EARLY WARNING AND RESPONSE

Why implement EWAR into the public health surveillance system?

▶ IHR (2005) State Parties have committed to detect all events with potential public health risk in a timely manner, and report and respond to them immediately. This required capacity is also known as Early Warning and Response: EWAR

What are the benefits of EWAR?

▶ Earlier detection of acute public health events
▶ Earlier and more effective response
▶ Reduced impact on health
▶ Fewer resources needed to respond
▶ Greater trust of the population in the health system
▶ Respect of the commitments to the IHR (2005)

What resources are needed for EWAR?

▶ **HUMAN:** skilled trained human resources
▶ **ORGANIZATIONAL:** strong coordination, multisectoral collaboration, and political commitment
▶ **FINANCIAL:** specific budget for both investment and recurrent costs
▶ **EQUIPMENT** including data management system

EWAR IS EMBEDDED IN THE NATIONAL SURVEILLANCE SYSTEM

WHO provides national health authorities, and stakeholders supporting them, with guidance for implementing or enhancing all-hazards EWAR within the national surveillance system.

This guidance should not be seen as a model to implement, but rather as a "toolbox" from which countries can select the most relevant elements to address their own needs.

To download the complete guidance on EWAR,
including the guide, "EARLY DETECTION, ASSESSMENT AND RESPONSE TO ACUTE PUBLIC HEALTH EVENTS: Implementation of Early Warning and Response with a focus on Event-Based Surveillance"

www.who.int/ihr/publications/WHO_HSE_GCR_LYO_2014.4/en/

For more information

www.who.int/ihr/lyon/surveillance/en/
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World Health Organization

World Health Organization
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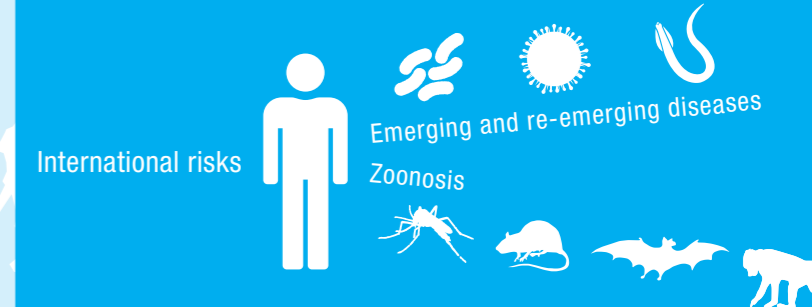# DETECT EARLIER TO BETTER PROTECT

ACUTE PUBLIC HEALTH EVENTS

World Health Organization

A NEW CONTEXT FOR PUBLIC HEALTH SURVEILLANCE

1 Emergence or re-emergence of international disease threats

International risks

Emerging and re-emerging diseases

Zoonosis

2 Other public health risks: radiological, chemical, etc.

3 Faster spread of public health risks
• Increased urbanization
• Growth in international travel and trade

2005, REVISION OF THE INTERNATIONAL HEALTH REGULATIONS

The IHR (2005) are a legal agreement between countries to work together for global health security. The IHR (2005) contain a range of innovations. Among them:

• A scope not limited to any specific disease, but covering any type of event that represents a threat to human health
• Each State Party has to meet core capacity requirements for surveillance and response

IHR
2005

EARLY WARNING AND RESPONSE

DETECTION
OF RAW DATA & INFORMATION

Sources of information have to go beyond traditional surveillance data generated by the national health system

SYSTEMATIC AND REGULAR DATA TRANSMISSION
- Pre-defined list of structured data for specific diseases or conditions
- Regularly reported (weekly, monthly)
- Including usual surveillance data generated by the national health system

INDICATOR-BASED SURVEILLANCE (IBS)
▶ **Specific and reliable data**

ADDITIONAL SURVEILLANCE INFORMATION
Available through multiple sources (rumours, social community, media, etc.)
- Unstructured information for all types of public health events
- Actively collected

EVENT-BASED SURVEILLANCE (EBS)
▶ **Sensitive and timely information**

TRIAGE
OF RELEVANT DATA & INFORMATION

A CRUCIAL STEP
to avoid overwhelming the process with unnecessary information

Sorting data and information into the categories
✓ Likely to be relevant
✗ Not likely to be relevant

FOR USUAL SURVEILLANCE DATA GENERATED BY THE NATIONAL HEALTH SYSTEM
▶ Data analysis and data interpretation to detect abnormal morbidity and mortality figures

FOR ADDITIONAL SURVEILLANCE INFORMATION FROM MULTIPLE SOURCES
▶ Discard duplicates / irrelevant information and identify unexpected or severe events

◢ SIGNAL

VERIFICATION
& COLLECTION OF ADDITIONAL INFORMATION

AN ESSENTIAL STEP
to confirm the reality of the signal and its characteristics

- Contact original source
- Collect additional information
- Cross-check information using reliable sources
- Verify pertinence
- Characterize nature of event

◢ EVENT

RISK ASSESSMENT

The event needs to be assessed to determine the level of risk for the population and the control measures

HAZARD ASSESSMENT

EXPOSURE ASSESSMENT

CONTEXT ASSESSMENT

Potential impact on public health of the event

◢ ALERT

RESPONSE

Timely and effective response to reduce the impact on health

INVESTIGATE
- Confirm the diagnosis
- Collect and analyse additional information
- Refine the risk assessment and the response to be applied

CONTROL MEASURES
- Case management
- Immunization
- Infection control and prevention of exposure
- Enhanced surveillance and contact tracing

ADAPTED RESPONSE
- Local
- National
- Intermediate
- International

COMMUNICATION

Communication between partners for effective response
- National contact list with names, phone numbers, fax, e-mail, etc.
- Ad-hoc feedback, weekly newsletters or quarterly bulletins

Communication to the public to inform and increase trust and commitment for cooperation
- Social mobilization
- Media communication

DETECT
all threats

CAPTURE
only relevant threats

TARGET
only genuine events

IDENTIFY and ASSESS
acute public health events

IMPLEMENT
a tailored and effective response

ENABLE
information sharing and risk communication

MONITORING - EVALUATION - OPTIMIZATION