

# Introduction

## 1. Purpose of this document

This document provides practical guidance on how to implement and strengthen early warning, alert and response (EWAR) during an emergency, when the national surveillance system is disrupted or underperforming.

## 2. Why is this needed now?

This document simplifies and updates existing guidance, provides a comprehensive overview of EWAR as a core function of surveillance in an emergency setting, and provides operational guidance for how to strengthen EWAR at the national and sub-national levels.

## 3. Who is this document for?

The primary audience for this guidance include:

- **Frontline health staff** who recognize unusual alerts and collect and report surveillance data;
- **Rapid response teams** who are involved in receiving, verifying, and responding to EWAR alerts;
- **Epidemiologists** who design, implement, monitor and evaluate surveillance systems, and use EWAR data to predict and prevent outbreaks and other public health emergencies;
- **Policy makers** who take decisions and allocate resources to strengthen EWAR.

## 4. How should this guidance be used?

This document is a concise guide to the essentials of EWAR design, implementation, monitoring and evaluation. It is divided into three sections and 10 modules.

## Section 1: Technical Standards

This section describes the concepts, technical standards, and definitions for EWAR.

- **Module 1: Introduction.** Defines EWAR and explains why it is important for national surveillance systems and during emergencies.
- **Module 2: Overview.** Provides an overview of the core EWAR functions, structure, and terminology.
- **Module 3: Indicator-based surveillance.** Explains the role of indicator-based surveillance in detecting alerts based on health facility data reported weekly
- **Module 4: Event-based surveillance.** Explains the role of event-based surveillance in the detection of alerts from non-conventional sources reporting immediately.
- **Module 5: Verification and risk assessment.** Describes how rapid verification is used to authenticate {signals/alert} as acute public health events and how risk assessment is used to evaluate the potential impact on public health.
- **Module 6: Enhanced surveillance for outbreaks.** Discusses the different forms of enhanced surveillance that must be established when an event is confirmed (e.g., during outbreaks and other public health emergencies).

## Section 2 Operational Support

This section provides step-by-step operational guidance on how to implement EWAR at national and field levels.

- **Module 7: National EWAR.** Explains the key steps in strengthening EWAR as a core function of a national surveillance system.
- **Module 8: Emergency EWAR.** Explains the key steps in strengthening EWAR during an emergency, when the national surveillance system is disrupted or underperforming.
- **Module 9: Electronic tools.** Presents the minimum requirements for how electronic field collection tools should collect, report, analyse and use EWAR data. [Note to TWG: module on hold]
- **Module 10: Data analysis and use.** Provides best practices on how data should be analysed, visualised, and presented in epidemiological bulletins and other information products.

- **Module 11: Monitoring and evaluation.** Covers monitoring and evaluation of EWAR at field level, including on-the-job supervision, regular monitoring, and external evaluation.

## Section 3: Tools

This section includes useful tools and reference materials that are discussed in each module.



### References

**This document consolidates content from the following key guidelines.**

1. Early detection, assessment and response to acute public health events: Implementation of early warning and response with a focus on event-based surveillance (WHO, 2014)
2. Rapid risk assessment of acute public health events (WHO, 2012)
3. Outbreak surveillance and response in humanitarian emergencies: WHO guidelines for EWARN implementation (WHO, 2012)
4. Communicable disease control in emergencies: a field manual (WHO, 2005)
5. Early warning, alert and response network in emergencies: an evaluation protocol (CDC, 2017)