

How WHO detects, investigates and classifies public health events

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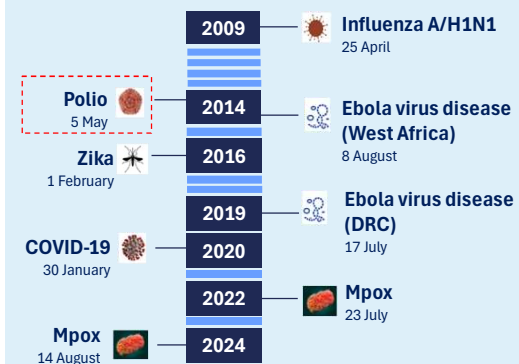
WHO Emergencies Programme, Geneva



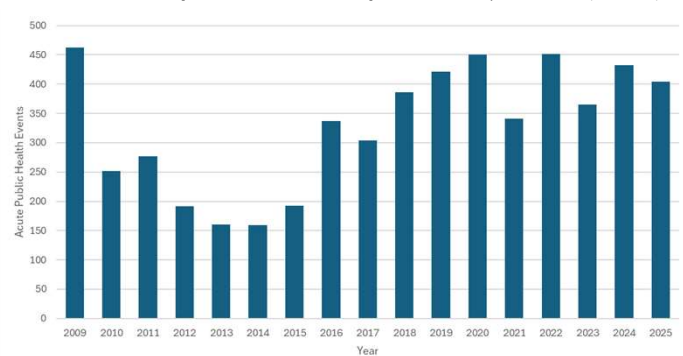
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(Potential) Public Health Emergencies of International Concern

Declared Public Health Emergencies of International Concern (PHEIC)



Number of acute public health events reported to WHO, 2009-2025 (n=5585)

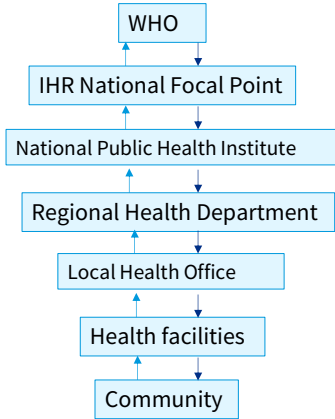


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How WHO detects public health events

National surveillance & response structure



From Member States – IHR notifications

- national assess all reports of urgent events in 48hrs
- notification in 24 hrs of assessment of public health information of all events which may constitute PHEIC

Always notifiable

- Smallpox, SARS, poliomyelitis due to polioviruses, human influenza caused by new subtype

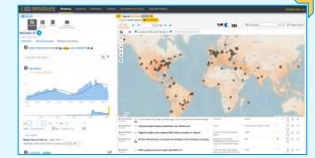
Any event of potential international public health concern that meet two of the criteria;

- 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?

From Open Sources

Epidemic intelligence from Open Sources (**EIOS**)

GDACS, GISRS, IDSR, PacNet



From networks

Partner communications

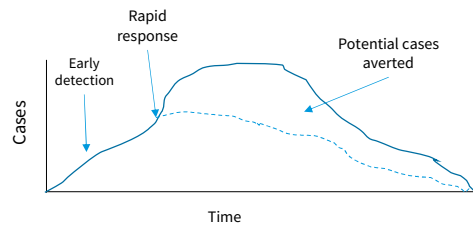
Joint FAO–WHO–WOAH Global Early Warning System for health threats at the human–animal–ecosystems interface (**GLEWS+**)₃

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Public Health Intelligence – Key Steps

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.”
(United Nations Terms)



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Verification

As per **IHR Article 10 IHR**: WHO may request verification from a State Party regarding reports from unofficial sources about events that may constitute a public health emergency of international concern (PHEIC).



In 2025, >60% signals verified by States Parties within 24-48 hours



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Alert & Response in action: Not yet diagnosed disease, Democratic Republic of the Congo



DETECTION
29 November 2024

The Ministry of Public Health of DRC reported a signal on increased deaths from an undiagnosed cause in Panzi health zone, Kwango Province.



Experts scrambled as mystery outbreak kills 79 in remote part of the Congo
Specialists rule out coronavirus but say that the disease affects the respiratory system, with symptoms particularly acute in young people



VERIFICATION
30 November 2024

- First Public Health Emergency Operations Center (PHEOC) meeting held with partners
- Joint MOH-WHO rapid response team (RRT) from Kwango Province was deployed to Panzi.
- Area rural & remote, access hindered by the ongoing rainy season. Approx 48 hours from Kinshasa.
- Limited phone & internet coverage
- Insecurity in the region



INVESTIGATION & RISK ASSESSMENT
5 December 2024

- 24 October - 5 December 2024:
 - 406 cases of a not yet diagnosed disease with symptoms of fever (96.5%), cough (87.9%), fatigue (60.9%), runny nose (57.8%).
 - 31 deaths (CFR 7.6%).
 - Children aged 0-14 years represent 64% of all reported cases and among the deaths 71% below the age of 15.
- Risk to affected communities is assessed as high
- At national level, the risk is considered moderate
- At regional & global levels, the risk remains low, however, proximity to Angola border raises concerns

ALERTING
6-8 December 2024

- The [Event Information Site report](#) for National IHR NFPs



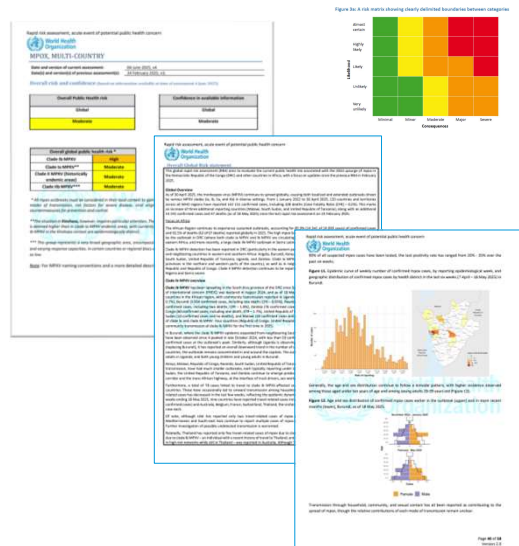
- The Disease Outbreak News (DON) on the [not yet diagnosed disease, Democratic Republic of the Congo](#)
- Further response & surveillance activities
- 27 Dec - Disease Outbreak News (DON) [Acute respiratory infections complicated by malaria \(previously undiagnosed\)](#)



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Rapid Risk Assessment (RRA)

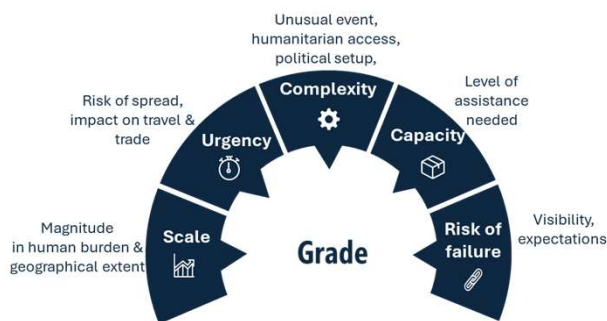
- Since 2016, WHO conducted **Rapid Risk Assessments** for acute public health events using a standardized, all-hazards methodology.
- Used for major events that could overwhelm a country's response or have international implications, requiring support from WHO and partners.
- Main objectives are to characterize the risk to public health and to recommend most effective public health actions
- An independent assessment of public health risks and a country's capacity to control an event.
- Categorize the risk as low, moderate, high or very high, using Hazard, Exposure and Context approach.
- Recommends whether event should be;
 - assessed for grading to determine level operational response
 - referred to IHR Emergency Committee



<https://www.who.int/emergencies/risk-assessment/rapid-risk-assessment>

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WHO Grading - level operational response



- Ungraded** Operational response **does not exceed** the usual country-level cooperation of the WCO and MS. Event is monitored as required.
- Grade 1** Event requires a **limited response** by WHO, which exceeds the usual country-level cooperation. Organizational or external support required is minimal. Support to WCO is coordinated by an IM counterpart in the Regional Office.
- Grade 2** Event requires a **moderate response** by WHO, exceeding the capacity of the WCO. Organizational or external support required is moderate. Support to WCO is coordinated by an IM in the Regional Office, with an IM counterpart at HQ to assist with coordination or organization-wide support as required.
- Grade 3** Event requires a **major to maximal WHO response**. Organizational and external support required by the WCO entails the mobilization of Organization-wide assets. Support to WCO is coordinated by an IM in the Regional Office. An IM is also appointed at HQ to assist with the coordination of Organization-wide support. The WHE EXD and involved RDs may agree to coordinate the event from HQ. An IM at HQ will coordinate responses involving multiple regions.

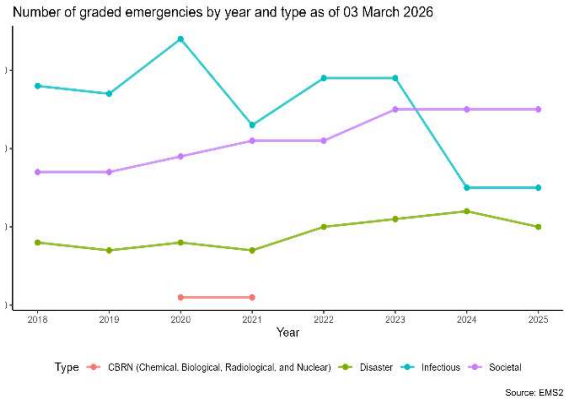
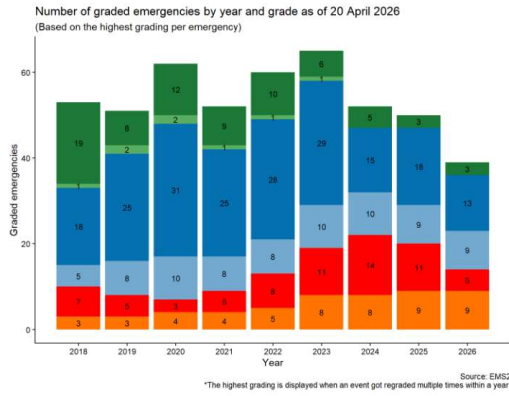
An IASC system-wide scale-up activation automatically results in a WHO Grade 3



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Number of Graded Emergencies



Thank you

For more information, please contact:

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Further reading: 2024 Annual global report on public health intelligence. WHO. 2025.

<https://iris.who.int/handle/10665/384924>

