exposure and infection among health workers in the West Africa Ebola virus disease outbreak. Health security and emergencies preparedness in Tanzania should include capacity building of all health workers in the country. Moreover, there is a need for all health workers and all those involved in the response to adhere to all protocols.

Recommendations for priority actions

- Collaborate with training institutions to review the pre-service training curricular to ensure that IHR (2005), IDSR and disaster management are addressed.
- Proactively enroll professionals from animal health in field epidemiology and laboratory training programmes (FELTPs) to build technical leadership and managerial skills for national and subnational surveillance and prepare health leaders (basic, intermediate and advanced FELTP courses) in animal health.
- Support exchange visits to established centres for mentoring of critical staff from human and animal health.

Indicators and scores

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

Strengths/best practices

Human health

- The Tanzanian health system has a special cadre of health officers who are trained for monitoring and managing disease outbreaks and communicable diseases in general. There is also the FELTP under Muhimbili University of Allied Health Services (MUHAS), which helps build capacity of health workers particularly in disease surveillance and response at regional and district levels. In addition to FELTP graduates (see below), there are biostatisticians (around 20) and information system specialists (around 50) mainly at the national level in research institutes and the academia.

- Most of the regional and district health officers are epidemiologists or have postgraduate training in public health.
- Each region has at least one professional who has been trained in epidemiology or public health. All clinicians at regional and district levels have had clinical management training.
- At intermediate and peripheral levels, all health officers who carry out surveillance are suitably trained and some have additional training in basic epidemiology or IDSR.
- There are clear career tracks for doctors/nurses/laboratory staff who want to study clinical disciplines. The career path for nurses or doctors, who want to do postgraduate study in epidemiology or laboratory, sciences, is still under discussion. However, graduates of epidemiology find positions at districts and regions and chair technical committees which oversee all technical issues as well as surveillance and response at regional and district levels.
- In-service training has been done for diseases such as viral haemorrhagic fevers, influenza, cholera, dengue and Rift Valley fever.
- The national IDSR Guidelines, 2011 is in place and provides guidance on how to build and strengthen capacity for multidisciplinary rapid response teams.

Animal health

- There is a two-year applied epidemiology postgraduate course in veterinary health, but no short-term or intermediate courses for mid-level managers.
- In the public and private sectors there are 733 veterinarians; 840 paraprofessional assistants (certificate holders) ; 990 paraprofessional (diploma holders); 41 veterinary research scientists; 84 laboratory technicians.
- In research institutions (Tanzania Wildlife Research Institute (TAWIRI), National Medical Research Institute (NIMR), Ifakara Research Institute) there are 32 veterinarians and 19 laboratory technicians.
- In training institutions (Sokoine University of Agriculture, Muhimbli University of Allied Health Sciences, Nelson Mandela Institute, University of Dodoma, St August University, Livestock Training Agency) there are 60 veterinarians and 23 laboratory technicians.
- Of the 169 Local Government Authorities, 49 do not have qualified veterinarians. Of the 12 000 officially registered villages, only 6% have livestock extension officers.

Laboratory personnel

- All regional laboratories are headed by a laboratory technician and are capable of confirming epidemics. However, inadequate supplies and reagents hinder adequate levels of testing.
- The districts also have laboratory capacity depending on the levels defined by the sector ministry and there are 1500 laboratory technicians in the country.

Areas which need strengthening and challenges

- Tanzania should partner with more schools of medicine, public health and universities to design, develop and deliver specialist short courses in surveillance, epidemiology and outbreak investigation and response for national and subnational level managers.
- The MoHCDGEC should proactively use a technical committee co-chaired by FELTP graduates to guide regional and district health management teams
- A human resource strategy should be developed to address public workforce challenges at the subnational level because of the wide geographical expanse of the country with many tiers of the health system.

- A clear career path in the public sector for epidemiologists graduating from the FELTP should be developed, such as epidemiologist, senior epidemiologist, and principal epidemiologist.
- Incentives should be provided for those who work in remote regions and districts.

D.4.2 FETP or other applied epidemiology training programme is in place – Score 4 human, 2 Animal

Strengths/best practices

- Set up in 2008, the FELTP is now well established with 72 Masters in Science and 350 graduates. Several graduates have been taken on to run the programme. The FELTP is owned by the MoHCDGEC in collaboration with African Field Epidemiology Network, CDC, National Institute of Malaria Research (NIMR), MUHAS and WHO but is predominantly funded by US Government agencies – President's Emergency Plan for AIDS Relief (PEPFAR) and Project Management Institute (PMI). There is minimal Government contribution since 2012 and World Bank funding since 2010.
- A shorter training course is in place for the district health management team in-service employees who want to advance their training in field epidemiology.
- While the field epidemiology capacity is currently not tracked, there is a database of graduates and a tracer study is planned to determine whether the graduates are practicing what they were trained to do and the challenges they face.
- Graduates from the FELTP participate in the alumni association (which was formed to facilitate networking and information sharing) and meet annually. There is ongoing mentorship through the programme staff, MUHAS, as well as national and regional local supervisors who have been identified and oriented in field epidemiology.
- While partnerships have not been formally established, the graduates travel to assist other countries. Tanzanian FELTP residents assisted in the 2012 Uganda Ebola outbreak and an additional five FELTP graduates provided support during the 2014 Ebola epidemic in West Africa.

Areas which need strengthening and challenges

- There is a concern for graduates from the FELTP in terms of attrition due to limited clarity on the career path, especially for those without a medical degree. These FELTP graduates (especially laboratory graduates) are thus not attracted to the government sector, and most end up in local nongovernmental or UN agencies within the country. There is a need to develop a clear career path for FELTP graduates, such as epidemiologists, senior epidemiologist and principal epidemiologist in the public sector.
- There is a need to increase the scope of the FELTP to include animal health.

D.4.3 Workforce strategy – Score 2

Strengths/best practices

- Plans are underway with the President's Office — Local Government Authority to establish workforce incentives. Various nongovernmental organizations (such as Mkapa Foundation) assist the Government in deployment and staff allocation in hard-to-reach regions and provide incentives.
- Capacity building for in-service staff for postgraduate studies is being provided by MoHCDGEC and MoLFD.
- Capacity building for undergraduates is through Ministry of Education, Science, Technology and Vocational Training that disburses funds that come from the Ministry of Finance as student loans.
- There are also donors who support in-service workforce development, such as PEPFAR, World Bank.

Areas which need strengthening and challenges

- A comprehensive workforce strategy to address public health workforce and other issues relating to human resources in health needs to be developed, especially at the regional, district and subnational levels.

Relevant documentation

- Country presentation on workforce development
- Human Resource for Health Strategy 2015-2020

RESPOND

Preparedness

Introduction

The effective implementation of the IHR (2005) requires multisectoral/multidisciplinary approaches through national partnerships for effective alert and response systems. Coordination of nationwide resources, including the sustainable functioning of a national IHR focal point, which is a national centre for IHR (2005) communications, is a key requisite for IHR (2005) implementation. The national IHR focal points should be accessible at all times to communicate with the WHO IHR regional contact points and with all relevant sectors and other stakeholders in the country. States Parties should provide WHO with contact details of national IHR focal points, continuously update and annually confirm them.

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.

Tanzania level of capabilities

Tanzania's human and animal health authorities have an exceptional understanding of the critical components and importance of preparedness for public health and animal health emergencies, as well as the need for supporting legislative and regulatory frameworks, operationalizing plans from national to community levels, and the requirement of simulation exercises.

The national Disaster Management Act, 2014 provides a strong framework for a nationwide all-hazards approach to preparedness and response, though regulations to allow implementation have yet to be put in place. This Act allows for the creation of a national agency that can operate continuously at subnational administrative units, and hence provide continuing preparedness operations between times of emergency.

Health risk evaluations and mapping efforts were conducted for five regions in 2013, and epidemics, floods, motor traffic injuries as well as drought were identified as hazards of higher risk. Multisectoral tabletop simulation exercises have been done, in coordination with the Prime Minister's Office, on public health emergency scenarios.

Recommendations for priority actions

- Establish regulations and an effective agency structure to operationalize the Disaster Management Act, 2014.
- Review the draft Public Health Emergency Preparedness and Response Plan by examining it in relation to the national One Health Strategic Plan, and subsequently endorse, distribute to operational subnational units and test via simulation exercises.

- Ensure that senior officials recognize the importance of updating national health risk and resource mapping needs and approve allocation of the resources required.
- Conduct a national health risk and resource mapping exercise in coordination with animal health authorities, and request other government sectors such as the US National Weather Service to contribute relevant data and guidance.

Indicators and scores

R.1.1 National multi-hazard public health emergency preparedness and response plan is developed and implemented – Score 2

Strengths/best practices

- Tanzania currently has disease-specific preparedness and response plans for Rift Valley fever, influenza, Ebola and cholera, that have been implemented.
- The draft multi-hazard/all-hazard plan stipulates health sector specific roles and responsibilities and stakeholders roles and responsibilities in preparedness and response to different hazards, and is inclusive of points of entry issues.
- Surge capacity exists through reallocation of resources available at various implementation levels, i.e. the regional and district health facilities/departments including the private sector, as well as national level staff from various departments and other sectors.

Areas which need strengthening and challenges

- A multi-hazard/all-hazard plan that covers the IHR core capacities is currently in draft form and has not been officially endorsed.
- The draft Public Health Emergency Preparedness and Response Plan needs to be reviewed with the national One Health Strategic Plan, finalized, endorsed, distributed to operational subnational units, and tested via simulation exercises.

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

Strengths/best practices

- Health risk evaluations and mapping efforts were conducted for five regions in 2013 with epidemics, floods, motor traffic injuries and drought identified as hazards of high risk.
- A disaster risk management country capacity evaluation was carried out in 2012, which involved capacity in terms of resources. The evaluation did not focus directly on IHR but on disaster risk management in general, inclusive of public health risks.
- Stockpiles, such as personal protective equipment, are kept at government facilities for commonly occurring health risks, as well as for in vitro fertilization (IVF). These are also relevant for IHR related hazards.

Areas which need strengthening and challenges

- Senior officials must recognize the importance of updating national health risk and resource mapping needs and approve allocation of the resources required.
- A national health risk and resource mapping exercise should be conducted in coordination with animal health authorities and other government sectors, such as the US National Weather Service, which should be asked to contribute relevant data and guidance.

Relevant documentation

- National Ebola and Marburg Preparedness and Response Contingency Plan
- Tanzania Emergency Preparedness and Response Plan
- National Pandemic Influenza Preparedness and Response Plan of the United Republic of Tanzania
- The United Republic of Tanzania One Health Strategic Plan 2015–2020
- National Operational Guidelines 2003 (Draft 2nd edition 2014)
- Tanzania health sector Emergency Operations Guidelines 2013

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.

Tanzania level of capabilities

The Government of Tanzania initiated the establishment of a Public Health Emergency Operations Centre (PHEOC) approximately five months prior to this evaluation. It was instituted as a response mechanism to coordinate the activities required to manage the cholera outbreak. In this relatively short period of time, the PHEOC has developed into a recognized resource and reference point for health agencies and several other sectors. This has put very high expectations on the PHEOC to provide the necessary functions to support the health aspects of managing an ongoing significant cholera outbreak while still attempting to further develop itself.

Recommendations for priority actions

- Ensure high-level leadership from the MoHCDGEC (Chief Medical Officer and Permanent Secretary) to provide official directives and recognition regarding the existence and utility of the PHEOC, and enumerating its roles and responsibilities to support engagement of all those required to jointly manage the health consequences of all emergencies.
- Ensure that the MoHCDGEC provides a budget line for the PHEOC and facilitates official availability of fully dedicated EOC focal persons from the various health clusters, particularly during emergencies.
- Increase staff at the PHEOC and provide employees with the required training.
- Obtain the required technical equipment and physical space.
- Establish a comprehensive health emergency programme at the policy level.

Indicators and scores

R.2.1 Capacity to activate emergency operations – Score 2

Strengths/best practices

- There is strong high-level support for the further development and utilization of the PHEOC as a central hub for health operations support.

- Extremely dedicated and knowledgeable core staff are in place.

Areas which need strengthening and challenges

- There is a need to increase dedicated staffing for the Incident Management System critical functions required in monitoring and documentation (situation status), data management (Epi), contextual mapping (geographical information system), support for designated EOC manager (Deputy EOCM) and others.

R.2.2 EOC operating procedures and plans – Score 3

Strengths/best practices

- A basic PHEOC management SOP that is in its final draft stage is being used even though it is at the policy level and pending approval.
- Full utilization of the Incident Management System as a national standard has been instituted in the PHEOC; this will enable interoperability with subnational health authorities and other agencies and sectors as they further develop plans.

Areas which need strengthening and challenges

- Staff and partners need training in IMS, which would increase human resources capacities and capabilities for managing public health events.

R.2.3 Emergency operations programme – Score 1

Strengths/best practices

- There is strong high-level support for the further development and utilization of PHEOC as a central hub for health operations support to the regions.
- The country has initiated an overarching health emergency programme which is not yet fully defined as a programme as functions in place are not optimally implemented

Areas which need strengthening and challenges

- For sustainability and comprehensiveness to address all components of prevention and mitigation, preparedness, response and recovery, Tanzania should institute the overarching "health emergency programme" competently.
- The health emergency programme should include: (i) risk evaluation (hazard and vulnerability assessment); (ii) prevention and mitigation (treatment of risks); (iii) preparedness (assessment of capabilities, plan development, sustainability of infrastructure, etc.); (iv) response (PHEOC and field-level resources); and (v) recovery (infrastructure restoration and resilience, after action reviews, implementation of action plan to mitigate risks and improve future response).

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

Strengths/best practices

- IDSR is utilized in the majority of the regions (includes case definitions and case management guidance for high-risk pathogens).

Areas which need strengthening and challenges

- Tanzania should promote and increase the utilization of IDSR in all regions and laboratories by resourcing the necessary staffing and providing them with appropriate training.

Relevant documentation

- Country presentation on emergency response operations
- Health Sector Emergency Operations Guideline 2013
- Mass Casualty Management Guidelines 2013
- National IDSR Guidelines 2011

Linking public health and security authorities

Introduction

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

Target

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

Tanzania level of capabilities

This indicator provides an opportunity for public health officials to review the possibility of working with experts who have a comparative advantage in investigating criminal activities related to misuse of biological materials with the intent to harm society. The law enforcement sub-sector has surge capacity and can deploy logistics at short notice. Tanzania is on the path to linking public health with law enforcement (this was observed by the consistent presence of an INTERPOL officer during the external evaluation exercise). Protocols that allow all sectors to work together have been established under the Superintendent of the Prime Minister's Office. The law enforcement officers are integrated in the working structure of the MoHCDGEC (similar to the IHR technical working group) and are sharing training resources.

Recommendations for priority actions

- Develop a joint training programme and curriculum.
- Establish a mechanism for sharing information on a regular basis.
- Explicitly define and share roles of law enforcement in the cycle of public health emergencies.

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 2

Strengths/best practices

- The IHR technical working group has a member from law enforcement.
- FELTP has trained three officers from the TPDF in a joint training (this is good practice for sharing resources and developing acquaintances that facilitate in real incident team work).
- The MoHCDGEC has undertaken a simulation exercise together with law enforcement.
- The Tanzania Emergency Preparedness and Response Plan states working with the law enforcement sub-sector although the roles of law enforcement are not clearly articulated.
- Protocols for collaboration with law enforcement exist (although these are not formal memorandums of understanding).

Areas which need strengthening and challenges

- SOPs for joint/shared risk assessment should be developed.
- A mechanism for sharing information on a regular basis should be established.
- Formal procedures to identify potential biological events or other public health events that may have deliberate motives should be established.
- Public health experts should also participate in emergency response exercises, which are regularly carried out by the law enforcement and are linked to the Biological and Toxin Weapons Convention.

Relevant documentation

- Tanzania Comprehensive Multi-Year Plan for 2010-2015
- Tanzania Emergency Preparedness and Response Plan

Medical countermeasures and personnel deployment

Introduction

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

Target

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

Tanzania level of capabilities

Tanzania's medical countermeasures capacities are limited. Although some emergency stockpiles exist, planning is based on re-distribution of items in stock. Purchases are made when there is a health emergency. A number of existing plans make reference to medical countermeasures. However, there are no clear SOPs on sending and receiving medical countermeasures. With the Medical Stores Department, Tanzania seems to have a reliable distribution system in place.

For personnel deployment, Tanzania has proven its capacities by sending health experts to West Africa during the Ebola epidemic. Nevertheless, there are no written procedures in place to send assistance or to request and receive foreign personnel.

Recommendations for priority actions

- Develop SOPs and protocols for medical countermeasures and personnel deployment. Protocols should include criteria for sending and receiving medical countermeasures, as well as personnel and procedures for fast track importation of medical countermeasures, including procedures for potential tax exemption for medical countermeasures in emergency situations. Agreements with neighbouring countries and regional organizations should be formalized to ensure mutual cross-border aid (personnel and medical countermeasures).
- Estimates (including a forecasting tool) on the type, quantity and costs of medical countermeasures needed for priority scenarios should be developed. These figures could be used as the basis for further planning.
- The draft All Hazard Health Emergency Preparedness and Response Plan should be finalized to allow implementation of the described procedures for medical countermeasures and personnel deployment.

Indicators and scores

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

Strengths/best practices

- Several plans, guidelines and acts make reference to medical countermeasures in emergency situations. Responsibilities and general funding sources, although limited, are described.
- The draft All Hazard Health Emergency Preparedness and Response Plan includes concrete steps and strategies for the establishment of contingency stocks. However, the Plan has yet to be adopted and implemented.
- The Medical Stores Department, which is an autonomous department under the MoHCDGEC, has a well-recognized distribution network with nine regional hubs to serve health facilities within 24 hours (if the requested item is available at the hubs). Fast track mechanisms for emergency distribution and procurement exist within the Medical Stores Department.
- The Medical Stores Department has framework agreements with different suppliers for emergency situations. Pooled procurement mechanisms exist within the EAC and SADC.
- A national donation guideline for medicines and medical supplies is in place.
- The TFDA has fast track procedures in place allowing rapid importation. In an emergency situation "one-time" special importation permits for needed countermeasures, which are not nationally registered/licensed, can be issued to ensure timely importation.

Areas which need strengthening and challenges

- Although procedures and responsibilities for medical countermeasures are reflected in a number of plans and guidelines, there are no SOPs available for receiving and issuing medical countermeasures, including SOPs for rapid customs clearance of donations.
- Implementation of tax exemption for donated medicines, related medical supplies, personal protective equipment and other disaster related equipment need to be considered.
- Tanzanian dedicated stockpiles for emergency situations are very limited. Building up of stockpiles for priority countermeasures should be considered. Currently it is planned to use regular stockpiles; additional purchases would be made on an ad hoc basis when there is a health emergency.
- Emergency provisions for blood and blood-product supplies should be included in strategies and plans.
- A clear policy on how emergency funds will be utilized during the very early stages of a response should be delineated in order to avert critical delays especially in a rapid onset emergency.
- The capacity for supply chain management of medical countermeasures is described as very limited and needs strengthening.
- Mechanisms for receiving and sending medical countermeasures need to be implemented.
- Estimates ("forecasting-tools") on the type, quantity and costs of needed countermeasures for priority scenarios are not available.

R.4.2 System is in place for sending and receiving health personnel during a public health emergency – Score 2

Strengths/best practices

- Tanzania has proven its capacity by sending medical personnel to West Africa during the Ebola epidemic. International deployment mechanisms were used, based on pre-existing agreements with WHO–Global Outbreak Alert and Response Network and the African Field Epidemiology Network.
- There are some agreements with EAC, ECSA and SADC that refer to rapid deployment and receiving rapid response teams.
- The draft All Hazard Health Emergency Preparedness and Response Plan (yet to be adopted) includes concrete steps and strategies for health staff deployment.

Areas which need strengthening and challenges

- There are no specific plans and SOPs for deployment and receiving personal. There is currently no policy that directly addresses regulatory and licensure concerns of receiving health personnel from an international source.
- Agreements with neighbouring countries and regional organizations for sending and receiving surge health personal should be formalized.
- Agreements and SOPs for national, in-country deployment of rapid response teams should be made available, to ensure smooth deployment of health personal between Tanzanian regions, if needed. The role and responsibilities of the PHEOC for deployment of personnel should be reflected in the SOPs.
- Pre-deployment trainings should be set up.

Relevant documentation

- National Operational Guidelines for Disaster Management, 2003
- Public Procurement Act, 2011
- National Avian and Pandemic Influenza Emergency Preparedness and Response Plan, 2011
- Disaster Management Act, 2015
- All Hazard Health Emergency Preparedness and Response Plan, 2015 (draft)
- Guidelines for Medicines and Medical Supplies Donations (Tanzania Mainland), 2015

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.

Tanzania level of capabilities

Tanzania is very well aware of the importance of risk communication for health emergency management and every ministry has a communication unit. However, resources for health risk communication are very limited, both in terms of staffing and financial resources. The PHEOC does not have capacity for risk communication. Several emergency-related plans and guidelines make reference to risk communication, both at national and subnational levels but some important documents are still in draft form – not yet adopted, implemented or tested. In general, social mobilization is considered a priority, although the number of trained messengers (such as health personnel, community chiefs and religious leaders) needs to be increased. Given the scarce resources, research on the effectiveness of risk communication has not been conducted systematically to date.

Recommendations for priority actions

- Strengthen capacity for risk communication, both at national and subnational levels, and in particular for the PHEOC.
- Set up tailored training specific to the target groups (staff at national level, messengers at local level)
- Develop strategies for more pro-active risk communication by considering public–private partnership

models with the media (mobile phone providers, radio, television, newspapers, social media providers).

- Finalize the draft All Hazard Health Emergency Preparedness and Response Plan to allow implementation of the described measures for risk communication and social mobilization.

Indicators and scores

R.5.1 Risk communication systems (plans, mechanisms, etc.) – Score 2

Strengths/best practices

- Tanzania has a national multi-hazard risk communication plan in place – the Tanzania Disaster Communication Strategy (TDCS) – which outlines the organization, operational concepts, responsibilities and procedures for emergency communication. The TDCS is linked and complementary to the multisectoral Tanzania Emergency Preparedness and Response Plan. The TDCS applies the One Health approach. The animal health sector was involved in the development of the TDCS.
- The draft All Hazard Health Emergency Preparedness and Response Plan includes concrete steps and strategies for strengthening risk communication at all levels. However, the plan has yet to be adopted and implemented.
- For the health sector, the National Communication Guidelines for Public Health Risks and Emergencies (NCGPHRE) has been drafted with World Bank support. The NCGPHRE outlines principles and strategies, including some roles and responsibilities for implementation at national and subnational levels.
- Disease specific plans and strategies exist (such as Ebola—National Strategy for EVD[1] Outbreak Communication and Dissemination; Avian Influenza—Tanzania National Avian Influenza Emergency Preparedness and Response for Raising Public awareness on HPAI).
- Every government sector has a communication unit. The communication units are regarded as "links between the ministries and the community". The communications unit of the MoHCDGEC, coordinates responses to queries related to health risks; and a health promotion section coordinates public education and awareness for positive behaviour change.

Areas which need strengthening and challenges

- The allocation and alignment of human and financial resources were described as being insufficient (e.g. the MoHCDGEC's communication unit consists only of two staff members). There is no dedicated budget line for risk communication during emergencies.
- The newly established PHEOC does not have any dedicated staff for risk communication.
- During the recent cholera outbreak coordination mechanisms were applied, however, till date no structured simulation exercise has been conducted.
- Risk communication training offered by partners to national and subnational personnel may not be sufficient and only partially adequate for the target group. In particular there is a lack of training for "communicators", including community chiefs, religious leaders, at the subnational level.
- The draft NCGPHRE and the All Hazard Health Emergency Preparedness and Response Plan should be finalized in consultation with all relevant stakeholders.
- Standard and disease specific templates for risk communication may be supplemented to the respective existing plans. The availability of templates would facilitate communication in times of crisis and would help to make the existing planes and guidelines more "operational".

[1] EVD: Ebola virus disease.

- Based on a risk assessment, communication messages for priority scenarios should be developed in a way that they are ready for immediate use (or quickly adapted) in a health emergency situation.

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

Strengths/best practices

- Some existing plans and strategies (e.g. National Strategy for EVD Outbreak Communication and Dissemination) account for communication to different target groups.
- There are (informal) mechanisms for sharing information, communication plans, talking points, agreements and/or SOPs between other entities and stakeholders involved in risk communication.
- The National Task Force (Case Management Subcommittee) is considered as a path for coordination and communication with health care facilities. Private health care facilities are formally part of the Subcommittee, however their engagement in the Subcommittee is considered low.

Areas which need strengthening and challenges

- Regular and systematic involvement of all relevant stakeholders has not yet reached an adequate level.
- Formalization of communication coordination mechanisms with national and international stakeholders (including government, civil society, public sector, international partners) is needed.
- Ensure availability (including dissemination) of materials for risk communication with staff involved in emergency operations, such as information on specific risk and self-protection measures for responders involved in emergency operations.

R.5.3 Public communication – Score 2

Strengths/best practices

- For public communication, the MoHCDGEC's communication unit works in collaboration with the Health Promotion Section within the Ministry.
- Both traditional and new (social) media are used for the dissemination of messages.
- During the recent cholera outbreak weekly press statements and updates were released.

Areas which need strengthening and challenges

- There is no analysis of the effectiveness of information, including whether the target audience was reached. Media research needs to be strengthened. The involvement of research and training institutions should be considered.
- Strategies for more proactive outreach to a variety of media platforms, such as newspaper, television, social media, should be established.
- Private media platforms, such as local radio, television, mobile phone companies, should be embedded as partners in risk communication activities. The possibility of sponsorship agreements with private media providers should be assessed.

R.5.4 Communication engagement with affected communities – Score 2

Strengths/best practices

- The tasks of the Health Promotion Section in the MoHCDGEC include social mobilization and behaviour change communication activities.

- An informal feedback loop between at-risk or affected populations and response agencies exists on an ad hoc basis. Local lessons learned and best practices from implementing risk communication measures at subnational level are shared nationally, but not in a systematic way.
- The draft NCGPHRE and the All Hazard Health Emergency Preparedness and Response Plan include a strong component on social mobilization. A subcommittee on social mobilization with corresponding structures at subnational level is being planned according to the NCGPHRE.

Areas which need strengthening and challenges

- Risk communication capacities and capabilities at subnational level are very limited. Capacity building measures, such as regular training and supervision for subnational communicators is needed. This includes training of health care workers in social mobilization at "house-to-house" level.
- The subcommittee on social mobilization, including corresponding structures at subnational level is not yet functional.
- Since unpredictable and aggressive behaviour of a "social mob" is considered as a priority scenario in a health emergency, a respective contingency strategy could be developed.

R.5.5 Dynamic listening and rumour management – Score 2

Strengths/best practices

- The MoHCDGEC is very aware of the importance of dynamic listening and rumour management.
- Rumours are addressed by reaching out to community meetings, religious gatherings, schools, markets and by involving key decision makers in the community.
- Strategies for managing specific rumours are discussed based on ad hoc meetings.

Areas which need strengthening and challenges

- The capacity and capability for monitoring and managing is very limited. Key staff and key decision makers at local level should be trained.
- The ability to determine that actions changed behaviours and stopped rumour spreading should become part of a strategy to evaluate communication response and effectiveness.

Relevant documentation

- National Avian Influenza Emergency Preparedness and Response Plan – Raising public awareness on HPAI, 2008
- Tanzania Disaster Communication Strategy (TDCS) 2012
- National Strategy for EVD Outbreak Communication and Dissemination, 2015
- Draft - All Hazard Health Emergency Preparedness and Response Plan, 2015
- National communication guidelines for public health risks and emergencies, 2016
- National climate change and health communication strategy, 2016—2021

OTHER IHR RELATED HAZARDS AND POINTS OF ENTRY

Points of entry

Introduction

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

Target

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

Tanzania level of capabilities

Control of diseases at border crossings remains a fundamental element of the IHR (2005). In addition to routine measures that must be in place at points of entry, a number of IHR requirements for surveillance and response apply to designated airports, sea ports and ground crossings. The JEE team visited two international airports (Julius Nyerere International Airport and Kilimanjaro International Airport) and one ground crossing (Namanga border crossing) of the country's 43 recognized points of entry. Routine screening for yellow fever vaccination for travelers from endemic and Ebola affected countries is conducted at points of entry using surveillance forms and public health passenger locator forms. These designated points of entry were found to have arrangements with nearby health facilities for provision of emergency medical and diagnostics services. Draft Aviation Public Health Emergency Plans are available but still need to be incorporated into the aerodromes' response plans. The airports had dedicated ambulance services and some vector control activities were being carried out. Training on ship sanitation inspection and issuance of ship sanitation certification has been provided to 90% of points of entry staff.

Recommendations for priority actions

- Finalize and operationalize public health emergency contingency plans for points of entry.
- Evaluate the effectiveness of points of entry in responding to public health events at points of entry through simulation exercises.
- Facilitate necessary SOPs, guidelines, equipment and kits for facilitating routine work at points of entry.
- Ensure proper workforce protection including provision of free vaccines, equipment and training.

Indicators and scores

PoE.1 Routine capacities are established at points of entry – Score 2

Strengths/best practices

- Various personnel from IHR hazard related sectors (such as public and environmental health, fisheries, atomic energy, chemical and food and drug agencies) were working together at the Namanga border crossing.
- Routine screening for yellow fever vaccination for travellers from endemic and Ebola affected countries is conducted at points of entry.
- Body temperature scanners are available, though the evidence for the effectiveness of body temperature scanning is low.
- Traveller surveillance forms and public health passenger locator forms are available at the points of entry. Travellers from high-risk countries complete forms before entry to the airport premises.
- The designated points of entry have arrangements with nearby health facilities for provision of appropriate medical services including diagnostic facilities for sick travellers.
- Over 90% of the public health points of entry staff have been trained in conveyance inspection and control measures.
- Regular vector control through insecticide spraying is done around the airport compound. However, the spraying does not adequately cover the stipulated areas including outside the airport perimeter fence.

Areas which need strengthening and challenges

- Health care workers at the points of entry should receive regular updates on public health issues and be vaccinated against diseases, such as yellow fever and hepatitis.
- There is no vector risk assessment and mapping at Kilimanjaro International Airport; only ad hoc water sampling is done for quality assurance.
- There are inadequate incineration facilities and lack of a mechanism for vector mapping and control, particularly at Kilimanjaro International Airport.
- There is no ship sanitation inspection at points of entry due to lack of inspection kits.

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

Strengths/best practices

- A draft Aviation Public health Contingency Plan is available at the national level, however it needs to be reviewed and finalized in consultation with the relevant stakeholders.
- There is a multisectoral, facilitation committee at the airports that has representatives from the various key stakeholders.
- There is a Namanga Border Post Joint Border Coordinating Committee with representation from customs, immigration, revenue authority, radiation, chemical, food and drugs, port health authorities and others.
- One holding unit with six beds with personal protective equipment and medical supplies is available just outside the Kilimanjaro International Airport perimeter fence.

Areas which need strengthening and challenges

- There is a need for operational public health emergency contingency plans for responding to public health emergencies at the points of entry.
- The draft national and airport contingency plans for responding to public health emergencies at the points of entry needs to be finalized.
- Simulation exercises for public health related events at points of entry are not conducted.
- There are no designated rooms with capacity for all passengers/crew in a flight for temporary separation and isolation from other airport passengers/personnel. This is needed in case a sick passenger suspected of having a highly pathogenic disease was on board, in order to perform necessary inquiries regarding completion of passenger locator cards, questions on direct exposure during flight, etc.
- There is a patient isolation (holding) unit with no beds at Julius Nyerere International Airport. However, as the new terminal building is currently under construction, and a designated room for patient isolation will be available soon.

Relevant documentation

- Kilimanjaro Airport Emergency Plan developed by the Kilimanjaro Airport Development company
- Assessment tool for core capacity requirements at designated airports, ports and ground crossings
- Handbook for inspection of ships and issuance of ship sanitation certificates
- Protocol for Assessing National Surveillance and Response Capacities for the International Health Regulations (2005)
- Site visitations

Chemical events

Introduction

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

Target

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

Tanzania level of capabilities

The management of specific risks including chemical, toxic and environmentally induced events is particularly challenging. The improvement of national control programmes that aim to reduce public health risks associated with chemical, toxic and environmentally induced events is an effective way to improve national health security. The Industrial and Consumer Chemicals (Management and Control) Act Cap 182, was passed in Tanzania in 2003 and is implemented by the Government Chemist Laboratory Agency (GCLA) in the MoHCDGEC. The legislation aims to protect health and the environment from adverse effects of chemicals. The Act also provides for management and control of chemicals from production, transportation, exportation, storage, dealing, and handling to safe disposal. The Act is implemented through registration, inspection and issuance of permits for importation, exportation and transportation of chemicals.

Recommendations for priority actions

- Conduct a survey and list persistent organic pollutants to enable updation of the 2003 legal framework on industrial chemicals.
- Establish an electronic inventory of major hazard sites and installations.
- Implement the roadmap and programme for chemical accident prevention and preparedness, including reporting.

Indicators and scores

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

Strengths/best practices

- Legislation on Industrial and Consumer Chemicals (Management and Control) Act Cap 182, has existed since 2003.
- Multisectoral and interdisciplinary coordination mechanisms which deal with chemical safety exist and include establishments such as the Prime Minister's Office, health, environment, industry, agriculture, research and academia and nongovernmental sectors.

- Currently, 1055 chemical dealers are registered, 70 chemicals Inspectors are appointed and 20 points of entry and exit are inspected daily with many companies complying with Cap 182.
- Major chemical multilateral environmental agreements are being implemented in Tanzania, including the following ratified conventions and agreements: Basel, Stockholm, Rotterdam including the Montreal Protocol, and Minamata Convention on Mercury.
- There is laboratory capacity to confirm aetiology of heavy metals, pesticides and inorganic compounds.

Areas which need strengthening and challenges

- Procedures for risk assessment with regards to chemicals need to be strengthened among all stakeholders.
- Routine surveillance and monitoring of chemical events by facilities that use chemicals is required and not just during the inspection and enforcement period.
- A roadmap and programme for chemical accident prevention and preparedness including reporting needs to be developed.
- A specialized waste disposal system and facilities for hazardous chemicals need to be developed and established.
- Human and financial resources must be increased for effective implementation of the Chemicals Act.

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

Strengths/best practices

- A Chemical Accidents Prevention and Preparedness project has been implemented.
- Analysis of water, air and soil sediments for chemical hazards in accordance with the requirements of the National Environment Management Council is ongoing.
- Control of imports and exports of chemicals through permits, inspection, sampling and analysis as necessary has been implemented.
- The TFDA is monitoring the quality of foodstuffs.
- A National Poison Control Centre has been established.

Areas which need strengthening and challenges

- The emergency response plan needs to be finalized by defining the roles and responsibilities of relevant agencies.
- The roadmap on chemical accident prevention and preparedness needs to be operationalized.
- Chemical risk management strategies need to be incorporated into existing government and corporate policies.
- Tanzania needs to create awareness about and establish a mechanism for chemical events reporting.

Relevant documentation

- The Industrial and Consumer Chemicals (Management and Control) regulations, 2015
- Procedures for inspection of imported medicines, medical devices and cosmetic products at points of entry
- Harmonized border fisheries inspection guide for promotion of regional fish trade in eastern and southern Africa
- Protocol for assessing national surveillance and response capacities for the International Health Regulations (2005)

Radiation emergencies

Introduction

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

Target

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

Tanzania level of capabilities

Identification of a radiological/nuclear emergency event is based on the assessment of case history and confirmation of radiation exposure. Coordination of preparedness and response between radiological/nuclear authorities and local, regional and national governments is critical. Therefore, protocols for operational interfaces and plans for coordinating the national response to the range of potential nuclear and radiological emergencies should be in place. The Tanzania Atomic Energy Commission (TAEC) was established under the Atomic Energy Act No. 7 of 2003. TAEC is empowered by the law to authorize and inspect activities that involve ionizing radiation and to enforce the legislation.

Recommendations for priority actions

- Finalize the draft National Nuclear and Radiological Emergency Response Plan (NNRERP).
- Conduct national radiation risk mapping, and install radiation-monitoring devices in strategic places, including at the designated points of entry.
- Finalize SOPs and action guides for responders to radiation emergency.

Indicators and scores

RE.1 Mechanisms are established and functioning for detecting and responding to radiological and nuclear emergencies – Score 2

Strengths/best practices

- The TAEC, currently under the Ministry of Education Science and Technology, was established under the Atomic Energy Act No. 7 of 2003.
- TAEC is empowered by law to authorize and inspect regulated activities that involve ionizing radiation and enforce legislation and all associated regulations.
- TAEC is responsible for coordination and monitoring of the implementation of regional and national projects that use nuclear techniques for research and development in the country. These projects are supported by the International Atomic Energy Agency and are in the fields of health, agriculture, research, mining and water resources management.

- Tanzania conducts monitoring and verification of compliance using appropriate equipment. In addition, the import and export of foodstuff is controlled to ensure that they are not contaminated with radiation.
- Regulations on transport of radiological and nuclear materials and waste management exist.
- A Nuclear Energy Policy is under development; and a strategic plan to strengthen surveillance and response on radiological and nuclear events exists.

Areas which need strengthening and challenges

- There is inadequate specialized human resource capacity.
- Financial resources are insufficient.
- Laboratories at the points of entry lack sufficient capacity.

RE.2 Enabling environment is in place for management of radiation emergencies – Score 3

Strengths/best practices

- A strategic plan to strengthen surveillance and response in the event of a radiological/nuclear event exists.
- Relevant (TAEC) staff have been trained on emergency response to radiation events and there is a radiation safety officer at all key sites.
- There is an existing partnership with the International Atomic Energy Agency to mobilize additional experts as necessary.

Areas which need strengthening and challenges

- Communication and coordination structures between the national competent authority and the national IHR focal point need to be strengthened.
- Assessment and regular reporting of radiological risks to relevant authorities needs to be strengthened.
- A public health plan and guidelines for a coordinated response to massive radiation exposure should be developed.
- Community awareness and information on radiation risks and emergencies should be developed and strengthened.

Relevant documentation

- The draft National Nuclear and Radiological Emergency Response Plan (NNRERP)
- Protocol for assessing national surveillance and response capacities for the International Health Regulations (2005)

Appendix 1: JEE background

Mission place and time

Dar es Salaam, 22-26 February 2016

Arusha, 24-25 February 2016

Mission team members: Experts and advisers

- Simo Nikkari, Finland, Ministry of Health (Team Lead)
- Karen Sliter, USA, Department of Agriculture (Team Co-Lead)
- Christophe Bayer, Germany, Ministry of Health (Team member)
- Billy Karesh, USA, EcoHealth Alliance (Team member)
- Issa Makumbi, Uganda, Ministry of Health (Team member)
- Athman Mwatondo, Kenya, Ministry of Health (Team member)
- Paul Cox, World Health Organization (Advisor)
- Bouna Diop, FAO (Advisor)
- Mark Evans, Public Health England (Advisor)
- Peter Gaturuku, World Health Organization (Advisor)
- Moetapele Letshwenyo, World Organization for Animal Health (Advisor)
- Patrick Lumumba, World Bank (Advisor)
- Tom Mogeni, World Bank (Advisor)
- Rajesh Sreedharan, World Health Organization (Advisor)
- Ambrose O Talisuna, World Health Organization (Advisor)
- Liz Tayler, World Health Organization (Advisor)

Objective

To evaluate Tanzania's capacities and capabilities relevant for the 19 technical areas of the JEE tool in order to provide baseline data to support Tanzania's efforts to reform and improve its public health security, and to meet its obligations under the WHO IHR (2005).

Preparation and implementation of the mission

- Tanzania requested a joint external evaluation as part of its commitment to the implementation of IHR (2005).
- Tanzania completed a self-assessment using the JEE tool.
- The Tanzania evaluation was the first to use the JEE tool.
- Tanzania's goals for the evaluation were to receive feedback on its public health, food safety and veterinary systems, as well as to identify gaps and prioritize areas for future investment.

Limitations and assumptions

- The evaluation was conducted in one week, which limited the amount and depth of information that could be managed.
- The evaluation is not an audit and information provided by Tanzania was not independently verified. Information was discussed and an evaluation rating was mutually agreed to by Tanzania and the JEE team. This is a peer-to-peer review.
- It is assumed that the results of this evaluation will be publically available.

Key participants and institutions from Tanzania

Tanzania lead representative:

Janneth Mghamba, Assistant Director – Epidemiology and Program Director TFELTP, Ministry of Health and Social Welfare, Tanzania

Participating Institutions:

- Tanzania International Health Regulations Technical Working Group
- Office of the President of Tanzania
  - Regional Administrative Local Government (Permanent Secretary)
- Office of the Prime Minister of Tanzania
  - Permanent Secretary
  - Director Disaster
  - One Health Focal Point
  - Sector Coordination Focal Point
- Zanzibar Permanent Secretary and National Focal Point
- Tanzania Ministry of Health and Social Welfare (Mainland)
  - Office of Preventive Services
  - Office of Curative Services
  - Office of Quality Assurance
  - Office of Planning and Policy
  - Office of Human Resource
  - Office of Administration and Personnel
  - Tanzania Food and Drug Authority
  - National Institute for Medical Research
  - Government Chemist
  - Tanzania Wildlife Research Institute
  - Atomic Energy Commission
  - Office of Immunization Vaccine and Emergency
  - Assistant Directors: Epidemiology, Diagnostic, Emergency Preparedness, Environmental Health and Port Health, Health Promotion, Reproductive and Child Health, Inspectorate
  - Office of the Chief Pharmacist

- Tanzania Ministry of Livestock and Fisheries Development
  - Office of Veterinary Services
  - Office of Surveillance
  - Tanzania Veterinary Laboratory Agency
- Universities
  - Muhimbili University of Health and Allied Sciences
  - Sokoine University of Agriculture
  - Bugando Medical Centre
- Regional offices of health
- Research institutions
  - National Institute for Medical Research
  - Ifakara Health Institute
- Points of entry
  - Aviation
  - Water
  - Airports
  - Julius Nyerere International Airport
  - Kilimanjaro International Airport
  - Namanga ground crossing
- Association of Private Hospitals in Tanzania (APHTA)

Supporting documentation

Presentations:

- National legislation, policy and financing
- Coordination, communication and advocacy
- Antimicrobial resistance
- Zoonotic disease
- Food safety
- Biosafety and biosecurity
- Immunization
- National laboratory system
- Real-time surveillance
- Reporting
- Workforce development
- Preparedness
- Emergency response operations

- Linking public health and security authorities
- Risk communication
- Other IHR related hazards and points of entry
- Chemical events
- Radiation emergencies

WHO/WHE/CPI/2017.7