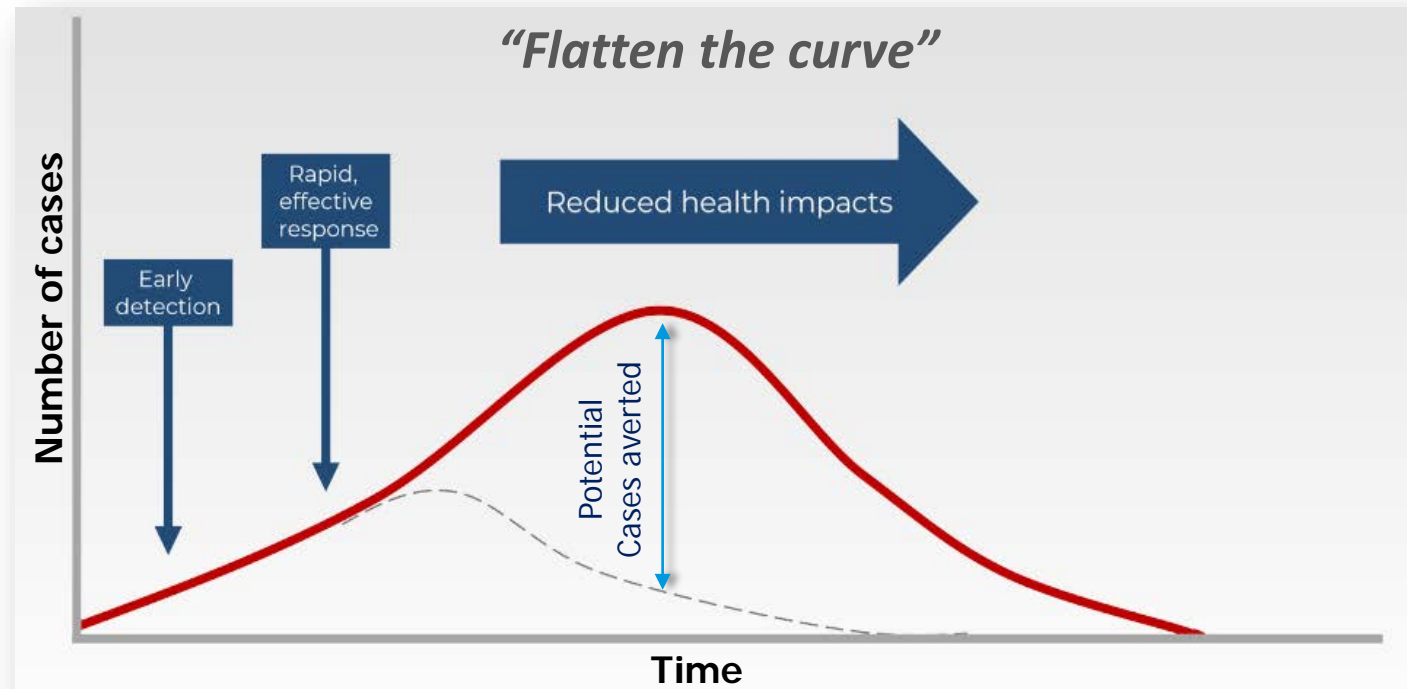# Global Public Health Intelligence:

WHO's Operational Practices

Public Health Intelligence (acute events)
Alert & Response Coordination Department
WHO Emergencies Programme

31 October 2024

World Health Organization

HEALTH
EMERGENCIES
programme

"Flatten the curve"

Reduced health impacts

Number of cases

Rapid, effective response

Early detection
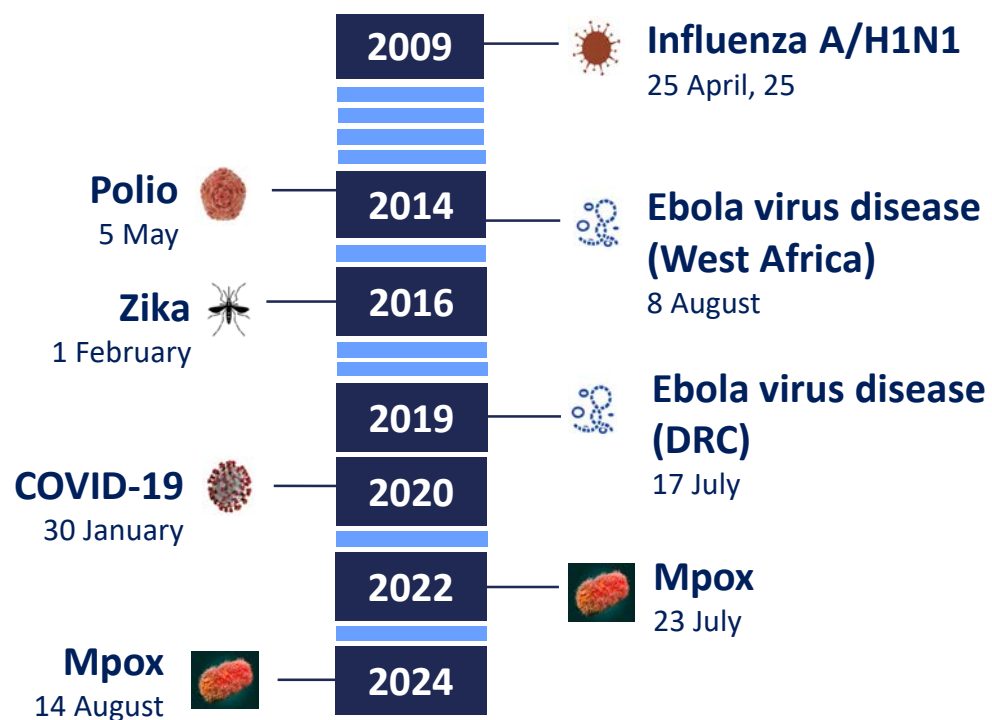
Potential Cases averted

Time

Early detection
Early warning
Early response
Saves lives

Public Health Intelligence: "...**a core public health function** responsible for identifying, collecting, connecting, synthesizing, analyzing, assessing, interpreting and generating a wide range of information for actionable insights and disseminating these for informed and effective decision-making to protect and improve the health of the population. "
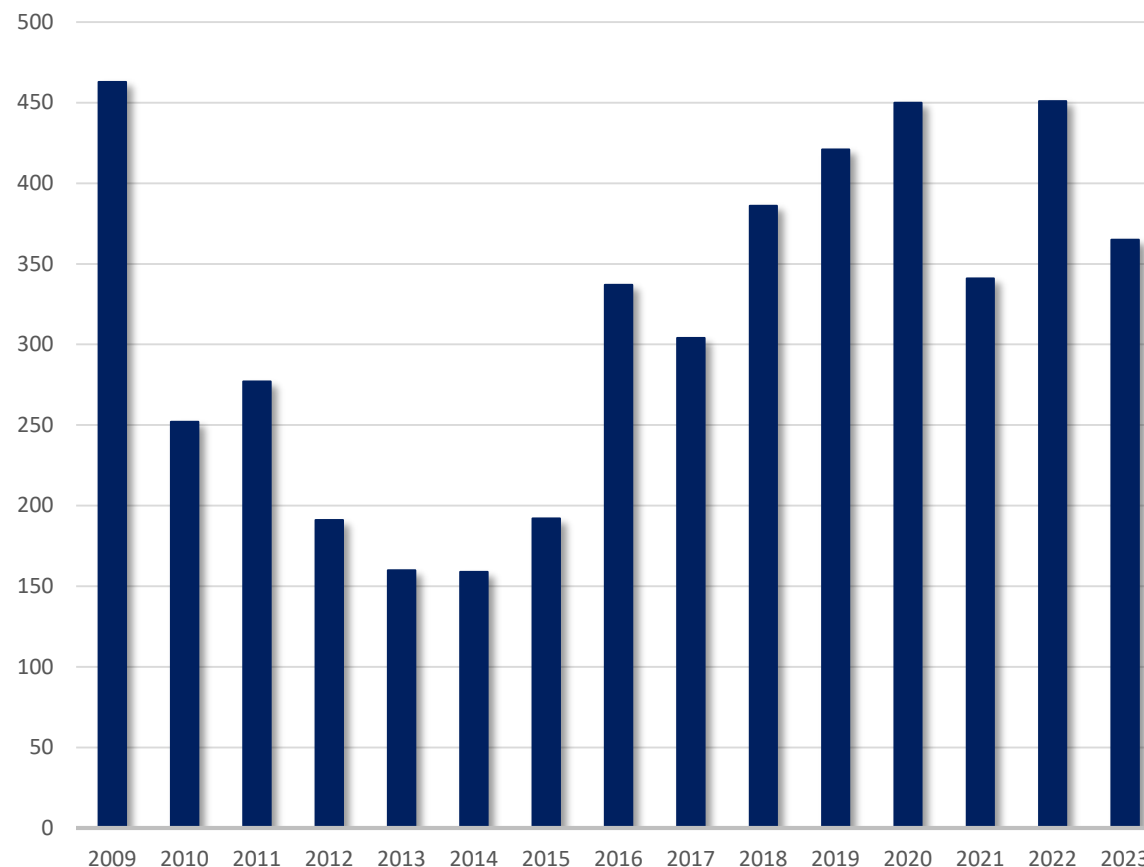
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- UN Terms

(Potential) Public Health Emergencies of International Concern

Declared Public Health Emergencies of International Concern (PHEIC)

2009 — **Influenza A/H1N1**
25 April, 25

Polio
5 May

2014 — **Ebola virus disease (West Africa)**
8 August

Zika
1 February

2016

2019 — **Ebola virus disease (DRC)**
17 July

COVID-19
30 January

2020

2022 — **Mpox**
23 July

Mpox
14 August

2024

Number of acute public health events reported to WHO, 2009-2023 (n=4749)

World Health Organization

IHR article 5 - **Surveillance**

WHO shall collect information regarding events through its surveillance activities and assess their potential to cause international disease spread and possible interference with international traffic.
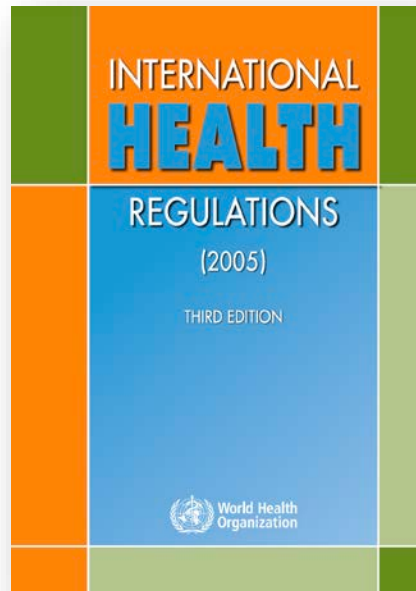
IHR article 9 – Other reports

WHO may take into account reports from other sources other than notifications or consultations and shall assess these reported according to established epidemiological principles...WHO shall consult with and attempt to obtain verification from the State Party...[]

IHR article 11 – Provision of information by WHO

WHO shall send to all States Parties...[] such public health information...[]which is necessary to enable States Parties to respond to a public health risk. ...[]

WHO may also make it available to the public ...[] if there is a need for the dissemination of authoritative and independent information.

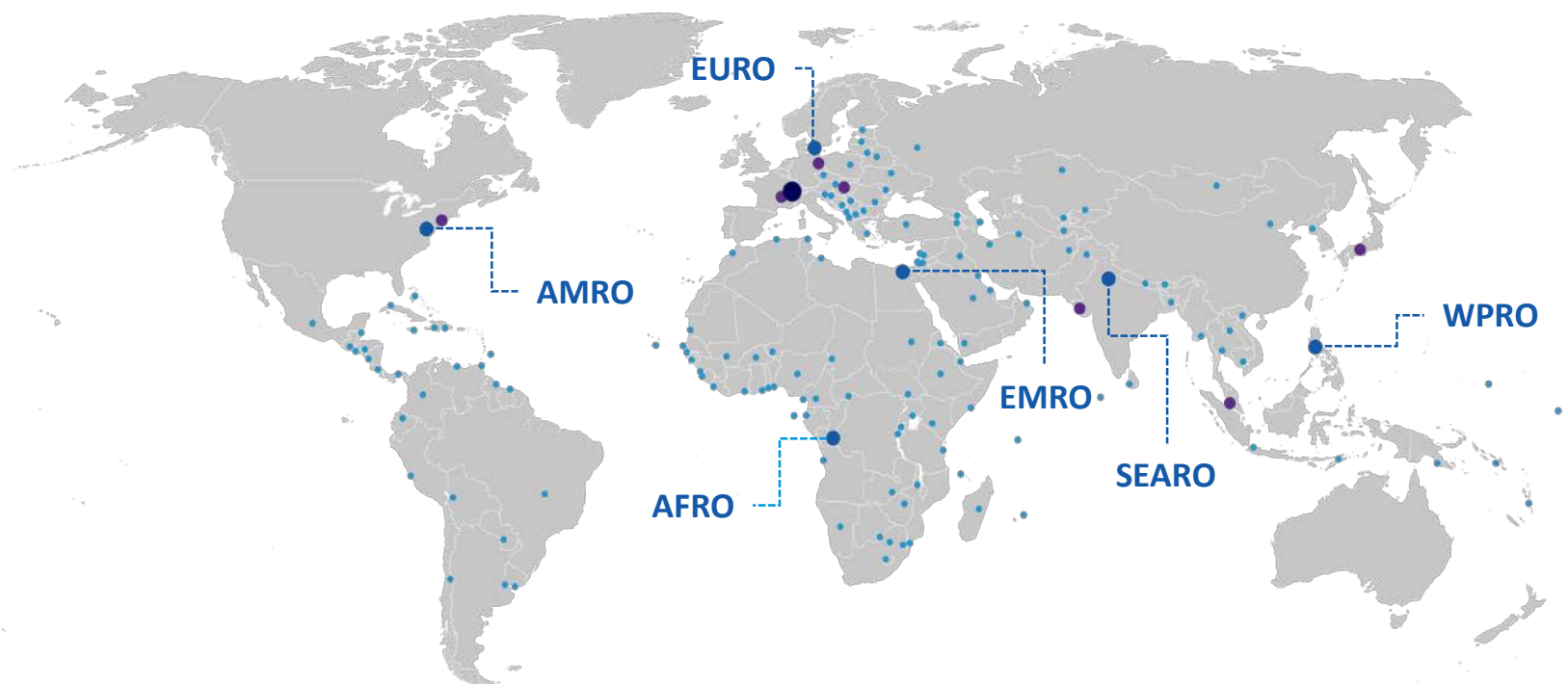**Other key articles for PHI operations**

IHR article 6– Notification

IHR article 8– Consultation

IHR article 10– Verification

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4

WHO's Global Public Health Intelligence Infrastructure

HEALTH **EMERGENCIES** programme

6 **Regional offices + HQ**   **150** **Country offices**

EURO
AMRO
WPRO
EMRO
SEARO
AFRO

+ Global Network of Technical Experts

- Disease experts
- Antimicrobial resist ance experts
- Laboratory experts
- GOARN partners
- GLEWS+
- INFOSAN

World Health Organization

GOARN: Global Outbreak Alert and Response Network; GLEWS+: Tripartite Global Early Warning and Response System; INFOSAN: International Food Safety Authorities Network

Public Health Intelligence – Key Steps

Detection

Verification

Risk Assessment

Reporting / Alerting

Action / Response

World Health Organization

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EMERGENCIES
programme

In 2023

~13,000,000
pieces of information

~1,300,000
raw signals

~1,500
signals

40 **events**
risk assessed

EIOS: Epidemic Intelligence from Open Sources
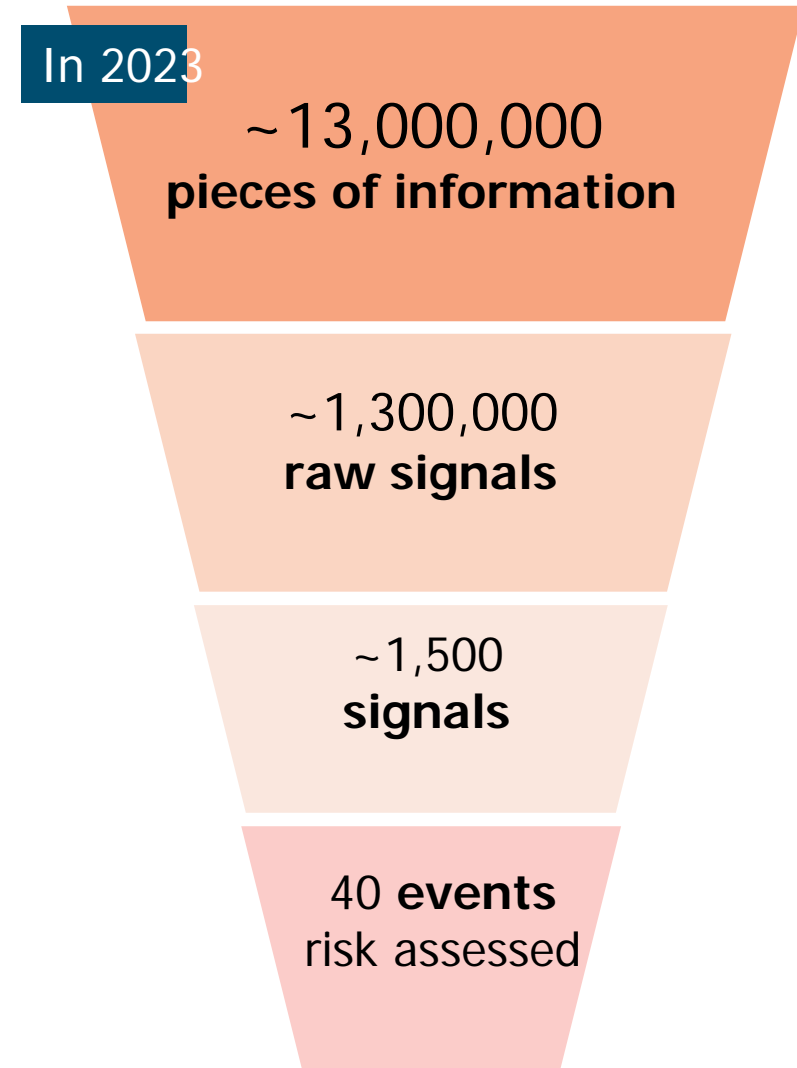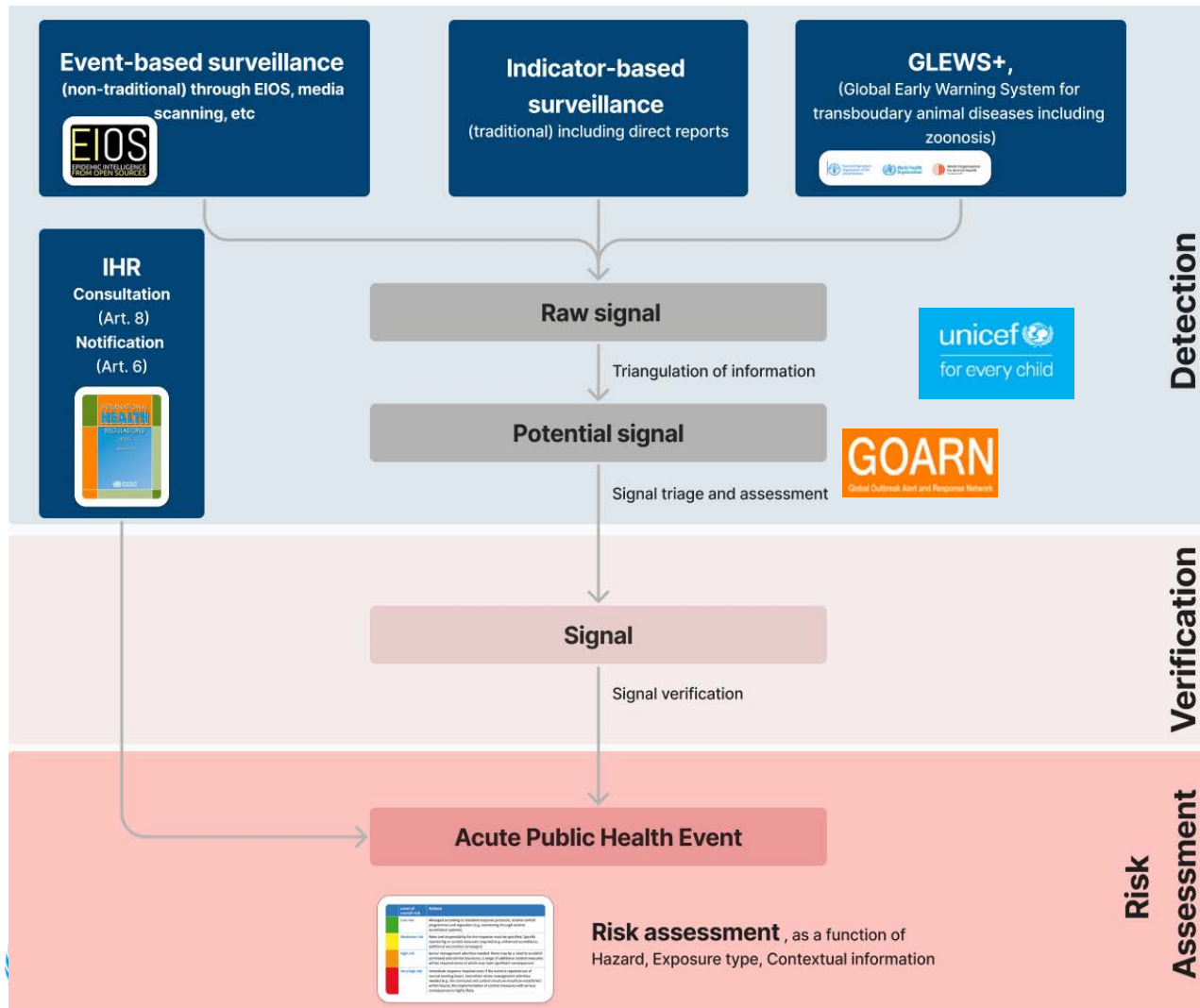
Any public health concern with the potential to affect human health

Higher than expected **mortality** or **morbidity**
- Among **specific population groups** (e.g., refugees, health care workers, marginalized populations)
- Due to an **undiagnosed** or **unknown** illness or death in humans or **unusual** death animals

Concern for **transmission/spread** and **global** impacts:
- Potential to cause an outbreak with substantial risk of spread, including food safety/security
- Unusual/unexpected/unexplained morbidity or mortality related to international travel or mass gathering
- Possible consequences for international trade or travel
- From CBRN and environmental hazards

**Re-emergence** of disease with pandemic potential or vaccine-preventable disease

Indirect effects on health including:
- Undue level of concern/fear in the affected community
- Potential reputational risk for WHO

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Organization

CBRN: Chemical, Biological, Radiological and Nuclear

- Do we already know as WHO?
  - Review of internal systems

- Respectable source?
  - If yes, next question
  - If not, check other sources
    - Government websites
    - Partner websites
    - Expert teams

- What is known?
  - Person? Place? Time?
  - Background rate?
  - Unusual/unexpected?

- What is the context?
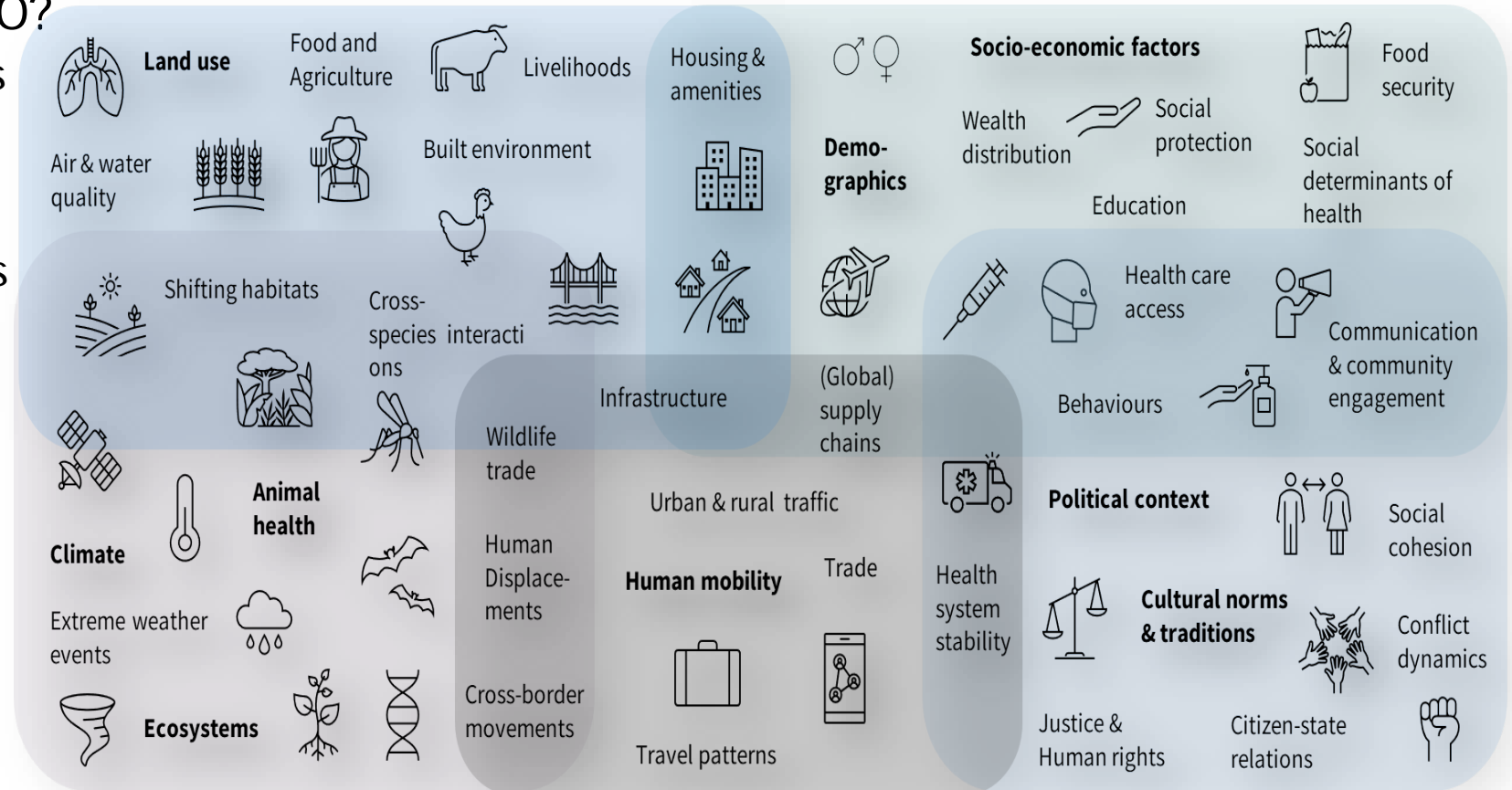
credit: I. Redies, WHO

World Health
Organization

Daily Public Health Intelligence Review

- Multi-disciplinary team with 24/7 coverage

- Collaborative assessment, triage and categorization of signals/events
  - Review of signals under monitoring
  - Review new events reported by Member States
  - Review of requests received from other teams

- Review of outstanding alert actions (EIS, RRA, DON, situation reports)

- Identification of signals for daily reporting and presentation to WHO Director General and senior management for action

World Health Organization

EIS: Event Information Site report; RRA: Rapid Risk Assessment; DON: Disease Outbreak News report

Signal Verification and IHR

Signal verification is a multistep process that involves collaboration with key stakeholders.

In 2023, 62% of responses to verification requests to Member States were received in <48hrs.

States Parties to the IHR have obligation to notify within 24 hours any potential public health events of international concern.

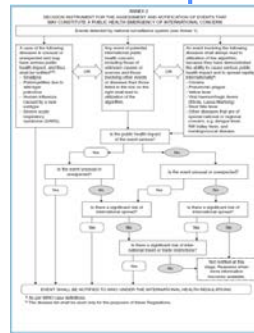IHR: International Health Regulations

Always notifiable

- ☐ **Smallpox, SARS, Wild-type poliovirus, human influenza caused by new subtype**

Any event of potential international public health concern that meet two of the criteria;

- ☐ **Is the public health impact of the event serious?**

- ☐ **Is the event unusual or unexpected?**

- ☐ **Is there any significant risk of international spread?**

- ☐ **Is there any significant risk of international travel or trade restrictions?**

HEALTH **EMERGENCIES** programme
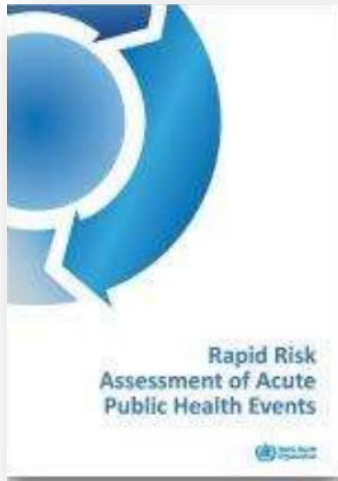
- Reflect WHO's independent assessment including country's capacities /vulnerabilities to control outbreak/event

- Highlights urgent actions required including
  - Refers event for review of IHR Emergency Committee for consideration as a PHEIC
  - Activation of Emergency Response Framework mechanisms
  - Recommend setting up a grading discussion

IHR: International Health Regulations; PHEIC: Public Health Emergency of International Concern; ERF: Emergency Response Framework
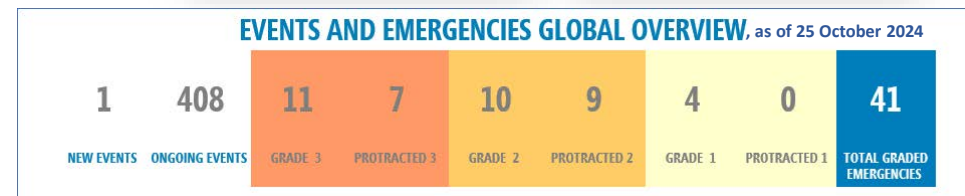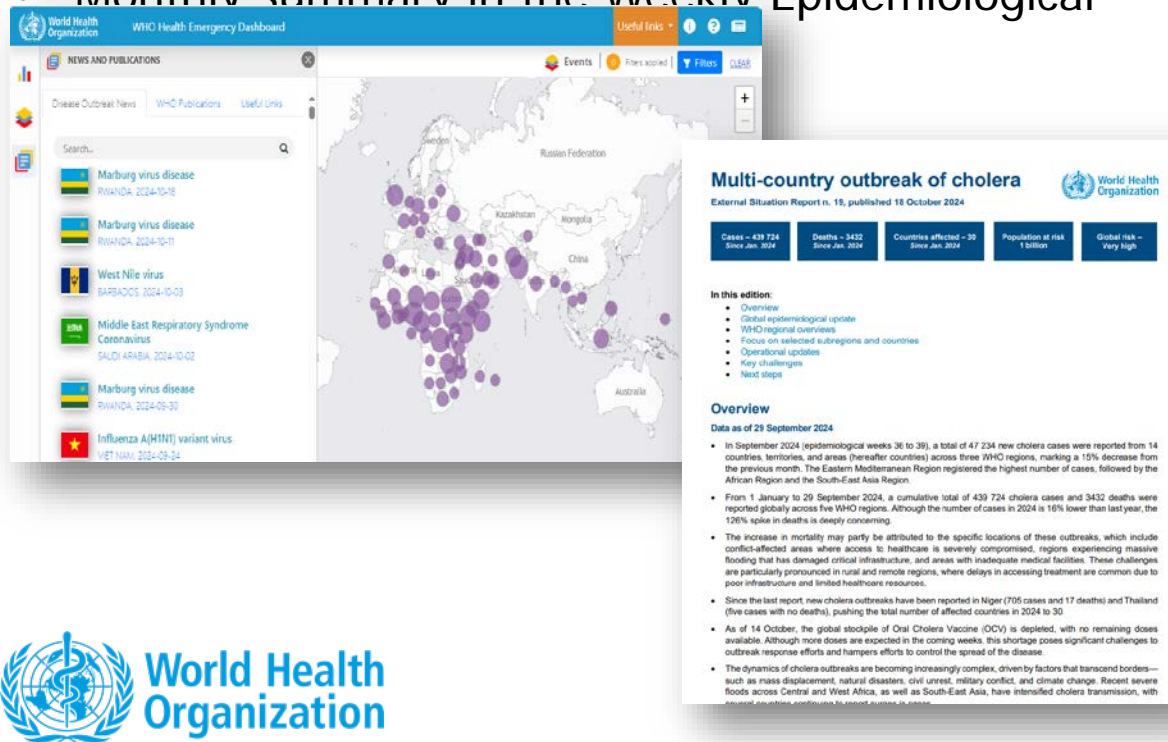
Alerting Member States: Event Information Site

- EIS: secure website developed by WHO to facilitate communications with the National IHR Focal Points (NFPs) as part of the implementation of the IHR

- Information is provided by WHO to NFPs in confidence   as specified in Article 11.1 of the IHR

- Information provided
  - IHR criteria assessment
  - Situation update
  - Public Health Response
  - WHO Risk Assessment
  - WHO Advice/Recommendations
  - Links for more information

- Compiled by technical experts across 3 levels of WHO

- Sent to NFP for consultation (an accuracy check)

IHR: International Health Regulations.
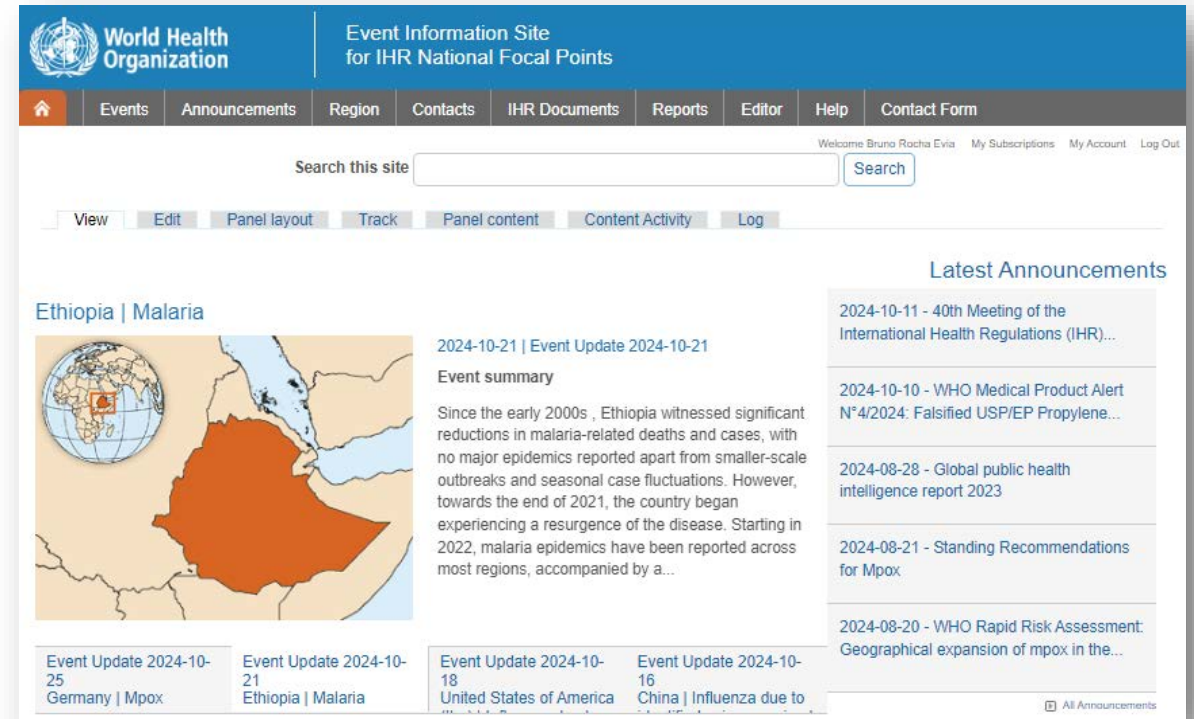
Alerting the Public: Disease Outbreak News, Situation Reports

- WHO's main communications product for the public on acute public health events > 25 years
- Translated and published in six UN official languages
- Linked to the WHO Health Emergency Dashboard
- Monthly summary in the Weekly Epidemiological

DONs: https://www.who.int/emergencies/disease-outbreak-news

Situation Reports: https://www.who.int/emergencies/situation-reports

Dashboard: https://extranet.who.int/publicemergency

WER: https://www.who.int/publications/journals/weekly-epidemiological-record

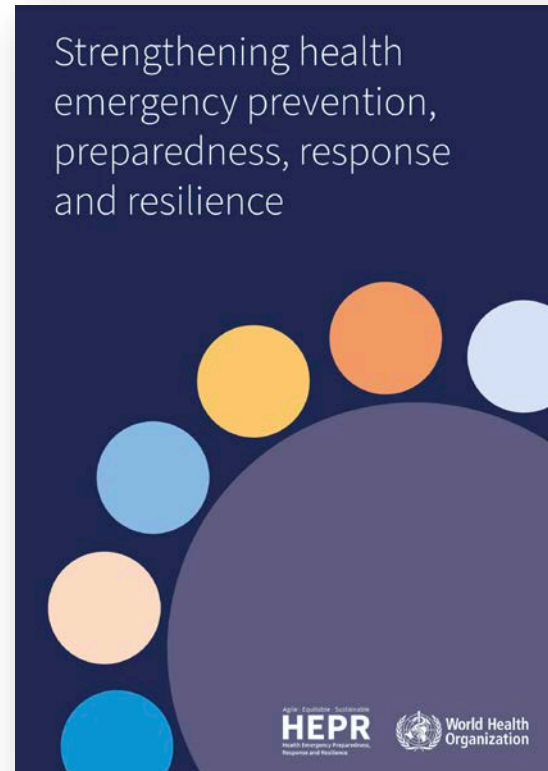DON: Disease Outbreak News report; WER: Weekly Epidemiological Record

14

Public Health Intelligence is essential to strengthen Health Emergency Prevention, Preparedness, Response & Resilience (HEPR)

HEALTH **EMERGENCIES** programme

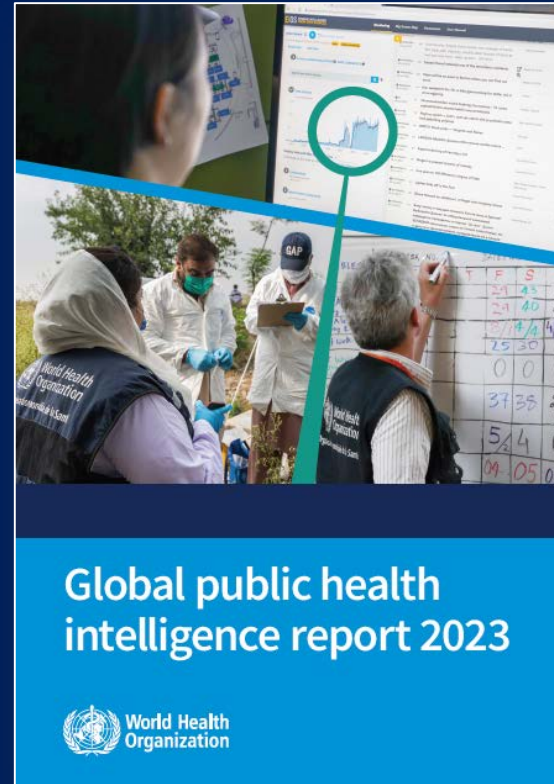Based on independent reviews, synthesising **+ 300 post-COVID recommendations ...**

*...developed in consultation with **Member States & partners***

Strengthening health emergency prevention, preparedness, response and resilience

HEPR Health Emergency Preparedness, Response and Resilience

World Health Organization

© World Health Organization 2023

Protect Health

Collaborative surveillance

Community protection

Emergency coordination

Access to countermeasures

Safe and scalable care

World Health Organization

Thank you

Global public health intelligence report 2023

Further reading: 2023 Annual global report on public health intelligence. WHO. 2024.

https://iris.who.int/bitstream/handle/10665/378455/9789240098206-eng.pdf?sequence=1

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