INTEGRATED DISEASE SURVEILLANCE AND RESPONSE (IDSR) TASK FORCE MEETING, ENTEBBE, UGANDA

MEETING REPORT

19 - 22 SEPTEMBER 2017







REGIONAL OFFICE FOR Africa

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ABBREVIATIONS

| After Action Review |
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| African Field Epidemiology Network |
| Regional Office for Africa |
| Anti-Microbial Resistance |
| Community-Based Surveillance |
| Community-Based Surveillance Volunteer |
| Centers for Disease Control and Prevention |
| Community health worker |
| Continued Medical Education |
| Disaster Risk Management |
| Electronic Surveillance |
| Event-Based Surveillance |
| East, Central and Southern Africa Health Community |
| Economic Community of West African States |
| Ebola Virus Diseases |
| Early Warning and Response Network |
| Early Warning, Alert and Response System |
| Food and Agriculture Organization |
| Global Health Security Agenda |
| Global Antimicrobial Resistance Surveillance System |
| Integrated Disease Surveillance and Response |
| International Health Regulations (2005) |
| Joint External Evaluation |
| Japan International Cooperation Agency |
| Ministry of Health |
| National Action Plan for Health Security |
| World Organization for Animal Health |
| Public health event |
| Public Health England |
| Regional integrated surveillance and lab Network |
| Simulation Exercises |
| Standard Operation Procedures |
| United Nations International Children's Emergency Fund |
| United States Agency for International Development |
| West African Health Organization |
| West Africa Regional Disease Surveillance |
| WHO Health Emergencies |
| World Health Organization |
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EXECUTIVE SUMMARY

In 1998, the World Health Organization Regional Office for Africa (WHO/AFRO), during the 48th Regional Committee meeting (resolution AFR/RC48/R2), adopted a strategy for developing and implementing comprehensive and integrated national public health surveillance and response systems.

In October 2000, the Regional Director set up a task force to provide policy and strategic advice on the implementation of the Integrated Disease Surveillance and Response (IDSR) in the Member States. The members of the IDSR Task Force are representatives from Member States, WHO and partners involved in disease surveillance and response. Between 2000 and 2005, the secretariat organized the annual IDSR Task Force meetings. The terms of reference of the IDSR Task Force are as follows:

- > To review, annually, regional progress in the implementation of the IDSR;
- **>** To approve the IDSR plan of action and its budget based on the recommendations of the Task Force;
- To contribute to the identification and mobilization of resources (human, material and financial) for IDSR implementation in the African Region;
- > To promote the timely exchange of information on IDSR among partners;
- To propose recommendations to the Regional Director on how to improve the implementation of the IDSR strategy;
- **>** To advocate for further IDSR implementation.

After 15 years of limbo, the secretariat convened the 6th IDSR Task Force meeting in Entebbe, Uganda from 19 to 22 September 2017 with the overall objective of providing strategic direction for the scale up of the IDSR in the WHO African Region. The specific objectives of the meeting were:

- To review progress in the implementation of the IDSR strategy over the last decade and make recommendations for priority interventions;
- To discuss the mobilization of technical and financial resources required for both the regional and national level and recommend ways for improving the coordinated use of IDSR resources;
- To recommend actions for strengthening national IDSR coordination mechanisms;
- To advance measures to promote the exchange of information on IDSR among participating agencies and Member States.

A total of 65 participants attended the meeting. They comprised national ministry of health IDSR focal persons from 41 Member States, nine partners, including US CDC, USAID, FAO, Africa CDC, UNICEF, AFENET, WAHO, ECSA-HC and Public Health England and 15 experts from the three levels (country, region, HQ) of the WHO. The Honourable Minister of Health, while thanking WHO for organizing the Task Force meeting, said she was happy that this second task force meeting was being held in Uganda, after the one of 2005. She stressed the importance of addressing the challenges impeding the implementation of IDSR in the African Region. She highlighted that the meeting offers an opportunity for the different experts to discuss: i) coordination mechanisms; ii) collaboration among relevant sectors and partners; iii) cross-border surveillance; iv) exchange of information and best practices; and v) sustainability of the IDSR implementation.

The IDSR e-Learning course, which is an electronic training tool, was officially launched during the meeting and is accessible using the following link:

- Course from WHO Health Security Learning Platform
- Step 1: Create an account with the link below:
- https://extranet.who.int/ads/adswebinterface/create.aspx
- (Keep your username and password so that you can retrieve them easily. You will need them to log on to the learning platform).
- Step 2: Click on the following link to access the e-learning course:



• https://extranet.who.int/hslp/training/course/view.php?id=119

Course from US-CDC Platform

https://idsr.mlearning.com/cs/onboarding/

Country Presentations on the progress of IDSR implementation over the last decade

Country presentations to share best practices were made by: Uganda, Ghana, Madagascar, Liberia, Democratic Republic of the Congo (DRC), Sierra Leone, South Sudan and South Africa. The key lessons learnt included the following:

- **IDSR** implementation requires multisectoral approach and strong collaboration between all stakeholders;
- Ocontinuous monitoring and supervision is necessary for rapid corrective action and motivation of health workers;
- Capacity building is the backbone of integrated disease surveillance;
- Sovernment commitment is essential for sustainable and effective results;
- Ocommunity involvement in disease surveillance is critical for early detection of public health events;
- Strategic and efficient preparedness is crucial to redoing attributable morbidity and mortality;
- Need to strengthen Field Epidemiology Training Programme (FETP);
- It is important to strengthen the laboratories and decentralize laboratory services though strengthening of human capacity at different levels of health system;
- Event-based surveillance needs to be implemented to complement indicator-based surveillance;
- Robust community surveillance is required;
- Simulation exercises are necessary to test the functionality of systems;
- AMR surveillance requires designation of a focal point on AMR, establishment of confirmatory facilities for priority pathogens and development of standards and policy;
- Share AMR data with stakeholders and partners;
- > There is need for regular dissemination of surveillance and response information products.

WHO and Partner presentations

WHO/AFRO provided an overview of the following:

- Existing strategies and frameworks for strengthening preparedness in the WHO African Region;
- Partnership for IDSR Implementation: Lessons learnt from the JEE.
- The Africa CDC presented its vision and mandate:
- To contribute to achieving peace and security as well as political and socioeconomic integration in Africa;
- To promote and defend African interests and democratic institutions, governance, and human rights.
- WAHO presented its action in IDSR implementation:
- IDSR activities focusing on the West Africa Regional Disease Surveillance (WARDS) project;
- Capacity building through training, and developing national health plans in close collaboration with relevant partners;
- Cross border meetings to strengthen border surveillance;
- Need for regional solidarity fund that is readily and easily accessible;
- Need for national and regional teams that can respond immediately.



The following recommendations were made at the end of the deliberations: Recommendations to Member States:

IDSR & Health System Strengthening

- Develop a National Action Plan for Health Security (NAPHS), using a one-health/ multi-hazard approach.
- Strengthen the implementation of event-based surveillance and community-based surveillance system to complement indicator-based surveillance for early notification and timely detection of public health events.
- Invest domestic resources in the implementation of IDSR through allocation of flexible funds or a budget line to guarantee sustainability.
- Use innovative methods to mobilize resources for IDSR scale up.

Cross-border initiatives, intersectoral collaboration and coordination

- Implement frameworks and tools for strengthening cross-border collaboration and coordination.
- Carry out joint planning, implementation, monitoring and evaluation of cross-border activities.
- Joint cross-border simulations to enhance surveillance and response capacities.

Capacity building for IDSR

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- Introduce revised IDSR into pre-service curricula of health training institutions in order to make available core trained resources.
 - Support implementation of IDSR and IHR curriculum in public health training institutions by 2019.

E-Surveillance implementation and sustainability

- Develop a legal framework to promote e-Surveillance.
- Develop Monitoring and Evaluation framework and reporting tools for e-surveillance.

Information products development and dissemination

• Establish policies for information products.

Key Performance Indicators on IDSR and IHR

- Implement event-based surveillance (EBS) using revised IDSR.
- Strengthen IHR coordination and Monitoring and Evaluation.

WHO and Partners

- Finalize and disseminate the 3rd edition of IDSR guidelines and tools by end of 2018.
- Develop and disseminate Standard Operation Procedures (SOPs) for guiding IDSR coordination mechanisms taking into account the One and Multi-risk approaches by the end of 2018.
- Develop and support implementation of framework and tools for strengthening cross-border collaboration, coordination and interoperable e-tool within One Health by 2019.
- Hold IDSR task force meeting every two years.
- Disseminate the relevant information products to facilitate timely sharing of information among Member States and relevant stakeholders.
- Support Member States to develop, monitor and evaluate the implementation of national action plans.
- Establish a regional and subregional partnership coordination mechanism.
- Establish a regional health workforce to respond to outbreaks and health emergencies promptly.

INTRODUCTION

1.1 Background

In response to the frequent outbreaks of preventable diseases in the African Region, the Integrated Disease Surveillance and Response (IDSR) strategy was endorsed by Member States in September 1998. IDSR aims to improve the availability and use of relevant data for public health action at all levels of the national systems.

For the last 20 years, IDSR has provided a framework for improving disease surveillance and response capabilities in the WHO African Region. To assist countries in its implementation, the WHO Regional Office for Africa and its partners have produced a number of guidelines and tools to provide countries with the technical elements necessary to strengthen IDSR across all levels. These include: the 2010 IDSR technical guidelines; the IDSR training modules, a district data analysis book, priority monitoring and evaluation (M&E) indicators; Community-based surveillance, and Community-based surveillance training manual.

To date, 44 of the 47 Member States have adapted the IDSR technical guideline 2010 and 38 of them have completed all the processes of IDSR implementation (from the adaptation to training at district level). So far, 37 countries are producing regular epidemiological information products. Further, since 2010, over 23 567 public health workers have been trained on IDSR. In 2016, a total of 3,720 out of over 5,579 districts in 47 countries reported on a weekly basis data on notifiable diseases.

Despite the progress made in strengthening national public health surveillance and response systems, very few countries have established the mechanisms and resources needed for integrated surveillance and timely response to public health events. Furthermore, the unprecedented Ebola virus epidemic in West Africa and the 2016 Yellow fever outbreak in Angola and the Democratic Republic of the Congo demonstrated the weakness of the surveillance system in the affected countries and lack of preparedness for public health threats.

An IDSR task force was established in 2000 to provide oversight in the scale up of IDSR. Since 2002, WHO has organized periodic IDSR task force meetings to provide an opportunity for partners to engage guidance on IDSR strategic direction and implementation. The IDSR task force include: national governments, agencies and professional organizations who share with WHO the vision, goals and objectives of the IDSR strategy. Task Force meetings will be an opportunity for partners to engage in useful dialogue on IDSR-related topics and to provide AFRO with advice, recommendations and suggestions for programme direction and sustainability.

Following the revision of the IDSR guidelines and tools, the WHO Health Emergencies programme plans to revitalize the IDSR task force. To that end, a task force meeting was held from 19 to 21 September 2017 in Entebbe, Uganda, including a partners' meeting. This meeting offered the opportunity for the official launching of the IDSR e-Learning.

1.2 Objectives and expected outcomes

1.2.1 General Objective

The overall purpose of the meeting was to provide strategic direction for the scale up of the IDSR guidelines and tools in the WHO African region.

1.2.2 Specific Objectives:

The specific objectives were:

- To review progress in the implementation of the IDSR strategy over the last decade and make recommendations for priority interventions;
- To discuss the mobilization of technical and financial resources required for both the regional and national levels and recommend ways for improving the coordinated use of IDSR resources;
- To recommend actions for strengthening national IDSR coordination mechanisms;
- To advance measures to promote the exchange of information on IDSR among participating agencies and Member States.

1.2.3 Expected Results:

The desired results for the meeting were as follows:

- Stakeholders sensitized on the IDSR technical guidelines and the rational for its revision;
- Lessons learnt and best practices in IDSR implementation over the last decade shared;
- Member States identified set of recommendations for effective coordination mechanisms and strategic direction of IDSR implementation;
- Consolidated recommendations for increasing partnerships and mobilizing resources to sustain IDSR Implementation.

1.3. Methodology of the Meeting

The meeting entailed a three-day technical meeting and a two-hour long partners' meeting. Information sharing was in the form of presentations in plenary sessions followed by group discussions.

OPENING CEREMONY

IDr Anne Nakinsige, Senior Medical Officer in charge of surveillance in the Ministry of Health, chaired the opening ceremony, which was marked by two speeches, one by the Honourable Minister of Health, Dr Jane Ruth Aceng, and the other by the WHO Officer in Charge (OIC) for Uganda, Dr Mariam Nanyunja.

In her opening speech, *Dr Jane Ruth Aceng*, welcomed participants and thanked WHO for organizing this meeting. She said she was happy that this second task force meeting was being held in Uganda, after the one of 2005 to address the real challenges impeding the implementation of Integrated Disease Surveillance and Response in the African Region. Indeed, since its adoption in 1998, IDSR implementation has encountered a number of challenges, despite the progress made. She observed that the meeting offered an opportunity for the different experts to further discuss coordination mechanisms, collaboration among the relevant sectors and partners, cross-border surveillance, exchange of information and best practices, and sustainability of IDSR implementation.

Dr Miriam Nanyunja, WHO Officer in Charge (OIC) for Uganda, welcomed the participants and emphasized the importance of the objectives of the meeting, which are in line with the regional strategy for health security and emergencies. She underscored the need for further efforts to enable countries to reach the key performance indicator, aims at ensuring that over 90% of Member States are implementing IDSR, including eventbased surveillance systems with at least 90% country coverage by 2019. She also stressed the importance of recommendations of the meeting.

Dr Yoti Zabulon, standing in for the Regional Emergencies Director, WHO Health Emergencies Programme at the Regional Office for Africa, opened the day by presenting to participants the rationale and objectives of the meeting. He stressed the importance of the current IDSR Task Force meeting, which has been missing for 15 years since the last IDSR Task force meeting held in 2005. He emphasized that successful IDSR requires strong country leadership, and ownership. Dr Yoti informed the delegates that the general objective of the task force meeting was to provide a strategic direction for scaling up the IDSR guidelines and tools in the WHO African Region. He also mentioned that the new IDSR technical guidelines would emphasize the "Allhazard approach" and the "One-health approach".

To summarize, all the representatives of international organizations who spoke during the opening ceremony noted that the meeting was timely and justified. They expressed satisfaction with the holding of this important meeting and underscored the relevance of IDSR implementation in ensuring effective and adequate implementation to address current regional and global health security challenges.

TECHNICAL SESSIONS

As per the planned objectives, the first technical sessions reviewed country progress in implementation of the IDSR strategy over the last decade. These experiences informed pertinent recommendations for strengthening national IDSR coordination and promoting the exchange of IDSR information among Member States and agencies. The discussion was preceded by the following presentations: i) Overview of existing and new strategies and preparedness in the WHO African Region; ii) Implementation of Global Health security in the WHO African region; iii) Preparedness and Response activities in the context of the One Health approach; iv) Partnership for IDSR implementation; v) Africa CDC partnership for strengthening preparedness and response; v) WAHO action related to IDSR implementation and way forward; vi) IDSR implementation: lessons learnt, best practices and way forward from Cameroon, the Democratic Republic of the Congo (DRC), Ghana, Liberia, Madagascar, Sierra Leone, South Africa and South Sudan.

2.1 Objective 1: To review progress in the implementation of IDSR strategy over the last decade and make recommendations for priority interventions

2.1.1 Overview of existing and new strategies and framework for strengthening preparedness in the WHO African Region

Dr Ali Ahmed Yahaya, Acting Country Preparedness and IHR Programme Manager from WHO Health Emergencies programme in the Regional Office for Africa presented an overview of existing and new strategies and preparedness in the African Region. He started by stating that the Region records more than 100 public health events annually. Therefore, the mission of WHO Health Emergencies programme is to protect health and save lives during outbreaks and emergencies through the establishment of the same organizational structure at headquarters and in regional and country offices. Furthermore, he underscored that several existing global and regional strategies and frameworks offer an opportunity to holistically prepare and respond to these emerging public health events and implement these strategies in order to improve health security and

emergencies in the Region. He also stressed the crucial need to adopt the following approaches:

- IDSR, IHR and Disaster Risk Management (DRM) implementation;
- Implementation of all-hazard approach and one health approach;
- Country ownership and leadership;
- Strengthening partnership;
- Fostering intersectoral collaboration.

The new IHR Monitoring and Evaluation framework provides an overview of approaches to review the implementation of country core public health capacities. The framework comprises four components: i) Annual Reporting (AR) to the World Health Assembly (WHA); ii) After Action Review (AAR); iii) Simulation Exercises (SIMEX); and iv) Joint External Evaluation (JEE), which will serve as reference for the development of the multisectoral National Action Plan for Public Health Security (NAPHS).

Preparedness and Response activities in the context of One Health Approach require collaboration between WHO, FAO and OIE and this tripartite alliance emphasizes the need to define the drivers of zoonotic and non-zoonotic diseases and to invest in building sustainable capacity in early warning, reporting and response to diseases, conditions and events.

2.1.2 Implementation of the Global Health Security Agenda in the WHO African Region: main achievements, issues and challenges and way forward

Dr Olga L Henao, Division of Global Health Protection, Centers for Disease Control and Prevention, emphasized that with increased connectivity and mobility comes an increased risk of infectious disease spread. She also underlined that global health risks have increased with the emergence of new organisms, drug resistance, and intentional events. CDC is working closely with countries to implement the Global Health Security Agenda (GHSA).

The implementation of the Global Health Security Agenda (GHSA) offers an opportunity to strengthen IDSR, laboratory preparedness and response since it has shared

points with effective strengthening of IHR core capacities by supporting JEE. The GHSA intervenes in three main areas, which are prevention, detection and response. The Core functions of IDSR really help and are crucial for the GSHA implementation in the sense that IDSR overlaps with the GHSA and has supported various countries to undertake JEE. CDC has collaborated with WHO/AFRO in the development of the IDSR framework and several activities have now incorporated IDSR strategies into their technical assistance initiatives. for Major Animal Diseases, including Zoonoses (GLEWS) that is the joint FAO, OIE and WHO tool for quickly sharing information and assessing health events of potential international concern. It relies on the existing surveillance and reporting systems in countries. In addition, the Crisis Management Centre-Animal Health (CMC AH) offers technical and operational assistance and promotes the Good Emergencies Management Cycle (GEMC), which includes preparedness, prevention, detection, response and recovery. Lastly, he presented



Figure 1: Community-based surveillance volunteers in Ghana

2.1.3 Preparedness and Response activities in the context of One Health approach

Dr Charles Bebay, the subregional One Health Coordinator for West and Central Africa Preparedness and Response activities in the context of One Health Approach, reported on the collaboration between WHO, FAO and OIE. This tripartite alliance emphasizes the need to define the drivers of zoonotic and non-zoonotic diseases and invest in building sustainable capacity in early warning, reporting and response to diseases events. Preparedness and Response activities in the context of one Health Approach global health security require broader collaboration and coordination across sectors. He went on to explain the Global Early Warning System the previous joint events and disease management and missions mainly through FAO animal health service in Nigeria, Cameroon and Togo. Examples of diseases include Avian influenza H5N1, Avian influenza H7N9, Ebola-Reston virus and the Pandemic influenza H1N1, including the Rift Valley fever, for which simulation exercises have been organized. He also stressed the need for capacity building at the national and local levels and knowledge sharing among the different sectors and countries.



2.1.4 IDSR implementation: lessons learnt and way forward

Dr Ben Masiira, Epidemiologist, African Field Epidemiology Network (AFENET), gave a historical background on surveillance of diseases before the adoption and implementation of IDSR in 2000. He presented the role of AFENET in disease surveillance and through collaboration with different partners, including WHO, CDC and the Ministry of Health. He also shared the following lessons from IDSR implementation:

- IDSR implementation requires multisectoral approach
- IDSR implementation requires strong collaboration between all stakeholders
- Continuous supervision
- Capacity building
- Government and partner commitment
- Community involvement in disease surveillance is critical.

He went on to outline the challenges met: high turnover of trained health workers, inadequate training or mentoring of many staff, inadequate funding of IDSR activities at district and health facility levels, irregular supervision of health facilities and lack of key logistics such as motorcycles and full personal protective gears (PPEs). To improve surveillance and response, he made the following proposals:

Continuous monitoring and supervision of IDSR implementation; regular provision of practical materials needed to implement IDSR, such as IDSR components in the pre-service curricula of all health workers; utilization of the Field Epidemiology Training Programme (FETP) to strengthen IDSR competence and performance at all levels; regular feedback from national to district level; support for all levels to conduct data analysis and introduction of a special budget line for IDSR activities at all levels.

2.1.5 Community-based surveillance: lessons learnt and best practices

Dr Franklin Asiedu-Bekoe, Head, Disease Surveillance Department, started by giving a background of community-based surveillance in Ghana, which began in 1988 as one of the strategies to eliminate guinea worm. This served as basis for building surveillance of other priority diseases. The strategies include training and retraining of volunteers, quarterly meetings for community volunteers, community sensitization and education, monitoring and supervision of volunteers, national coordination, supervision and monitoring and offer of logistics support like the CBS Register, transport facilities (bicycles, motorcycles, vehicles) as well as motivational items.

These efforts contributed to the elimination of guinea worm in 2015 and the last Polio case in 2008. He further pointed out that there are still challenges, the main ones being the issue of sustainability since the CBS Volunteer is not a job and the absence of clear structures for community-based surveillance. Other challenges include: lack of supervision, lack of funding for CBS activities, inadequate data and low completion rates, high attrition of volunteers and lack of training for volunteers, lack of clarity in the concept of signals, lack of one health approach mainly on human health and disease-based data or events. In order to strengthen CBS, he made the following proposals as the way forward:

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- Audit and update the Community-Based Surveillance Volunteer (CBSV) Roster;
- Review meeting of the CBSV programme;
- Define a list of priority diseases for CBS under IDSR;
- Identify non-incentive-based motivation for community health workers (CHW) and ways to integrate them into existing systems;
- Finalize the list of signals for priority diseases.

2.1.6 Event-based surveillance: lessons learnt and best practices

Dr Mireille Randria, Chief, Epidemiological Surveillance, presented the context of Madagascar, which is marked by a number of challenges with regard to epidemiological surveillance, leading to low performance indicators such as:

- weak leadership and governance owing to frequent organizational chart changes within the Ministry of Health, thereby making it difficult for the entities in charge of epidemiological surveillance to establish their leadership;
- weak integration, with several specific directorates/ programmes operating in the surveillance sector;



lack of human resources, especially trained personnel;
 geographical isolation in the absence of means of communication, etc.

She mentioned that the two IDSR approaches are in place in Madagascar: the indicator-based surveillance, which is mainly for communicable diseases because of high burden of morbidity and mortality and the event-based monitoring (EBS), which is carried out informally, without any well-defined structuring. She emphasized that this approach is still new in the country. The implementation of Event-based surveillance in Madagascar is characterized by a changing environment, marked by population explosion and galloping urbanization, population displacements, insular situation in Madagascar, existence of endemic anthropozoonoses such as plague, flu, and rabies. However, the efficient network of community relay agents in the country as boosted the experimentation of the EBS. The different ways to carry out EBS were highlighted as follows: i) usual weekly surveillance report received in hard copies; ii) community surveillance: item "event of importance in public health"; and iii) information intelligence: media, rumours.

Following WHO/AFRO recommendations and given all the constraints in surveillance in Madagascar, eSurveillance offers an opportunity to optimize data collection for immediate action. Using the electronic tablet Androïd, real-time surveillance captured 28 diseases/events under surveillance and generated an automatic alert (1 case or according to pre-calculated thresholds). For the eSurveillance coverage, all the public health facilities of the 27 health districts of 12 Regions of Madagascar are involved, with a completeness rate of 84% in 2017.

She outlined the difficulties encountered in the implementation of EBS, which include:

- > Weak level of Completeness;
- Low understanding of EBS by peripheral or even central actors;
- Poor competence of staff in management and use of data: several events remain unexplored;
- Deficiency in supervision;
- Difficulty in the telephone network coverage in some areas, leading to delays in or even lack of transmission of data;
- Delay in investigation of the 28 events due to an electronic reprogramming.

2.1.7 IDSR scaling up: lessons learnt and best practices

Mr. Thomas K. Nagbe, Director, Infectious Disease and Epidemiology, shared the experience of Liberia in IDSR and health system. Nine pillars were identified to prepare and respond to emergencies and outbreaks three of which are linked to the Ebola Virus Disease (EVD) outbreak experience. The country used the opportunity of the EVD epidemics, which triggered the investment plan for building a resilient health system. The following were highlighted as best practices and lessons learnt:

- Existence of an IDSR operational guideline in all health facilities;
- Production and dissemination of regular IDSR information products through different channels, such as the weekly early warning and IDSR bulletin, the weekly laboratory and diagnostic analysis, the monthly IDSR supervision monitoring and performance reports, and the half-yearly IDSR bulletin;
- Conduct of simulation exercises in every border district;
- Improvement in responding to health emergencies and outbreaks (90% of outbreaks with investigation reports in 2017 compared to 53% in 2016);
- Routine monitoring of IDSR Performance Indicators.

Issues and challenges to be addressed include the following:

- Strengthening syndromic surveillance (CEBS) through community engagement;
- Data management and harmonization;
- Network connectivity in some areas for e-Surveillance rollout;
- Real-time laboratory results for outbreak detection;
- Strengthening one health platform for holistic approach to control priority zoonotic diseases, among others.



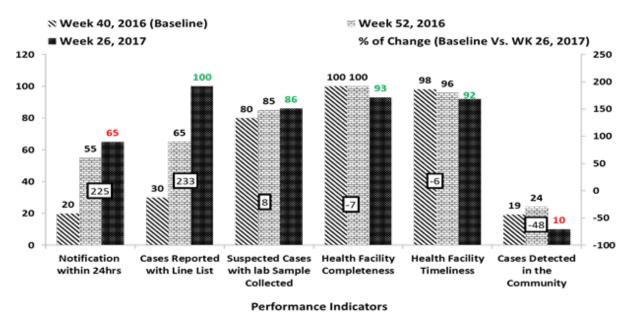


Figure 2: Comparison of IDSR Performance Indicators between the baseline in 2016 during week 40 and week 26 in 2017

2.1.8 Surveillance of the AMR: lessons learnt and best practices

Ms. Tsakari Furumele, from the national Department of Health, Republic of South Africa, emphasized the grave outcome of drug resistance by quoting Alex Flemming, "The thoughtless person playing with penicillin treatment is morally responsible for the death of a man who succumbs to penicillin resistance organism". She pointed out that AMR does not respect phylogenetic, geographical or ecological borders. Therefore, the efforts to monitor AMR should be global and multisectoral. She presented the AMR organization structure, the epidemiological situation and programme limitations in South Africa. She mentioned two main methods of surveillance: LARS laboratory-based Anti-Microbial surveillance, which was started in 2010 and the e-Surveillance, using sentinel sites (hospitals), which began in 2013.

She expounded on the GERMS surveillance programme and the four different groups of pathogens that are monitored:

- Epidemic-prone infections, for example cholera, typhoid, meningococcocal
- > HIV-related Opportunist Infections
- Vaccine-preventable, for example Rotavirus, H. influenza
- Hospital-related illnesses.

Lastly, she mentioned that South Africa is also incorporating the Global Antimicrobial Resistance Surveillance System (GLASS) model recommended by WHO. This model combines patient, laboratory and epidemiological surveillance data to enhance understanding of the extent and impact of AMR on populations. She recommended that countries should consider gradual implementation of the surveillance standards proposed in this manual, taking into account their priorities and resources.

2.1.9 Outbreak investigation and response: lessons learnt and best practices

Dr Gaston Tshapenda, Chief, Noncommunicable Disease Division, Democratic Republic of the Congo (DRC) presented first the background of the country. The DRC adopted the Integrated Surveillance in September 1998 and has been implemented since 2000. The adaptation of the IDSR Guideline was conducted in 2002 and later in 2010. Since 2015, 17 priority diseases and events are reported weekly. He explained the good practices using IDSR for Ebola and Polio surveillance throughout the country, including sentinel sites for yellow fever surveillance.



Strategies adopted by the division of surveillance at the Ministry of Health (MoH) to achieve good results include:

- Surveillance, using Sentinel sites in Kinshasa;
- Setting up of Provincial Surveillance System (Provincial Medical Inspections, Health Districts, Health Zones);
- Close collaboration with all partners: United Nations Organizations, international and national Nongovernmental Organizations (NGOs);
- Early warning system for timely and immediate epidemics notification by NGOs, churches, EPI coordination, monitoring rumours;

The strategies implemented contributed to reduce the notification timeline of outbreaks from 5 months previously to less than 15 days for the last Ebola Virus Diseases outbreak.

The MoH set up a national coordination committee, which coordinated the response of all major outbreaks and events.

Dr Gaston outlined the lessons learnt from the recent Ebola and Yellow fever outbreaks, namely:

- Community surveillance is a key contribution to integrated surveillance;
- The mobile laboratory is a key component for disease confirmation and control during outbreaks and allows appropriate actions in the field;
- A critical mass of trained personnel is necessary to support surveillance activities.

He, however, stated that the main challenge was lack of resources and emergency funds to conduct investigations and respond promptly when events occur. He ended the presentation by recommending that countries should intensify preparedness activities to ensure better management of epidemics and health-related events (training of personnel, surveillance, intervention kits, infection control and simulation exercises) and strengthening of community-based surveillance. 2.2 Objective 2: To recommend actions for strengthening national IDSR coordination mechanisms

2.2.1 Partnership for IDSR implementation

Dr. Ambrose Talisuna, Regional Advisor, Health Security in the WHO Health Emergencies programme, WHO Regional Office for Africa, presented a general overview of emergencies that have occurred in recent years. He emphasized that 78% of the global emergencies occur in Africa and most of them are infectious. Presenting a situational analysis of outbreaks in Africa, he pointed out that emerging and reemerging infections are of particular concern, as the number of victims has increased over the years. He enumerated the sources of IBS data such as the media, the health personnel, the game ranger, a farmer that may serve as early indicators of an outbreak. He went on to explain the existing frameworks and guidelines (IHR, IDSR, DRM), using the one health approach. He indicated that the role of IHR is to enable the international community to detect, assess, notify, report and respond to public health emergencies of international concern, which include human infectious pathogens, food safety, zoonoses, radio nuclear hazards and chemical hazards. The key to saving lives in an outbreak is early detection, which would require ample preparation in each country so that in the event of an outbreak they are prepared to act or have the capacity to detect threats early and save lives.

The JEE offers an opportunity to assess the country's capacity and preparedness to handle outbreaks. So far, 22 countries have conducted JEE while others have requested support to do so. Eight countries are yet to consider the JEE, and three countries have already developed NAPHS. He concluded by stressing the need to strengthen health systems, IDSR, and build IHR core capacities, using horizontal approaches to ensure sustainable and resilient health systems. In addition to formulating strategies for strengthening IDSR and IHR, core capacities should be built, using strategies aimed at achieving Universal Health Coverage (UHC) 2030 and Sustainable Development Goals (SDG-3) while strengthening partnership at all levels, both internationally and within countries across the different sectors, in collaboration with all stakeholders. 2.2.2 Partnership for strengthening preparedness and response.



2.2.2 Partnership for strengthening preparedness and response

Dr Ahmed Zaghloul, Medical Epidemiologist, Africa CDC, in his presentation outlined the vision, mandate to achieve peace and security in Africa, political and socioeconomic integration, promote and defend African interests as well as democratic institutions, governance, and human rights. The Africa CDC has a mandate in 55 African countries. He also explained the operational model of the Africa CDC, as well as the different collaborating centres with Regional Integrated Surveillance and Laboratory Network (RISLET) through the collaborating regional centres for disease control, which are located in Kenya, Nigeria, Zambia, Gabon and Egypt.

He highlighted the five strategic pillars and priority activities spread over a period of two years, namely:

- Surveillance and Disease Intelligence
- Preparedness and Response
- Data Laboratory systems and networks
- Information systems
- Public health research and institute in each country.

2.2.3 WAHO action related to IDSR implementation and way forward

Dr Félicité Chokki-Laleye, Focal Point, Epidemic Outbreak and Health Emergencies, West African Health Organization (WAHO), started by introducing WAHO, as the health institution of the Economic Community of West African States (ECOWAS). The mission, organizational chart and the different departments were presented. WAHO is composed of 15 countries in the West African region.

IDSR activities implemented with funding from the WARDS project include: revision of the Gambia IDSR technical guidelines, capacity building through training, developing national health plans, supporting the implementation of IHR in Mali, Senegal and Cabo Verde and conduct of cross-border meetings to strengthen border surveillance.

She also communicated plans for establishing a regional biobank.

Despite all the positive efforts and lessons learnt following the Ebola outbreak, the current status quo is that the West African region is still vulnerable to outbreaks. As evidenced by the recent Lassa fever outbreaks, the systems are still weak in terms of surveillance, preparedness and laboratory confirmation.

She stressed the need to mobilize funding to act swiftly and strengthen a regional solidarity fund in West Africa, which is often not easily accessible. The way forward includes setting up a national and regional teams that can respond promptly to epidemics, increasing the regional funds.

2.2.4 Official launch of the IDSR e-Learning course

Dr Boukare Bonkoungou, Officer in charge of Training and Capacity Building, WHO Health Emergencies Programme, WHO Regional Office for Africa, presented the background and overview of the IDSR e-Learning course. Then, he made a brief demonstration of how to access the IDSR e-Learning course, which was jointly developed by WHO/AFRO, US-CDC and USAID thanks to a tri-partite and fruitful collaboration that started in 2011. This online course addresses challenges and limitations of the face-to-face version of the training. In the era of technological advancement where computers and internet are becoming increasingly accessible and widely available, there is an opportunity to adapt the paper to electronic version of the course. IDSR e-Learning was conceived and developed based on lessons learnt and best practices of other similar existing courses. Prior to its finalization, a thorough technical review and quality control were conducted by experts and resource persons at WHO, CDC and USAID, while on-site and virtual testing was carried out before implementation. The advantages of the e-IDSR course is that it is paperless and at the same time comprehensive. In fact, there has been increased coverage since the health workers in remote areas are not excluded and lots of resource materials can be downloaded and exploited. The Chair officially launched the IDSR e- learning and called on all participants to disseminate the information as well as raise awareness among colleagues and health workers at large.



Below are the instructions to access the e-learning course:

On the US-CDC platform https://idsr.mlearning.com/cs/onboarding/ On the WHO HSLP platform

Step 1: Create an account with the link below: https://extranet.who.int/ads/adswebinterface/create.aspx (keep your username and password so that you can retrieve them easily. You will need them to log on to the learning platform). Step 2: Click on the following link to access the e-learning course: https://extranet.who.int/hslp/training/course/view.php?id=119 (NB. If you are unable to log on to your account, click on the "Logon" button and then use your username and password) Step 3: Provide the following Enrolment Key (for country 1 – ABC)_as requested: Country 1-ABC When you are connected with your user account, you can also access: - the Portuguese version: https://extranet.who.int/hslp/training/course/view.php?id=118 - the English version (no SCORM yet, no picture on the landing page): https://extranet.who.int/hslp/training/course/view.php?id=120



2.3 Thematic Sessions

Participants were divided into groups to present and discuss 6 topics during back-to-back days in the following thematic areas:

- 1. Integrated Disease Surveillance and Response and Health System Strengthening;
- 2. Cross-border collaboration for preparedness and response activities and Intersectoral collaboration and coordination before and during public health event (PHE);
- 3. Capacity building for IDSR, including EBS;
- 4. e-Surveillance implementation and sustainability;
- 5. Information products development and dissemination;
- 6. Key Performance Indicators on IDSR and IHR.

Each of the topics was provided with orientations composed of: i) overview on the thematic break-out session; ii) objectives of the group; iii) expected outcomes and iv) issues to be discussed in the plenary session.

Each group was asked to nominate a moderator and a rapporteur to lead the respective group discussion and present the outcomes to the plenary session. Using a participatory approach and country-based examples, the delegates discussed the issues, challenges, threats, strengths and opportunities in the region and through consensus came up with practical solution options and alternatives. Each group was allocated at least 40 minutes for the discussion. The final 20 minutes of the breakout session were allocated to developing the respective group presentations.



The summary of each group discussions is presented below:



Figure 4: Working group discussion on "IDSR and Health System Strengthening"



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| IDSR and Health System S | Strengthening | | |
|---|--|---|---|
| Challenges | strengths and opportunities | Solutions | Recommendations |
| Governance: weak leadership at ministries Inadequate human resources especially in peripheral areas | Political will, there is a guideline and many have adapted There are JEE tools that help identify the weaknesses of health systems | Set up a suitable coordination of IDSR Institutionalize community surveillance: need motivation, train personnel | Set up the DHI communication platform Encourage in-country mapping of resources for easy mobilization |
| Weak integration and are vertical, no linkage between the different systems | System in place DHIS2 | | Share technical reviews for example Nigeria's response to meningitis |
| Poor Infrastructure equipment and medicines stock outs and difficult access to resources | Community platform in existence | Set up mechanisms to quickly mobilize medicines, for example vaccines | |
| | Funds from partners, budgets that are set aside for emergencies | Strengthen the laboratory network especially at the peripheral levels. | |
| Unclear coordination factors, for example the one health coordination | | | |
| Cross-border collaboratio before and during PHE | n and response activiti | es and Intersectoral co | ollaboration and coordination |
| Weak internal coordination across different sectors especially on the ground | Designated border posts for IDSR at each | National coordination between different sectors | Working as a team |
| | | Protocols signed by the different nations | Strengthening/establishing port authorities and health facilities along the borders |
| Lack of information sharing at all levels especially on borders | Implementation of the one health approach | Establishing M&E mechanisms | Empowering or training across border staff |
| | Many partners exist | Training at border | |



| | | posts among | | | |
|---|--|---|------------------------|------|---------|
| | | collaborating | | | |
| | | countries | | | |
| | Presence of one | Mechanisms of | | | |
| | stop border points | information sharing | | | |
| | | Involvement of the communities | | | |
| | Same population | Promote health | | | |
| | across borders | education across the borders | | | |
| | | Capacity building , from the lowest posts | | | |
| | | Joint simulation exercises | | | |
| No common policy | | | | | |
| Political instability / | | Legal frame work | | | |
| difference | | for data sharing | | | |
| Lack of transparency/ political interference | | Multisectoral approach | | | |
| | | | | | |
| Capacity Building for IDSI | _ | N An Iva it was a slate wa | late metion | | |
| Inadequate involvement of the | E-Surveillance training module is | Make it mandatory for health workers | Integration curriculum | into | medical |
| private sector | available | to have IDSR training | curriculum | | |
| High attrition rate of health workers | Trained health workers to roll out IDSR are available | | | | |
| | | | | | |
| Inadequate funds at all levels | Partnerships exist, for example GHSA, WAHO, IGAD, REDISSE project | | | | |
| Low involvement of | | | | | |
| clinicians in big hospitals; more case | | | | | |
| oriented | | | | | |
| Minimal/Inclusion of IDSR , the trainers are | | | | | |
| | | | | | |



2.4 Objective 3: To recommend actions to promote the exchange of information on IDSR among participating agencies and Member States

2.4.1 Information products and documentation

Dr Pinyi Nyimol, Director-General, Preventive Health Services, South Sudan, shared the experiences, bestpractices, and challenges for IDSR documentation and dissemination of information products. He presented an overview of the South Sudan demographics.

He presented the history of IDSR, which was implemented in all ten states and 80 counties in South Sudan. However, following the political instability in 2013, which led to displacement of people, the system was only functional in 30% of the states. The Early Warning and Response Network (EWARN) was, therefore, set up to cater for disease surveillance needs of displaced populations in seven conflict-affected states and 37 partner-supported health facilities. He highlighted the objectives of the Early Warning, Alert and Response System (EWARS), namely surveillance, alert management and outbreak response. EWARS enabled real-time indicator and event-based surveillance, including outbreak line listing.

He went on to explain how the flow of information for surveillance occurs from the local level (hospitals and health centres), after confirmation at the intermediate level, it is sent to the national level where it is assessed for notification and public health response and events notified to partners, for example WHO and other health and WASH cluster partners.

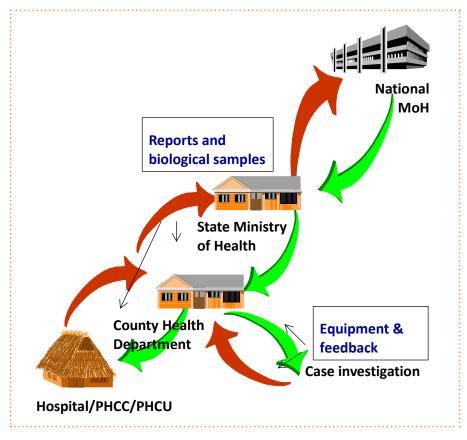


Figure 5: IDSR information flow in South Sudan



The main achievements notified are as follows: EWARS has been used since 2015 and 32 IDP highlighted increased access to areas with populations of humanitarian concern. By 2017, the use of EWARS increased the IDSR timelines and completeness of reporting by 73.4% and 75.5% respectively.

The challenges faced during implementation include: insecurity and restricted access, the highly reduced number of functional health facilities, sub-optimal penetration of telecoms infrastructure and the complex coordination environment. The lessons learnt from the implementation of EWARS in South Sudan were the ability to implement real-time reporting and analysis of epidemiological data; comprehensive data, including management of disease alerts and real-time outbreak line listing; automated information products including weekly epidemiological bulletins and data packs; and integration of other data types at health centre level.

He concluded by pointing out that investing in electronic reporting system is critical for enhancing progress towards attaining IDSR and IHR core competencies.



Figure 6: Electronic equipment required to implement EWAR in the context of IDSR



2.4.2 e-Surveillance implementation: lessons learnt and best practices

Dr Foday Dafae from the Sierra Leonean Directorate of Disease Prevention and Control shared lessons learnt and best practices for rolling out e-Surveillance in Sierra Leone. The country originally relied on paper-based forms for reporting both at national and district levels. However, several challenges were reported, including the fact that the system was labour intensive, slow reporting rate, with poor reporting timeliness, low health facility reporting rates, prone to errors, and lack of link to the national database, need for enormous physical space for storage, and difficulty in conducting M&E and conducting data quality assessment. To overcome these challenges, under the leadership of MOH and support from WHO, US CDC and e-health Africa, a move was made to upgrade to the e-IDSR, and the software based on DHIS2.

The implementation countrywide was done stepwise in two phases: the first was a pilot rollout, initially in 3 districts and later scaled up to 14 districts. Phase 2 from the lowest level of healthcare to the highest was completed in November 2016 and a total of 140 health workers were trained. He expressed his gratitude to the different partners who provided both technical and financial support, which facilitated the achievement of these results.

He shared the experiences of e-IDSR, and outlined the different input devices, ranging from phones, to computers and tablets. In addition, reporting is achievable offline by using SMS. He emphasized that training is key; there is also need for consensus among all stakeholders, for example mobile companies. Nationwide rollout of facility-level e-IDSR application and data is accessible on the web from anywhere.

He stressed the necessity for Interoperability with other MOH programmes and applications and bringing all partners on board to review the impact and sharing information.

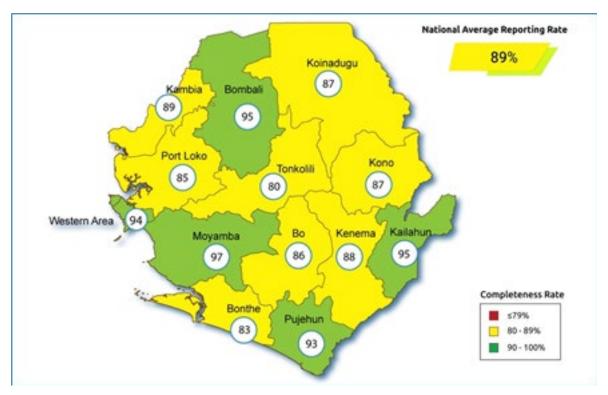


Figure 7: Intra-district health facility reporting rates before e-IDSR rollout in Sierra Leone, Week 1 – 33, 2016



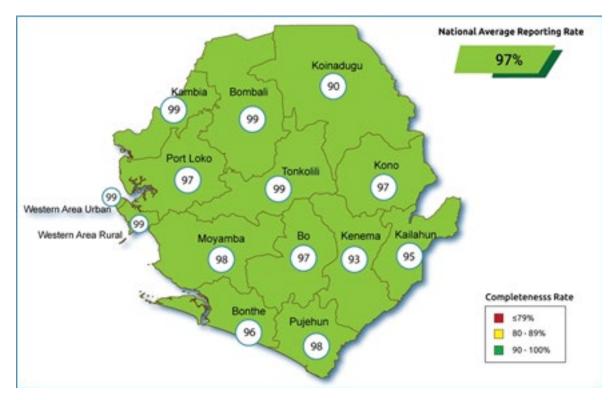


Figure 7: Intra-district health facility reporting rates before e-IDSR rollout in Sierra Leone, Week 1 – 33, 2016

During the discussions that followed the presentations by South Sudan and Sierra Leone, the participants

expressed the need for standardized guidance on the tools on implementation of e-IDSR, since the countries use different platforms. This is also necessary when moving towards harmonization. Data collection should take into account the one health approach so that data on other aspects like animal and agriculture may be captured. As this is being tested out in Sokoine University in Tanzania, we could probably learn from their experiences. It is important for countries to detect the link between surveillance and response and not just be content that countries can report that the indicators are all achieved.



Figure 9: English-speaking technical working group discussion on cross-border collaboration and response activities and intersectoral collaboration and coordination before and during PHE







2.5 Thematic Sessions

| e-Surveillance implem | entation and Sustainabili | ity: | |
|--|---|---|--|
| Most important issues and challenges | Critical Requirement for strengthening sustainable e- Surveillance | Recommended Solutions- Regional | Recommended Solutions-Countries |
| No interoperable e- tool to support e- Surveillance within the context of One Health (OH) | Country buy-in leadership (Political will) and strong partnership (PPP) | Develop interoperable e- tool to support e- Surveillance within the context of OH 2018 | Develop a legal framework that promotes and obligates e-Surveillance partners within the context of OH 2019 |
| No evidence-based strategy and policy frame work to support e- Surveillance implementation in the context of One Health | Clearly defined tools and reporting channels | Develop a strategic frame work to guide countries in the implementation of e- Surveillance: Strategy, tools, and standards by 2018 | Dedicated budget line for e-Surveillance by 2018 |
| No generic standard tool and software | Availability of technical guidance, strategies and follow up | Develop evidence/tested generic software by 2018 | Encourage and enhance the PPP for e- Surveillance by 2018 |
| No or limited local technical capacity (Development and Management) | Human resource training and usable ICT-Internet connectivity and infrastructure | Develop a generic M&E framework and establish mechanisms to track progress by 2018 | Strengthen human resource capacity (Development and Management) and ICT infrastructure in the context of OH by 2020 |
| Limited ICT infrastructure and lack of sustainability | Sustainable government funding to support scale up | Advocate for resources by 2017 | Develop relevant integrated reporting tools and monitoring |

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| financing | after pilot phase | | framework by 2018 |
|---|---|--|---|
| Accessibility to remote areas Lack of electricity Insufficient budget | Alternative measures for other sources of electricity | | Advocacy for internet coverage country wide Advocacy to MOH for a budget line on e-IDSR |
| Documentation and in | formation products | | |
| | | | |
| Weak health system (e-health, data quality, human resources, finances | Existing IDSR guidelines/training modules/DHIS2 | Establish/enforce policy of e-health, e-Surveillance and IT | Policies to harmonize e- Surveillance in countries |
| Current IDSR platform leaned towards IBS (Week EBS, and no feedback | Good partnership with partners/private sectors, e.g. Telecom companies | Improve health system (resource mobilization, training of human resources, power; infrastructure) | Develop Guideline and Indicators for e- surveillance implementation |
| No existing mechanism for data sharing across different sectors | Existing surveillance system in all countries in the regions | Harmonize/standardize e- Surveillance platforms to support one health and IDSR/IHR core function (nationally and regionally) | Harmonize/standard of e-surveillance platforms to involve OH and support IDSR/IHR core function |
| No existing models for data sharing and different sectors at different stages of health system development | Technological advancement regionally including skills development | Develop and disseminate guidelines for e- Surveillance | Improve health system (Resources, HR and Diagnostic capacity) |



(challenges of policy and legislation)

Different platforms across countries and no standardization for e-surveillance Existing other strategies like GHSA, IHR, One health

Establish e-surveillance indicators for monitoring

Develop and implement comprehensive one-Health Surveillance system

Training the entire health system (public, private)

Key performance indicators of IDRS and IHR

| Delay by Member States to adapt new IDSR Guidelines | Technical and financial support exist at WHO and among partners for IHR/JEE implementation | Advocate for government support and commitment towards IDSR & IHR implementation | Countries to use innovative methods to mobilize resources, including mainstreaming IDSR & IHR as line items in national budget |
|---|--|---|---|
| Inadequate resources required to adapt and roll out IDSR | Availability of IDSR Guidelines and tools | Resource mobilization from government and partners | WHO to orient NFPs on IHR core capacities, M&E framework and JEE process |
| Inadequate advocacy and government commitment towards IDSR and IHR implementation | Partnership exist to support implementation of IHR/IDSR e.g. GHSA, WAHO, IGAD, REDISSE project, DFID, CDC | Develop a common framework for EBS implementation | Strengthen IHR coordination and M&E |

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Lack of common framework in implementing EBS e-Learning platform for IDSR/IHR exist Orientation of NFPs on IHR and JEE

WHO to develop and provide countries with generic tools for EBS ,for example CBS guidelines, etc.

IHR not well understood, including NFP e.g. what are minimum capacities, JEE WHO to align JEE to M&E Framework

2.6 Meeting with Partners

2.6.1 Opening Remarks

The Chairperson, *Dr Yoti Zabulon*, opened the meeting by welcoming all partners and stressed that partnership is crucial to achieving Universal Health Coverage. He outlined the IDSR roadmap to cover 9 priority areas over the next two years. He underscored the primacy of stronger coordination efforts to improve partnerships and called upon

members to identify areas for aligning and supporting the different priority areas. He informed members that the 3rd edition of the IDSR technical guidelines, which are being finalized emphasizes the one health and all-hazards approach to surveillance and response, cross-border surveillance and Indicator-Based Surveillance (IBS). The revision was carried out through technical consultation and would be piloted in some countries, before improving and developing a final plan. Below are the 9 priority areas of the roadmap:



| Priority areas | Timeline |
|--|------------------------------|
| 1. Finalize the 3 rd edition of the IDSR technical guidelines covering: Indicator-Based Surveillance (IBS), Event-Based Surveillance (EBS), Community-Based Surveillance Cross-Border Surveillance, and Scale up of Electronic Surveillance supported by geographic information system (GIS) platforms | d 2, c |
| IDSR consultative meeting to review the draft IDSR Technical Guidelines (TG) | e November, 2017 |
| Finalize the IDSR TG | First Quarter 2018 |
| • Pilot IDSR TG in 6 countries | First Quarter 2018 |
| Disseminate the IDSR TG | Second Quarter 2018 |
| 2. Finalize the IDSR training modules | Second Quarter 2018 |
| 3. Finalize the SOPs for the IDSR coordination mechanisms taking into account the existing frameworks - IHR and One Health approach | |
| 4. Finalize the Rapid Response Team guidelines and modules, Q2 2018 | d Second Quarter 2018 |
| 5. Finalize the IDSR SOPs for cross-border collaboration and coordination | n First Quarter 2018 |
| 6. Support the inclusion of the revised IDSR in the previous training curriculum of at least 10 training institutions | s Third Quarter 2018 |
| | |





2.6.2 Statements and reactions from partners

2.6.2.1 UNICEF

The representative from UNICEF, Ms Susie Villeneuve, thanked all the partners for their role in supporting to manage emergencies and further stated that one of the main responsibilities of the organization is to provide vaccines and other support services for the control of outbreaks, including education, sanitation, while at the same time ensuring equity and safety for children and women. She mentioned that they had drafted for approval a document that would clearly outline the areas of collaboration. She also acknowledged that the meeting was a good starting point. Some of the areas for partnership would include planning together, holding health ad hoc meetings and conferences.

UNICEF has expertise in health emergencies, a strong team in terms of e-Health and can provide support in e-IDSR, contribute to real-time community surveillance, cross-border activities and strengthening of the health system. Funds have been directed toward some of the activities being implemented already by UNICEF in some countries and which can be extended to more countries. The areas would, therefore, be supported within the roadmap.

Comment: The WHO currently has functional hubs with experts in particular regions; the systems may be strengthened by working in partnership with UNICEF.

2.6.2.2 US-CDC C

The representative from CDC, Dr Olga Heno, committed to continue providing technical support through their offices in countries and the hub structure. She recognized the need to build capacity, at different levels, i.e. country, regional, local and district levels. An example was in Sierra Leone, where CDC staff are directly involved in training. A suggestion to have a forum in which all partners can touch base and also, the task force meeting is good and can be improved through regular (monthly or quarterly) phone calls to discuss implementation progress.

2.6.2.3 USAID

The representative from USAID, Dr Andrea Long Wagar, asked whether focal points in the countries are involved in the technical expertise for the formulation of new IDSR guidelines. She pointed out that this would increase and ease adoption of the guidelines since they are more familiar with realities in the country. For sustainability purposes in the face of decreasing resources, it is essential to search within the countries before calling on partners. To have a common understanding of one-health and help focus on the institutions within the countries she stressed the need to improve coordination, so that countries are more prepared to respond to emergencies.

Comment: The new guidelines will be piloted first in 6 countries (using criteria that would be agreed upon) before finalization and dissemination to other countries. Members were reminded that guidelines would provide flexibility for adaptation to each country's context.

2.6.2.4 Africa CDC

The representative from Africa CDC, Dr Ahmed Zaghloul, recognized that it is an ambitious plan. He suggested the development of an Innovative mechanism for incorporating IDSR into the different activities of various partners in order to avoid duplication. He pointed out that a review JEE reports revealed that countries have weaknesses and ACDC is working on supporting them to address these weaknesses. He mentioned the priority areas of Africa CDC, which include strengthening emergency support centres. The way forward is to ensure standardization of electronic surveillance, irrespective of the platform in use. He suggested that another method for involving more countries in the revision of the new IDSR guidelines is through an online platform that allows more experts to comment and update on a regular



basis and which can be assessed by technical experts from WHO.

Comments: It was acknowledged that there is already a form of collaboration that can be built on, although past experience showed a slow feedback. The paper-based form of surveillance would not be erased, since the electronic versions would be complementary. The need to build on existing structures was emphasized, while revising existing guidelines, for example published SOPs.

2.6.2.5 WAHO

The roadmap developed is aligned with WAHO in 2016/2017. Several activities would be implemented in partnership and it was suggested to allocate more time for the implementation of e-learning and intensification of cross-border surveillance, as well as training of staff at cross-borders and developing training modules for the training of personnel, taking into consideration the one health approach.

Comments: WHO is working closely with WAHO to implement the IDSR in all countries. It was acknowledged that the work being done in ECOWAS has promoted harmonization and rapid implementation across 17 countries and enhanced the role of one health in West Africa.

2.6.2.6 FAO

The representative from FAO, Dr Charles Eric Bebay, indicated that his organization is committed to supporting the one health approach and key coordination activities. He observed that when developing SOPs, technical mobilization is possible and support from FAO would promote harmonization and eliminate confusion within countries, as is often the situation if each partner is to carry out its own activities. A suggestion was made to develop a Framework for monitoring the one health approach and report to countries and all stakeholders. The animal system is weak and there is need for capacity building, for example training epidemiologists and sharing information systematically. It is also important to involve veterinary services and ensure their presence at community level. With the support of USAID, the aim is to deploy focal point animal health experts deployed in countries to provide support.

Comments: Identify areas of collaboration in animal health; there are many emerging disease systems for early preparedness that have not been taken up in Africa, despite warnings from meteorologists about the extreme weather patterns. In case of drought for example, it is not only animals that die, All 47 countries have volunteered to have NAPL as a result of JEE, the key is implementation. One member mentioned that all JEE activities were done in collaboration with FAO and OIE and a handbook has been published on implementation and monitoring of JEE and can be used to evaluate the status of the one health approach.

2.6.2.7 ECSA

ECSA coordinates activities in the East and Southern African region to ensure that there is harmonization of activities. The most recent activities entail enhancing surveillance at international borders. Also, an e-Surveillance system developed for sharing information on the different priority diseases enhanced capacity building, especially in laboratory services and training. The representative from ECSA, Dr Willy Were, expressed the desire to have cross-border simulation exercises on surveillance, as this offers the opportunity to assess how systems can function. He tasked members to assist with guidelines to overcome cholera, which is increasingly becoming a problem in the East and Southern African region.

Comments: There is political will to bring under control the two priority diseases, namely cholera and yellow fever, while a regional strategy on control of cholera and elimination of yellow fever within Africa is given strong support by the different ministers of health across the region.



2.6.3 Summary of recommendations from the partners meeting and way forward

- Promote standardization of e-Health and use a one health approach;
- Animal system is weak and there is need for capacity building, for example training epidemiologists, and sharing information;
- Place the emphasis on community surveillance and the rumor log should still be in use and later investigated;
- There is need to design a framework to monitor the one health implementation and collaboration and use this as a mechanism for reporting to countries and all stakeholders;
- Strengthen oordination mechanisms to avoid duplication of activities from different partners;
- Map out activities that are being carried out by various partners to optimize resources and avoid duplication of activities. Embark on activities that already exist as many of these are often very resourceful and need improvement without reinventing new ones;
- One mechanism for succeeding in implementation is the use of in-country resources, for example country focal points when developing technical documents for recommendation in order to promote ownership and ensure sustainability.

Way Forward

- For all the nine items listed, each partner should identify the areas they are working on:
- Sharing information on quarterly basis among partners to keep updated, sharing lessons learnt and keeping in touch as a form of audit at the level of implementation;
- Organizing a task force meeting every two years to audit previous activities.

Recommandations

The delegates made the following recommendations at the end of the meeting.

Recommendations to Member States:

- **IDSR & Health System Strengthening**
 - Develop a National Action Plan for Health Security (NAPHS), using one-health/multi-hazard approaches by 2019;
 - Strengthen the implementation of eventbased surveillance and community-based surveillance to complement indicator-based surveillance for early notification and timely detection of public health events;
 - Invest domestic resources in the implementation of IDSR through allocation of flexible funds or budget line to guarantee sustainability;
 - Countries to use innovative methods to mobilize resources for IDSR scale up.
- <u>Cross-border initiatives, inter-sectoral collabora-</u> tion and coordination
 - Implement frameworks and tools for strengthening cross-border collaboration and coordination;
 - Carry out joint planning, joint implementation and joint monitoring and evaluation of cross- border activities.
- Capacity building for IDSR
 - Introduce revised IDSR into pre-service curricula of health training institutions to make available core trained resources;
 - Support implementation of IDSR and IHR curriculum in Public Health Training Institutions by 2019.
- e-Surveillance implementation and sustainability
 - Develop a legal framework to promote e-surveillance;
 - Develop a Monitoring and Evaluation framework and reporting tools for e-surveillance.

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- Information products development and dissemination
 - > Establish policies for information products.
- S Key Performance Indicators on IDSR and IHR
 - Implement event-based surveillance (EBS), using revised IDSR;
 - Strengthen IHR coordination and Monitoring and Evaluation.

WHO and Partners

- Finalize and disseminate the 3rd edition of IDSR guidelines and tools;
- Develop and disseminate SOPs for guiding IDSR coordination mechanisms, taking into account the One Health Approach by the end of 2018;

- Develop and support implementation of framework and tools for strengthening cross-border collaboration, coordination and interoperable e-tool within one-health approach, by 2019;
- Hold/convene IDSR task force meeting every two years;
- Disseminate the relevant information products to facilitate timely sharing of information among Member States and relevant stakeholders;
- Support Member States to develop National Action Plans that are regularly monitored and evaluated;
- Establish a regional/subregional partnership coordination mechanism;
- Establish a regional health workforce to respond to outbreaks and health emergencies promptly.

CLOSING CEREMONY



Dr Mireille N. Randria, Head of the Epidemiological Surveillance Unit in Madagascar, represented the Member States and addressed all partners. She acknowledged the quality of the presentations and shared experiences and challenges of implementation of IDSR. She noted the progress made in reviewing progress by countries; existing frameworks and strategies for enhancing IDSR/ IHR. She thanked WHO and partners for supporting IDSR implementation and the taskforce meeting and requested countries to implement the recommendations of the meeting to push IDSR to the next level. She also encouraged regular meetings of this kind to share experiences with the view of implementing the IDSR.

Dr Andrea Long Wagar, Senior Infectious Disease Advisor, represented USAID Africa Bureau and partners and thanked the organizers and participants and acknowledged that the meeting was a positive step towards cementing the partnerships for enhancing national and international public health security. She noted that the next IDSR TG review would be richly informed by the discussions and recommendations from the meeting. The day ended with the closing ceremony presided by *Dr* Yoti Zabulon, representing the Regional Emergencies Director in the WHE programme for the African Region. He thanked the Government of Uganda and all the participants who were all engaged during the three-day meeting and worked very hard to achieve all the four objectives of the meeting. He underlined the importance of concerted efforts to achieve the overall objective of the meeting such as the need to coordinate better, to intensify efforts on the frontline and promote greater collaboration across the borders, to develop a better framework, using the all-hazard and one health approaches and to use electronic solutions. He reiterated the launch of the IDSR e-Learning course, which is an opportunity to increase the number of trained personnel. He stressed the need to put more investment in terms of time, resources and money for strengthening the Event-Based Surveillance, including Community-Based Surveillance and the Anti-Microbial



Resistance in the African Region. He emphasized that IDSR is a cornerstone of the GHSA and for Africa, IDSR is the tool for rapid notification, early detection, and timely response. He wished participants safe return to their respective countries and declared closed the IDSR Task Force meeting.



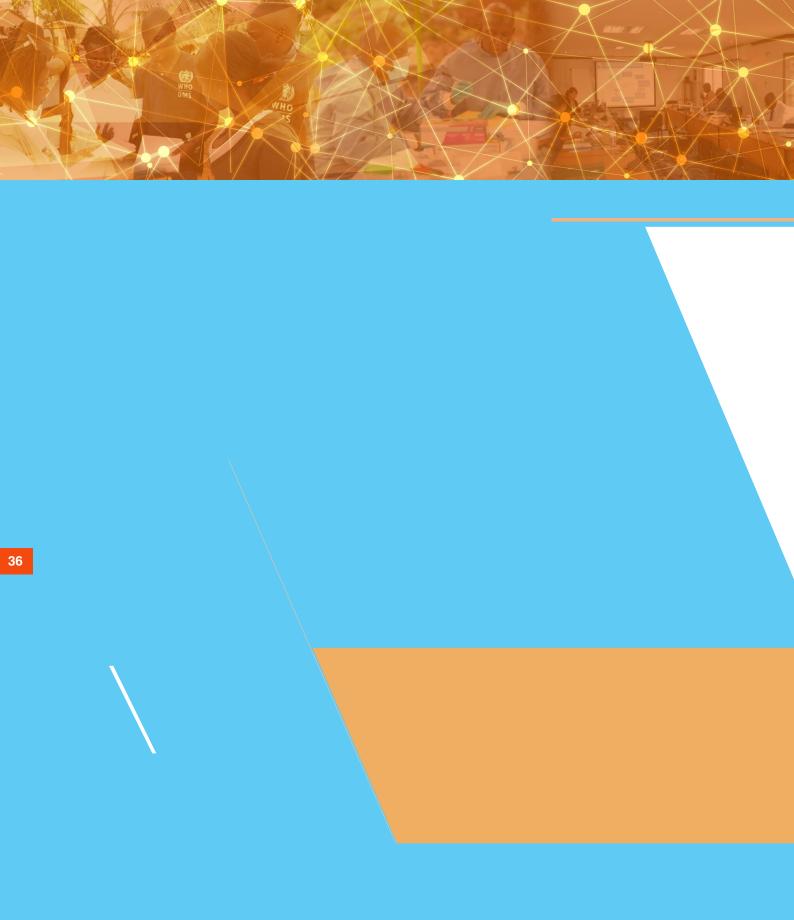
ACKNOWLEDGEMENTS

The Chairperson expressed his gratitude to all participants for taking time off their busy schedules to participate in the meeting and for working hard to achieve the objectives of the meeting. Acknowledgements went to the Government of Uganda for hosting the meeting and the WHO Country Office for making the ground arrangements. He thanked the rapporteurs for their dedication in capturing key points and keeping members updated through recap sessions and a summary of daily proceedings.

He further thanked the support teams, which included the technical staff, the hotel staff, the translators and drivers for their commitment during the meeting.

He further expressed gratitude to the team from WHO/AFRO and HQ, who provided technical expertise, planned the meeting and also served as the secretariat.

Lastly, he expressed his appreciation to the different partners: US CDC, USAID, FAO, Africa CDC, UNICEF, AFENET, WAHO, ECSA-HC and Public Health England who provided support in various ways to ensure the success of the meeting.



ANNEXES

ANNEX 1. TERMS OF REFERENCE

I. Introduction

In September 1998, the Regional Committee of the WHO Regional Office for Africa (WHO/AFRO) adopted resolution AFR/RC48/R2 calling on Member States to implement the Integrated Disease Surveillance and Response (IDSR) strategy. IDSR is a comprehensive evidence-based strategy for strengthening national public health surveillance and response systems in African countries.

In 2000, the IDSR Task Force was established in the Region to advise the Regional Director on issues related to the implementation of IDSR. The first meeting was held in Harare, Zimbabwe, in 2000. Subsequently, yearly meetings were held until 2005.

In May 2005, the World Health Assembly adopted the revised International Health Regulations (IHR, 2005) through Resolution WHA58.3 to strengthen global health security, while avoiding unnecessary interference with international traffic and trade. The IHR core capacity requirements are clearly defined in Article 5 and include: the capacity to detect, assess, notify and report events; as well as the capacity requirements for surveillance and response; and those for designated airports, ports, and ground crossings.

IDSR in the WHO African Region was the leading framework for major achievements, namely the progress towards the eradication of poliomyelitis, control and elimination of major vaccine-preventable diseases (measles, yellow fever, neo-natal tetanus), and the overall progress in priority disease surveillance such as malaria, tuberculosis and AIDS.

Despite the adoption of these resolutions, their implementation has been met with varying degrees of success in different countries. Consequently, addressing health emergencies remains a major concern. Furthermore, IDSR has faced some major challenges in recent years. The development of a funded parallel surveillance system for specific diseases, the insufficient amount of financial resources to implement IDSR at national and subnational levels, the late reporting by the surveillance officers, the weak community-based surveillance, and the mobility of trained staff are plaguing the performance of IDSR at the local, national, and global levels with major effects on the early warning system and on Global Health Security. The limited number of countries that are sharing IDSR data has a negative impact on objectives and timely decision-making.

To strengthen the capacities of Member States in the Region to prevent, detect and respond to public health emergencies within the framework of the regional strategy for health security and emergencies, there is a need to scale up and sustain the implementation of IDSR. The existence of a functional monitoring structure in charge of follow-up of the implementation of IDSR is important to enhance IDSR performance.

Based on the above, WHE/WHO-AFRO intends to re-establish IDSR Task force in the Region to oversee the implementation of strategies and interventions and mobilize additional resources to support the achievement of IDSR priority deliverables at regional and country levels.

II. Membership

The task force members include:

- Nationals: Senior IDSR champions from six selected countries taking into account WHO geographic balance (two from West Africa, two from Central Africa and two from East/Southern Africa),
- Staff from Word Health Organization
 - Regional Office for Africa
 - WHE Programme: Programme Area Manager Country Health Emergency Preparedness & IHR, IHR and Global Health Security Focal Person, Country Integrated Disease Surveillance Focal Person, IDSR Training Focal Person, Laboratory Surveillance Focal Person, Detection Verification and Alert Focal Person and Data Manager
 - Other clusters (FRH, CDS, HSS, NCD, IVD and PEP): Surveillance Focal Person
 - Headquarters: Surveillance Focal Person

INTEGRATED DISEASE SURVEILLANCE AND RESPONSE (IDSR) TASK FORCE MEETING, ENTEBBE, UGANDA



- WHO Country Offices: Sierra Leone, South Sudan, Liberia, DR Congo, Guinea, and Rwanda.
- Other agencies and professional organizations that share AFRO's vision, goals and objectives for the implementation of IDSR.
 - World Organization for Animal Health (OIE)
 - Food and Agriculture Organization of the United Nations (FAO)
 - U.S. Centers for Disease Control and Prevention (CDC)
 - U.S. Agency for International Development (USAID)
 - Africa Centre for Disease Control and Prevention (Africa CDC)
 - West African Health Organization (WAHO)
 - International Federation of Red Cross (IFRC)
 - African Field Epidemiology Network (AFENET).

Members from the countries and the WHO Country Offices will be included on a rotating basis with representatives selected for a maximum term of three years, with rotation starting from year 4 and renewal of countries in each subregion.

III. Functions

- Review annually regional progress in the implementation of IDSR strategy based on core indicators and make recommendations on priority activities;
- Contribute to the mobilization of financial and technical resources for IDSR at both the regional and national levels and recommend ways to improve the coordinated use of IDSR resources;
- Strengthen the implementation of national IDSR coordination mechanisms;
- Recommend ways to promote the exchange of information and best practices on IDSR among

Member States and on IDSR issues among stakeholders;

- Propose the Regional IDSR plan of action and its budget;
- Propose technical support needed for the implementation of national health policies, strategies and plans on IDSR and related frameworks;
- Facilitate the formulation and translation of evidence-based policies into action plans.
- Make any additional recommendations to the Regional Director on how to improve the implementation of the IDSR Strategy in the African Region.

To ensure the implementation of these functions, the WHO secretariat will:

- Lead the development of additional required policies, guidelines and tools for the implementation and scaling up of IDSR when necessary;
- Coordinate the implementation, monitoring, and evaluation of planned activities;
- Follow-up with national authorities regarding the implementation of recommendations agreed by the Task Force.

Other agencies and professional organizations will ensure the implementation of critical tasks based on their comparative advantages.

IV. Working methods

- The IDSR Task Force will be chaired by WHE/ WHO-AFRO.
- WHO-AFRO will serve as the Secretariat and will also be responsible for the coordination of the development and dissemination of the quarterly newsletters.



- The Secretariat will be the point of contact for all members and will be responsible for recording all meetings and facilitating communications.
- The Task force will meet annually and continue interactions by teleconferences and emails.
- The Secretariat will produce an Annual Report summarizing the updated strategic direction for the organization, significant highlights, major issues and new initiatives in a document not exceeding 10 pages in length.

ANNEX 2. AGENDA OF THE MEETING

| Time | Activities | Responsible |
|----------------|---|---|
| Tuesday, 19 Se | ptember 2017 | |
| 08.30-12.30 | Registration of participants Objectives, expected results and method of work Adoption of the agenda Election of the Chairperson and Rapporteurs TEA BREAK | - Dr Yoti Zabulon, WHO/AFRO |
| | Opening ceremony WHO representative in Uganda Honourable Minister of Health of Uganda Group Photo | WR Minister of Health or the representative of MOH |
| | To review progress in the implementation of the IDSR strategy over ons for priority intervention Overview on the existing and new strategies and frameworks for | er the last decade and mak |
| | strengthening preparedness in the WHO African Region | AFRO |
| 12.50.13.10 | Implementation of the Global Health Security Agenda in the WHO African Region: main achievements, issues and challenges and way forward | Dr Henao, Olga, US CDC |
| 13.10-13.30 | Discussion | |
| | | |

| 13.10-13.30 | Discussion | |
|-------------|---|---------------------------|
| 13.30-13.50 | Preparedness and Response activities in the context of One Health | Dr Charles Bebay, FAO |
| | approach | |
| 13.50-15.00 | LUNCH BREAK | |
| 15.00-15.20 | IDSR implementation: lessons learnt and way forward | Dr. Ben Masiira, AFENET |
| 15.20-15.40 | Discussion | |
| 15.40-16.00 | Community-based surveillance: lessons learnt and best practices | Dr Franklin Asiedu-Bekoe, |
| | | GHANA |
| 16.00-16.20 | Event-based Surveillance: lessons learnt and best practices | Dr Mireille Randria, |
| | | MADAGASCAR |
| 16.20-16.40 | IDSR and health system: lessons learnt and best practices | Mr Thomas K. Nagbe, |
| | | LIBERIA |
| 16.40-17.00 | Discussion | ALL |
| 17.00-17.30 | TEA BREAK | |



Wednesday, 20 September 2017

| 08.30-08.45 | Recap of Day 1 | RAPPORTEURS | |
|-------------|--|--------------------------------------|--|
| 08.45-09.00 | Outbreak investigation and response: lessons learnt and best practices | Dr Gaston Tshapenda, DR CONGO | |
| 09.00-09.15 | Surveillance of the AMR: lessons learnt and best practices | Ms Tsakari Furumele, SOUTH AFRICA | |
| 09.15-09.35 | Discussion | | |
| 09.35-09.50 | Partnership for IDSR implementation | Dr Ambrose Talisuna, WHO AFRO | |
| 09.50-10.05 | Partnership for strengthening preparedness and response | Dr Ahmed Zaghloul, Africa | |

| Time | Activities | Responsible | |
|-------------|--|----------------------------|--|
| | | CDC | |
| 10.05-10.20 | IDSR implementation | Dr Félicité Chokki-Laleye, | |
| | | WAHO | |
| 10.20-10.40 | Discussion | | |
| 10.40-11.00 | TEA BREAK | | |
| 11.00-11.10 | Implementation of the One health approach in Cameroon: lessons | Dr Stéphane A. Abah Abah, | |
| | learnt and best practices | CAMEROON | |
| 11.10-11.40 | Official launch of the IDSR e-Learning course | Dr Boukare Bonkoungou, | |
| | | WHO/AFRO | |
| 11.40-12.00 | Discussion | ALL | |
| 12.00-14.00 | LUNCH BREAK | | |
| 14.00-15.00 | Introduction of group work | Dr Pierre Nabeth, WHO/HQ | |
| | Group work sessions | ALL | |
| | - Group A: Integrated Disease Surveillance and Response and | | |
| | Health System Strengthening | | |
| | - Group B: Cross-border collaboration for preparedness and | | |
| | response activities & Intersectoral collaboration and | | |
| | coordination before and during PHE | | |
| | Group C: Capacity building for IDSR, including EBS | | |
| 15.00-15.30 | TEA BREAK | | |
| 15.30-16.30 | Report back and discussion | GROUPS | |
| 16.30-17.00 | Wrap up | Dr Ali Yahaya, WHO/AFRO | |



Thursday, 21 September 2017

Objective 3: To recommend actions to promote the exchange of information on IDSR among participating agencies and Member States

| ayencies and i | | |
|----------------|---|--|
| 08.30-08.45 | Recap of Day 2 | RAPORTEURS |
| 08.45-09.00 | Information product and documentation | Dr Pinyi N.M. Aupur, SOUTH SUDAN |
| 09.00-09.15 | e-Surveillance implementation: lessons learnt and best practices | Dr Foday Dafae, SIERRA LEONE |
| 09.15-09.30 | Discussion | |
| 09.30-10.00 | TEA BREAK | |
| 10.00-12.00 | Introduction of group work Group work sessions Group A: e-Surveillance implementation and sustainability GroupB: Information products development and dissemination Group C: Key Performance Indicators on IDSR and IHR Partners meeting | Dr Daniel Yota, WHO/AFRO |
| 12.00-13.30 | LUNCH BREAK | |
| 13.30-14.30 | Report back and discussion | GROUPS |
| 14.30-15.00 | Presentation of Summary of the meeting and Recommendations | Dr Ambrose Talisuna, WHO/AFRO |
| 14.45-15.00 | TEA BREAK | |
| 15.00-15.30 | Discussion and validation of the draft Summary Report and Recommendations | WHO |
| 15.30-16.00 | Closing Remarks | Representative from countries, USAID, WHO/AFRO |

ANNEX 3. LIST OF PARTICIPANTS

| | Name(s) | Country | Orgn./Ministry | Position | | |
|----|--|----------------------|----------------|---|--|--|
| | MEMBER STATES | | | | | |
| 1 | Dr Hannoun Djoher | Algeria | JNSP | Chef du Déparetment | | |
| 2 | Dr Nesredin Jami Oumer | Botswana | MoH | IDSR Focal person | | |
| 3 | Dr Issaka Yaméogo | Burkina Faso | МоН | Chef de service de la surveillance épidémiologique | | |
| 4 | Dr Spes Ndayishiniye | Burundi | МоН | Chef de service des urgences et riposte aux épidémies et IDSR | | |
| 5 | Dr Maria da Lourdes Monteiro | Cape Verde | МоН | Point Focal de la SIMR MoH | | |
| 6 | Dr Saindou Ben Ali Mbae | Comoros | МоН | Responsable national de la surveillance épidémiologique | | |
| 7 | Dr Dzabatou Babeaux Angelie Serge Patrick | Congo | МоН | Executive Director; National (MCIP) HIV, STD, Epidemics | | |
| 8 | Dr. Gaston Tshapenda | DRC | МоН | Chief of Noncommunicable Disease Division | | |
| 9 | Dr N'guetta Niamké Emilienne | Côte D'Ivoire | МоН | Chargé de la surveillance épidémiologique | | |
| 10 | Dr Benito Alu Nkumu | Equatorial Guinea | МоН | Chez SIMR | | |
| 11 | Dr FikreMariam Ghimichael | Eritrea | МоН | Head, IDSR | | |
| 12 | Dr Grégoire Biyoghe Obame | Gabon | МоН | Directeur de l'Institut d'épidémiologie lutte contre les endémies | | |
| 13 | Dr Balla Jatta | Gambia | МоН | National Disease Surveillance Officer | | |
| 14 | Dr Franklin Asiedu Bekoe | Ghana | МоН | Head, Disease Surveillance Department | | |
| 15 | Dr Placido Cardoso | Guinea Bissau | МоН | President of the National Institute of Public Health | | |
| 16 | Mr Thomas K. Nagbe | Liberia | МоН | Director Infectious Disease and Epidemiology | | |
| 17 | Dr Mireille Randria | Madagascar | MoH | Chef de service de la surveillance épidémiologique | | |
| 18 | Mr Edward Chado | Malawi | MoH | IDSR Focal person | | |
| 19 | Dr Sidi Mohamed Laghdaf | Mauritania | MoH | Directeur de la Lutte contre les Maladies | | |
| 20 | Mr Rajivsing Jeeto | Mauritius | MoH/QL | Senior Assistant Systems Analyst | | |
| 21 | Dr Narciso Antonio Maria Cardoso | Mozambique | МоН | Epidemiology Department | | |
| 22 | Ms Matyenyika Selma Mpingana | Namibia | МоН | National Programme Officer for Surveillance | | |
| 23 | Mrs Aïchatou Mahaman | Niger | МоН | Point Focal de la SIMR MoH | | |
| 24 | Kabeja Adeline | Rwanda | МоН | Director of Disease Surveillance | | |



| 24 | Kabaia Adalina | Dwondo | МоН | Director of Disease Surveillence |
|-----|---------------------------------|----------------------|--------------------------|---|
| 24 | Kabeja Adeline | Rwanda Sao Tome & | IVIOT | Director of Disease Surveillance |
| 25 | Mr Joâo Costa Neto | Principe | МоН | Technicien de la Direction du Soins de Santé |
| 26 | Dr Jastin Bibi | Seychelles | PHA/MoH | Officer In charge of Surveillance |
| 27 | Dr Foday Dafae | Sierra Leone | MoH | Director of Disease Prevention & Control |
| 28 | Ms Furumele Tsakani | South Africa | МоН | National Department of Health |
| 29 | Dr Pinyi Nyimol Mawien Aupur | South Sudan | МоН | Director-General for Preventive Health Services |
| 30 | Mr Vusi Lokotfwako | Swaziland | MoH | Epidemiologist |
| 31 | Dr Georges Cosmas Kauki | Tanzania | МоН | Epidemiologist/IDSR National FP |
| 32 | Dr Tamekloe Tsidi Agbéko | Togo | MoH | Chef, SIMR |
| 33 | Dr Anne Nakinsige | Uganda | MoH | Senior Medical Officer |
| 34 | Dr Isaac Phiri | Zimbabwe | MoH | IDSR Focal Person |
| PAF | RTNERS | | | |
| 35 | Dr Ben Masiira | Uganda | AFENET | Epidemiologist |
| 36 | Dr Willy Were | | ECSA-HC | Medical Epidemiogologist |
| 37 | Dr Olga Henao | USA-Atlanta | US CDC | Epidemiologist |
| 38 | Dr Victor Etuk | USA-Atlanta | US CDC | Epidemiologist |
| 39 | Prof Isabel Oliver | UK | Public Health England | Director, Field Epidemiology Service & Director National Injection Service |
| 40 | Dr Andrea Long Wagar | USA | USAID | Senior Infectious Disease Advisor |
| 41 | Dr Charles Eric Bebay | Congo | FAO | Sub regional One Health Coordinator |
| 42 | Dr Ahmed Zaghloul | Egypt | African CDC | Epidemiologist |
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| 47 | Dr Ali Ahmed Yahaya | Congo | WHO/AFRO | CPlai/WHE |
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ACKNOWLEDGEMENTS

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