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African Strategies for Health
4301 N. Fairfax Drive, Arlington, VA, 22203
Telephone: +1-703-524-6575
info-AS4H@as4h.org

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FOREWORD

More than fifteen years ago, the World Health Organization Regional Office for Africa (WHO/AFRO), its Member States, and technical partners adopted the Integrated Disease Surveillance strategy for developing and implementing comprehensive public health surveillance and response systems in African countries. Since its adoption in 1998, 43 out of 47 countries in Africa are implementing the strategy. Strong leadership, political commitment, effective partnerships, and the adoption and adaptation of technical guidelines and other tools, including the incorporation of the International Health Regulations (IHR), have all contributed to the ability of African countries to detect, report, confirm, and respond to infectious and non-infectious threats of public health importance.

WHO/AFRO and its technical partners, notably the United States Centers for Disease Control and Prevention (CDC) and the United States Agency for International Development's Africa Bureau (USAID/AFR), have been promoting Integrated Disease Surveillance and Response (IDSR) and remain committed to supporting Member States to build their capacity in disease surveillance and response. To respond to changes in the health, social, economic, environmental, and technical environments in Africa, including the coming into force of the International Health Regulations (2005), the IDSR technical guidelines were updated and new tools were developed that use advancements in technology to improve the collection and monitoring of data. We have seen an improvement in country ownership, with an increasing number of ministries of health adapting their IDSR strategies to meet the country's epidemiologic profile and national needs. To expand the scale up of IDSR to more districts and strengthen capabilities for workforce development, our collaboration is committed to improving existing training resources and extending opportunities for building public health capacity.

In line with these efforts, WHO/AFRO, CDC, USAID/AFR, and the African Strategies for Health (ASH) project organized and convened a one-day Integrated Disease Surveillance and Response (IDSR) Workshop in Addis Ababa, Ethiopia on November 17, 2013. The workshop took place in conjunction with the 5th Scientific Conference of the African Field Epidemiology Network (AFENET), a platform which drew public health professionals and trainees from Field Epidemiology and Laboratory Training Programs (FELTPs) from 22 countries in Africa. The workshop presented an interactive and dynamic forum for discussions on progress with and tools for IDSR implementation, lessons learnt from the experiences of countries responding to outbreaks, and priorities and partnerships for the third decade of IDSR. The attached report provides an overview of the presentations and discussions that took place during the workshop. It also serves as an update on the state of IDSR and priority areas for action moving forward.

The advancement of IDSR in Africa has been leveraged by partnerships with many internal and external international organizations who share a common vision of improving disease detection, confirmation and response. Similarly, this workshop was made possible only through close collaboration and considerable planning and organization by the joint agency partnership of WHO/AFRO, CDC, and USAID. We acknowledge their unwavering commitment, leadership, and support to strengthen IDSR and the health systems in order to contribute to healthier communities in the Region.



Dr. Francis Kasolo
Director, Disease Prevention & Control
World Health Organization Regional Office for Africa

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INTRODUCTION

This report documents key topics presented and discussed at the **Integrated Disease Surveillance and Response (IDSR) Workshop** held on the 17th November 2013 in Addis Ababa, Ethiopia. The one day workshop was convened by the World Health Organization Regional Office for Africa (WHO/AFRO), the U.S. Centers for Disease Control and Prevention (CDC), the United States Agency for International Development's Africa Bureau (USAID/AFR) and the African Strategies for Health (ASH) project. The purpose of the workshop was to highlight and discuss progress in the implementation of **IDSR in Africa**. The workshop took place in conjunction with the 5th Scientific Conference of the African Field Epidemiology Network (AFENET) held from 17 – 21 November 2013.

To build on discussions that took place during the December 2011 “Partners and Frameworks for IDSR and International Health Regulations (IHR) (2005) Implementation” workshop,¹ this November 2013 meeting aimed to provide participants with an update on progress in IDSR programming and implementation and a forum for sharing experiences, challenges and lessons learned.

A total of **53 participants**, drawn from **11 countries in Africa**, including Angola, Cameroon, Ethiopia, Ghana, Kenya, Mozambique, Nigeria, South Africa, Tanzania, Uganda, and Zambia, attended the workshop. The agenda included an update on progress in IDSR implementation within the African region and sessions on the following topics:

- **new developments and tools** for IDSR;
- **country experiences** showcasing the implementation of IDSR in responding to outbreaks and strengthening surveillance of priority diseases and conditions;
- **priorities and partnerships** for IDSR in the coming decade; and
- a group exercise based on a case study about an actual cholera outbreak in Sierra Leone in 2011 which provided an opportunity to **apply learnings to outline a practical approach to outbreak response**.

Participants were welcomed by Dr. Benido Impouma, Epidemic and Pandemic Alert and Response (EPR) Regional Adviser for the Disease Prevention and Control Cluster at WHO/AFRO. In his opening remarks, he noted the importance of IDSR for detecting and responding to disease outbreaks and saving lives. He acknowledged the strong collaboration between partners (WHO/AFRO, CDC, USAID and others), noted the emergence of new initiatives, such as the One Health approach and e-surveillance, and set the stage for full day of informative and interactive discussion.

See Annex 1 for the detailed Meeting Agenda, Annex 2 for the List of Participants, Annex 3 for the List of Organizers and Presenters, and Annex 4 for information on accessing session presentations.

¹ “Partners and Frameworks for IDSR and IHR (2005) Implementation” workshop report available at: http://www.stimson.org/images/uploads/Stimson_GWU_WHO_Workshop_Report.pdf



IDSR: A BRIEF OVERVIEW

Integrated Disease Surveillance and Response (IDSR) is a comprehensive regional framework endorsed by Member States of the World Health Organization Regional Office for Africa (WHO/AFRO) for strengthening national public health surveillance and response systems in Africa. In Africa, ministries of health are organizing and strengthening national disease surveillance programs by adopting IDSR and modifying the strategy to meet their country's epidemiologic profile. With this approach, countries may better detect and respond to diseases and share information across borders. During the last 15 years, this powerful framework has been associated with reduction of lifespan of outbreaks, reduction in number of cases and deaths, with cost saving and deaths averted.

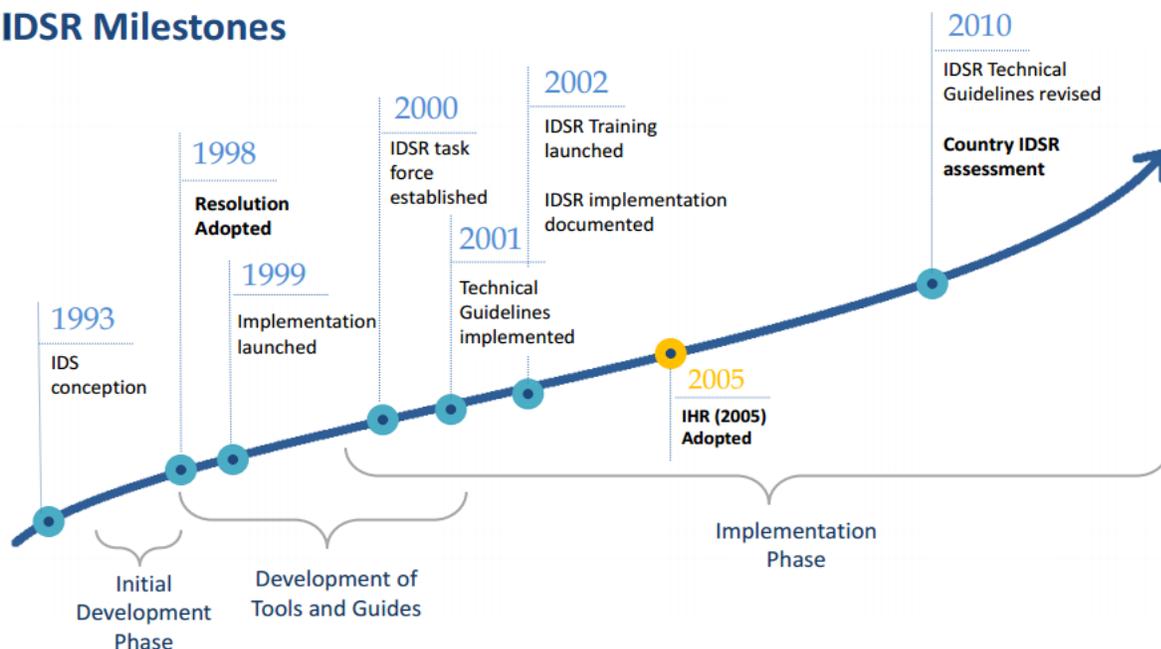
OBJECTIVES OF IDSR

- Integrate vertical disease surveillance systems for effective and efficient use of resources
- Improve the flow and use of information for detecting and responding to public health threats
- Improve country capacity to detect and respond to priority public health events

PROGRESS IN IDSR PROGRAMMING & IMPLEMENTATION

Since the adoption of IDSR by WHO/AFRO Member States in 1998, many strides have been made in supporting and strengthening its implementation. As depicted in the timeline below, IDSR Technical Guidelines were executed, IDSR training was launched, and IDSR implementation was documented. By 2005, IDSR was providing the platform to implement International Health Regulations (IHR), and in 2010, the Technical Guidelines were revised. Zambia's implementation of IDSR leveraged their ability to respond to an anthrax outbreak in 2011. Their experience is highlighted on page three.

IDSR Milestones



Source: Presentation by Dr. Peter Gaturuku, WHO/AFRO, at the IDSR Workshop, 17 November 2013



In 2010, WHO/AFRO designed and conducted an IDSR Rapid Assessment and found that 43 out of 45 countries assessed were implementing IDSR, though progress varied across indicators. The assessment also identified a number of challenges related to implementation. These include the following:

- An absence of dedicated IDSR human resources at the district level;
- A lack of IHR and non-communicable diseases (NCDs) in the previous IDSR guidelines;
- Insufficient data management tools; and
- Core indicators are not used systematically for monitoring and evaluation.

To address these challenges, countries will need support to build capacity at the district level, revise their guidelines to incorporate IHR and NCDs, and strengthen monitoring of IDSR implementation. Sensitization of national officials and stakeholders will be critical to generating political support and mobilizing resources.

COMBATting ANTHRAX IN ZAMBIA THROUGH IDSR

Dr. Muzala Kapin'a Kanyanga, a representative from the Zambian Ministry of Health (MOH), presented her country's experience of responding to an anthrax outbreak in 2011.

In 2011, from July to September, an anthrax outbreak occurred in the remote Chama district, Zambia. A total of 85 hippopotamus deaths, five human deaths, and 565 suspect human cutaneous cases were reported. After identifying cases of anthrax, all cases of cutaneous lesions were reported and found to be related to contact with meat from dead hippos. Immediately, the district **increased surveillance, began public awareness campaigns, distributed antibiotics, and conducted a case study.**

An investigative team consisting of MOH, Ministry of Agriculture and Livestock (MAL), Zambia Wildlife Authority (ZAWA), University of Zambia and CDC representatives was established to conduct the study. The four key findings of the study are as follows:

- 1) The highest number of cases (44) was registered on August 26 and 27;
- 2) Chikwa was the most affected village in Chama with 169 cases;
- 3) Men over 36 years of age were most affected; and
- 4) Out of the 56 samples collected from humans, hippos, and soil, 17 were positive.

In response to these findings, the MOH enacted control measures, which included case management, community sensitization, restriction of access to hippo death sites, and decontamination of hippo death sites. This required **close collaboration** with MAL and ZAWA counterparts. In addition, the following **recommendations** to promote human and animal health were outlined:

- Continue active human surveillance;
- Conduct sensitization campaigns in anthrax prone areas;
- Address food insecurities;
- Improve and standardize wildlife disease surveillance; and
- Train ZAWA scouts to identify and report wildlife illnesses.



NEW DEVELOPMENTS IN IDSR: TOOLS AND e-LEARNING

IDSR was adopted by African countries to increase timely detection and response to outbreaks and epidemics that are largely due to preventable causes. Without early detection and response mechanisms in place, the response may be delayed and the opportunity to prevent cases and deaths is lost. The following guidelines and tools were developed to streamline processes for effecting key IDSR requirements and facilitate smooth implementation.

IDSR Technical Guidelines (October 2010)

Following the adoption of IHR into the IDSR platform, the IDSR Technical Guidelines were updated and revised in 2010² to include IHR priorities and other emerging threats such as zoonotic diseases and NCDs. The guidelines contain information such as the standard case definitions for priority diseases, surveillance thresholds for action, laboratory guidance for the collection of specimens for confirmation of suspected outbreaks, training strategies and disease-specific recommendations. IDSR Training Modules (2010), a comprehensive course for teaching the content of the IDSR Technical Guidelines, are also available to support roll-out.

IDSR Performance Indicators

IDSR performance indicators were developed to measure IDSR implementation. Progress is being measured through evidence of improvements in: timely reporting, reporting of case-based data, data analysis at the local level, investigation and laboratory outbreak confirmation, and appropriate responses. Laboratory performance indicators were created to monitor IDSR progress towards functional laboratory surveillance programs. A well performing laboratory system will report data on time, transport specimens to referral laboratories, and maintain supervision and control.

Costing Tool

IDSR is a cost-effective intervention for early detection and response to public health threats. The CDC IDSR website³ provides a free costing tool that can be used to determine the cost of implementing a public disease surveillance and response system. SurvCost is a free interactive spreadsheet that allows the user to estimate all associated costs or to focus on one component.

e-Learning Tools

To increase access to training materials, WHO/AFRO, USAID, and CDC are proposing a shift from instructor-led training of IDSR at the district level to e-Learning. The benefits of e-Learning are a reduction in the number of hours required for training (40 hours with an instructor versus 15-20 hours with e-Learning) and the ability to train more people with less resources. Currently, the course is being designed and is expected to be finalized in 2014.

² The Revised IDSR Technical Guidelines are available at: <http://www.afro.who.int/en/clusters-a-programmes/dpc/integrated-disease-surveillance/features/2775-technical-guidelines-for-integrated-disease-surveillance-and-response-in-the-african-region.html>

³ SurvCost and other tools can be found at: <http://www.cdc.gov/globalhealth/healthprotection/ghsb/idsr/tools/default.html>



PRIORITIES FOR IDSR IN THE NEXT DECADE

Developments in IDSR since 2000 have created opportunities for new partnerships and collaboration in priority areas. Some on-going key partnerships and their efforts are outlined in the “Global and Regional IDSR Partnerships” box below. The inclusion of IHR in IDSR enables international and cross-border collaboration, which facilitates open information sharing and outbreak awareness, while the inclusion of NCDs, Maternal Death Surveillance and Response (MDSR), and public health events of international concern in the revised IDSR Technical Guidelines (2010) increases opportunities for multi-sector collaboration. Read about Uganda’s experience of integrating MDSR into IDSR on page six.



Source: Presentation by Dr. Peter Gaturuku, WHO/AFRO, at the IDSR Workshop, 17 November 2013

The IDSR platform also creates the opportunity for the successful implementation of new initiatives which will address a wide range of disease control strategies. **One Health** can support IDSR by bringing an expertise in the connection between human and animal health. This partnership will result in a comprehensive strategy to address the human and animal components, increase awareness in leaders, and encourage collaboration among different sectors. Meanwhile, the **eSurveillance** initiative will create an African Governance Strategic group that will provide guidance on tools, IT platforms, and IT support staff to assist with electronic data reporting and collection.

GLOBAL AND REGIONAL IDSR PARTNERSHIPS:

For the development of IDSR District Level **eLearning Course** (Online and CDs):

- WHO/AFRO, CDC, USAID and U.S. Defense Threat Reduction Agency (DTRA)

To support the enhancement of **Maternal Deaths Surveillance (MDSR)** within the context IDSR Framework:

- WHO/AFRO, United Nations Population Fund (UNFPA), United Nations Children’s Fund (UNICEF), African Union (AU), CDC and USAID

To support the establishment of the transitional body for the **African Surveillance and Informatics Governance Board (ASIGB)**:

- WHO/AFRO, CDC, AFENET and DTRA



INTEGRATING MDSR INTO IDSR IN UGANDA

Dr. Miriam Sentogo, a representative from the Ugandan Ministry of Health (MOH), presented her country's experience of integrating Maternal Death Surveillance and Response (MDSR) into IDSR.

Uganda adopted the IDSR strategy in 2000 and through its use has **strengthened surveillance of priority disease conditions**. In 2008, due to a high maternal mortality rate (438/100,000), maternal deaths were declared a national emergency in Uganda. As a result, maternal death was integrated into IDSR as a priority condition.

The overall objectives of Maternal Death Surveillance and Response (MDSR) are to provide information to effectively guide action to reduce maternal mortality and to track every death.

To **integrate MDSR into IDSR**, maternal death (MD) case definitions were formulated and integrated into the Ugandan IDSR Technical Guidelines, case definition booklets, and weekly and monthly reporting forms. MDs are notified and now immediately reported to the national level. They are followed by investigation and confirmation, and are then reviewed at health facility level and review findings shared.

The integration of MDSR into IDSR in Uganda has resulted in the following outcomes:

- Data is sent to one place in the MOH;
- Reporting, analysis, and investigation is completed using the IDSR platform;
- Notification increased by 100%;
- More facilities are institutionalizing reviews of maternal and perinatal deaths; and
- There is increased energy and effort towards reducing maternal deaths.

To ensure the effectiveness of integration, recommendations for the future have been identified, including the scale up of mobile phone technology for rapid electronic MD reporting, the establishment of district MDSR committees, and the full integration of MDR in IDSR and HMIS.

CONCLUSIONS AND NEXT STEPS

During this workshop, participants learned about new developments in IDSR, including tools and initiatives, and were provided with practical, real-life examples of the application of IDSR from Zambia and Uganda. Participants were particularly interested in the processes involved in implementing IDSR, including practical considerations for multi-sector collaboration. They cited the challenges related to communication between Ministries, for example, and noted the need for training to promote knowledge sharing and for commitment from the highest levels of leadership to drive cross-sector collaboration.

It became clear during the workshop that the majority of participants, many of whom were Field Epidemiology and Laboratory Training Program (FELTP) students and graduates, were not familiar with



the IDSR strategy or technical guidelines. This signals a need to better promote IDSR trainings and/or integrate them into other curricula and programs.

As evidenced in the workshop presentations, it is clear that great progress has been made in effectively implementing IDSR across Africa. However, room for improvement remains. Efforts to strengthen district and national level capacity to implement IDSR must remain a focus. Platforms that utilize new technology, such as the e-Learning tool and eSurveillance, provide innovative opportunities for strengthening systems. In addition to building capacity for IDSR implementation at district levels, engaging with national leaders inside and beyond the health sector will be critical to ensuring sustained commitment and funding.

IDSR has the potential to be used as a platform to implement a wide range of disease control strategies recommended by the WHO/AFRO Regional Committee. As new actors begin to engage in disease surveillance and response, new opportunities for collaboration and resource mobilization will emerge. To maximize impact, close coordination and collaboration will be critical to ensuring cost-effective early detection and response to public health threats in Africa.



ANNEX I: WORKSHOP AGENDA

Session Title	Time	Presenter
Opening and Welcome	8:30 – 8:45	Chair
Plenary Session One	8:45 – 10:30	Various
IDSR: an African strategy for surveillance and response	8:45 – 9:15	WHO/AFRO
IDSR: key principles, requirements and tools	9:15 – 9:35	CDC/AFRO
Country Presentation 1: Anthrax in Zambia	9:35 – 9:50	Country Representative
Plenary One Discussion	9:50 – 10:15	All
Summary of Plenary One and Introduction to Mini-session	10:15 – 10:30	Chair
Break	10:30 – 11:00	
Demonstration Session	11:00 – 12:00	
Improving access to knowledge: eLearning for IDSR		AFRO & CDC
Lunch	12:00 – 1:30	
Plenary Session Two	1:30 – 3:00	Various
Brief recap of morning sessions & Setting up new partnerships and priorities for IDSR in its 2 nd decade	1:30 – 2:00	AFRO
Country presentation 2: Maternal Death Surveillance and Response (MDSR) in Uganda	2:00 – 2:15	Country Representative
Plenary Two Discussion	2:15 – 2:45	All
Summary of Plenary Two and Introduction to Mini-sessions	2:45 – 3:00	Chair
Break	3:00 – 3:30	
Concurrent Mini-Sessions	3:30 – 4:30	
<i>Mini-session 1</i> : Outbreak Response: practical considerations		AFRO/GOARN
<i>Mini-session 2</i> : OHCEA (One Health Central and East Africa): Generating future leaders in One Health		OHCEA/USAID
IDSR in 2030 & Summary and Closing Remarks	4:30 – 5:00	Chair

**ANNEX 2: WORKSHOP PARTICIPANT LIST**

No.	Name	Affiliation
1	Dr. David Mugabi	AFENET/MAKERE University
2	Mr. Gemacho Beffa	AFENET
3	Mr. Tesfaye Deti	AFENET
4	Dr. Elizabeth Mgamb	AFENET
5	Musa Sekamath	AFENET
6	Nathan Isabirye	Makerere University
7	Berihun Afera	OHCEA
8	Muzala Kapina Kanyanga	MOH-Zambia
9	Mengistu Tedesse Kedede	FMOH
10	Amin Abdulahi Usman	FMOH
11	Adam Hassan Haji	AFENET
12	Daniel Woldeyes	AAU
13	Julio F. Laite Da Costa	Angola-FELTP
14	Abyot Bekele Woyessa	Ethiopian FMOH
15	Nurauni Awd	Ethiopian FMOH
16	Patience F. Kweza	SAFELTP
17	Andronica Moipone Rakgantso	SAFELTP
18	Dr. Seukap Elise	CAFELTP
19	Ndode Corhim E	CAFELTP
20	Paixao Tornes	FELTP- Mozambique
21	Dr. Herbert Kazoora	AFENET
22	Godbless Lucas	FELTP-Tanzania
23	Herilinda Temba	FELTP-Tanzania
24	Dr. Israel Tareke	WHO Office
25	Gemechi Gudina	EFETP
26	Dereje Mamo	EFETP
27	Dairo M. David	NFELTP, Nigeria
28	Armand Bejtullahu	WHO Geneva



No.	Name	Affiliation
29	Abdi Ahmed	EHNRI/FMOH
30	Ibrahim Adem idris	GFTP Residence
31	Yirdaw Emiru	EFTP Resident
32	Wake Abebe	EFTP
33	Gebeyehu Dumessa	EFTP
34	Engdayehu Hailu	EFTP
35	Habtamu Zimev	EFTP Residence
36	Dr. Baonga	CAFELTP
37	Simon E. Kabamanya	TFELTP
38	Negga Asamere	EHNRI
39	Manuel Lazaro	FELTP-MOE
40	Abdifatah Tahit Hafi	EFETP
41	Shirley Karambu Kailikia	FELTP
42	Jane Githuku	FELT-Kenya
43	Dr. Karugira Rweyem Amu	FELTP-Tanzania
44	Dr. Justin Maeda	FELTP-Tanzania
45	Dr. Miriam Sentongo	MOH-Uganda
46	Dr. Peter Mmbayi	MOH-Tanzania
47	Dauda Sowa	GFELTP
48	Atuheire Emily	AFENET, MOH-Uganda
49	Daniel Teshome	EFETP
50	Theophil Malibiche	FELTP-Tanzania
51	Athman Mwantondo	FELTP-Kenya
52	Degu Kono	RHB
53	Aba Jean-Claude A.	CAFELTP

**ANNEX 3: WORKSHOP ORGANIZERS AND PRESENTERS**

No.	Name	Affiliation	Role
1	Dr. Benido Impouma	WHO/AFRO	Chair
2	Dr. Peter Gaturuku	WHO/AFRO	Presenter, Facilitator
3	Alyssa Wong	CDC	Presenter
4	Dr. Muzala Kapina Kanyanga	MOH Zambia	Presenter
5	Dr. Miriam Sentongo	MOH Uganda	Presenter
6	Armand Bejtullahu	WHO Geneva, GOARN	Presenter
7	Dr. Berihun Afera	OHCEA	Presenter
8	Dr. Herbert Kazooru	AFENET	Presenter
9	Andrea Long-Wagar	USAID/AFR	Planning Committee
10	Sarah Konopka	ASH	Planning Committee
11	Dr. Helen Perry	CDC	Planning Committee
12	Dr. Rudi Thetard	ASH	Planning Committee
13	Monique Tuyisenge-Onyebula	CDC	Planning Committee



ANNEX 4: WORKSHOP PRESENTATIONS AND RESOURCES

The presentations delivered at the November 2013 IDSR Workshop can be accessed here:

- <https://www.dropbox.com/sh/zk066cws660azf2/ogYgUufVDI>

All of the resources referenced in this document, including the IDSR Technical Guidelines and various tools, can be accessed on the WHO/AFRO and CDC websites at the following locations:

- <http://www.afro.who.int/en/clusters-a-programmes/dpc/integrated-disease-surveillance.html>
- <http://www.cdc.gov/globalhealth/healthprotection/ghsb/idsr/default.htm>

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African Strategies for Health
4301 N. Fairfax Drive, Arlington, VA, 22203
Telephone: +1-703-524-6575
info-AS4H@as4h.org

www.africanstrategies4health.org
