International Scientific Symposium On Influenza Pandemic Response and Preparedness, Beijing , China
21-22 August 2009

Global surveillance during pandemic

Dr Sylvie Briand, Global Influenza Programme, WHO

World Health Organization

Information needs and challenges for pandemic surveillance

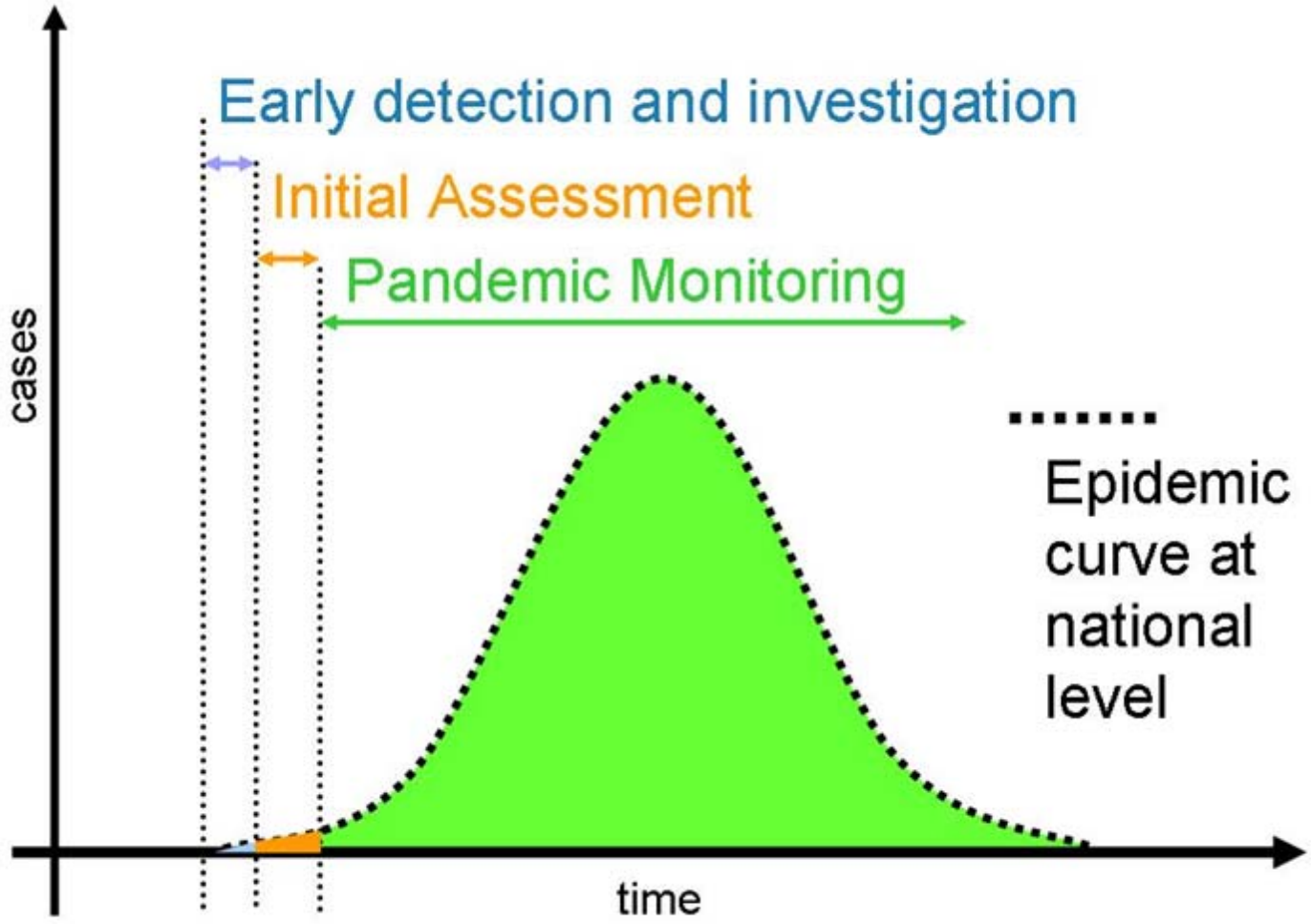
- There are many questions from Member States, the media and the public.
  - Which countries are affected ?
  - How fast does the disease spread? Is it the end of the first wave?
  - How severe is the disease? Is the situation evolving?
  - What are the at risk groups?
  - What is the effectiveness of the interventions?

- Challenges of surveillance during pandemic (H1N1) 2009
  - Time pressure
  - Completeness
  - Reliability - comparability
  - Communication of preliminary / incomplete information
  - Flexibility (use of modern tools)

Global Consultation on Surveillance during Pandemic (December 2007): *Recommendations and Conclusions*

- Given the diversity between countries, define minimum core indicators for global monitoring
- Information needs will be shifting during pandemic: pandemic surveillance will be based on different components (early detection and investigation, initial assessment, monitoring)
- Build on existing tools and influenza surveillance systems
- Even for good organized surveillance systems it will be a challenge to provide timely information, especially numbers of cases and deaths (experience from SARS)

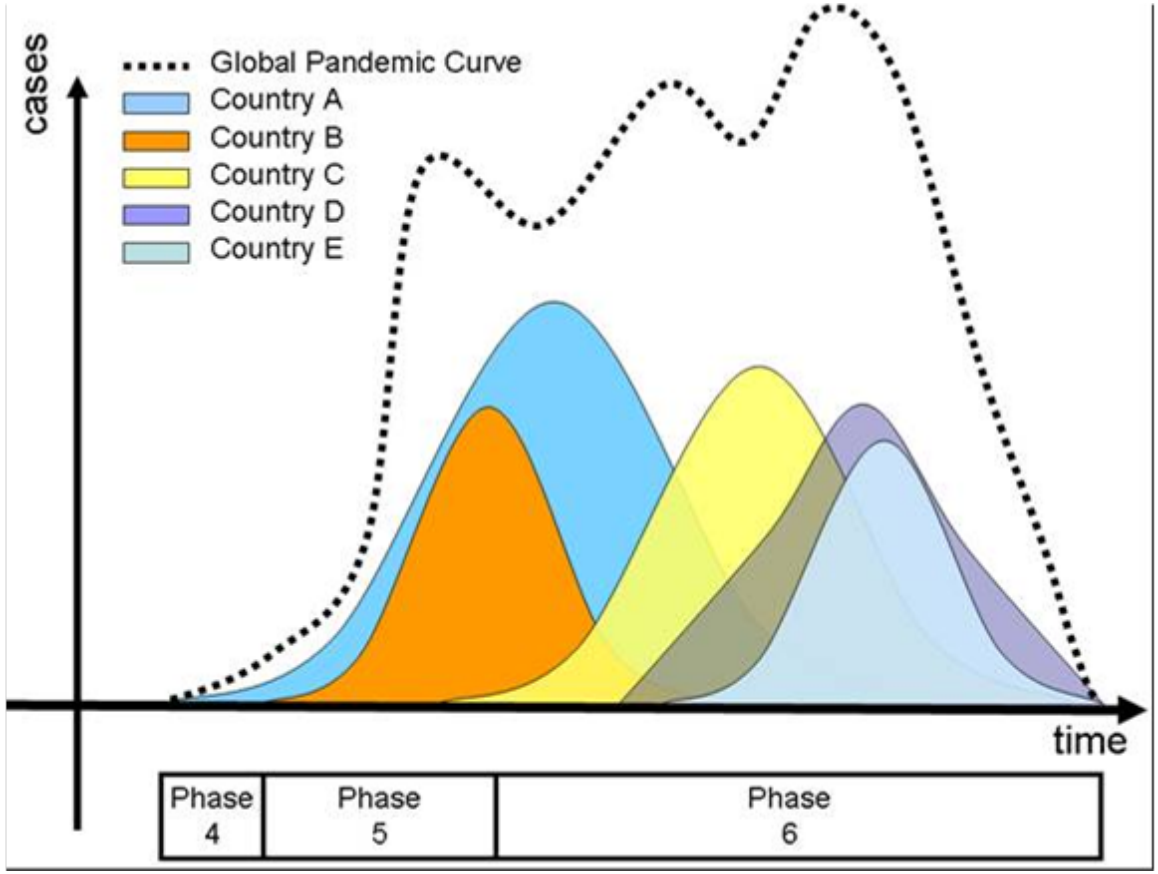
Shifting information needs during pandemic - Country level-



Global surveillance in H1N1 pandemic 2009

- Need for a coordinated global monitoring
  - Adequate international public health response to "international amplifiers" such as international mass gatherings and increased international travels to minimize potential impact on the economy
  - Opportunity to increase the knowledge on the pandemic and its characteristics in different settings (severity/impact) by pooling and sharing information from different countries.
  - To address global needs : access to antiviral and vaccines
  - Better communicate with the public and media by providing a global picture

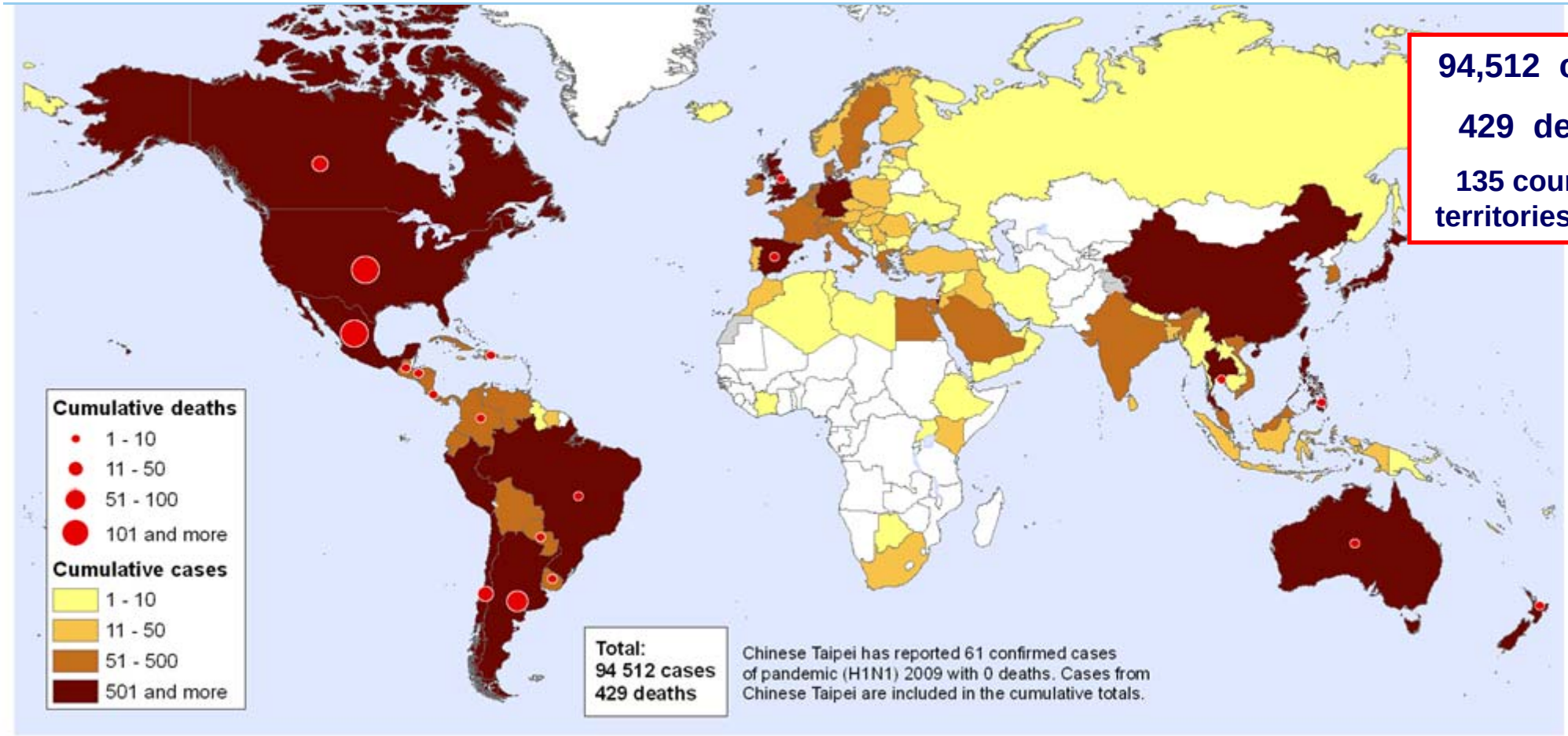
Pandemic surveillance: global and national levels



Sources of information

- Different sources of information and mechanisms for data collection :
  - IHR mandatory reporting
  - global/regional technical/surveillance networks like GISN
  - 4 networks of experts have been created : clinical, virorological, epidemiological, modelling
  - Regional and global teleconferences
  - Scientific literature review
  - Web site screening

Pandemic (H1N1) 2009
Epidemiological situation, 6 July 2009



94,512 cases

429 deaths

135 countries territories, areas

The boundaries and names shown and the designations used on this map do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted lines on maps represent approximate border lines for which there may not yet be full agreement.

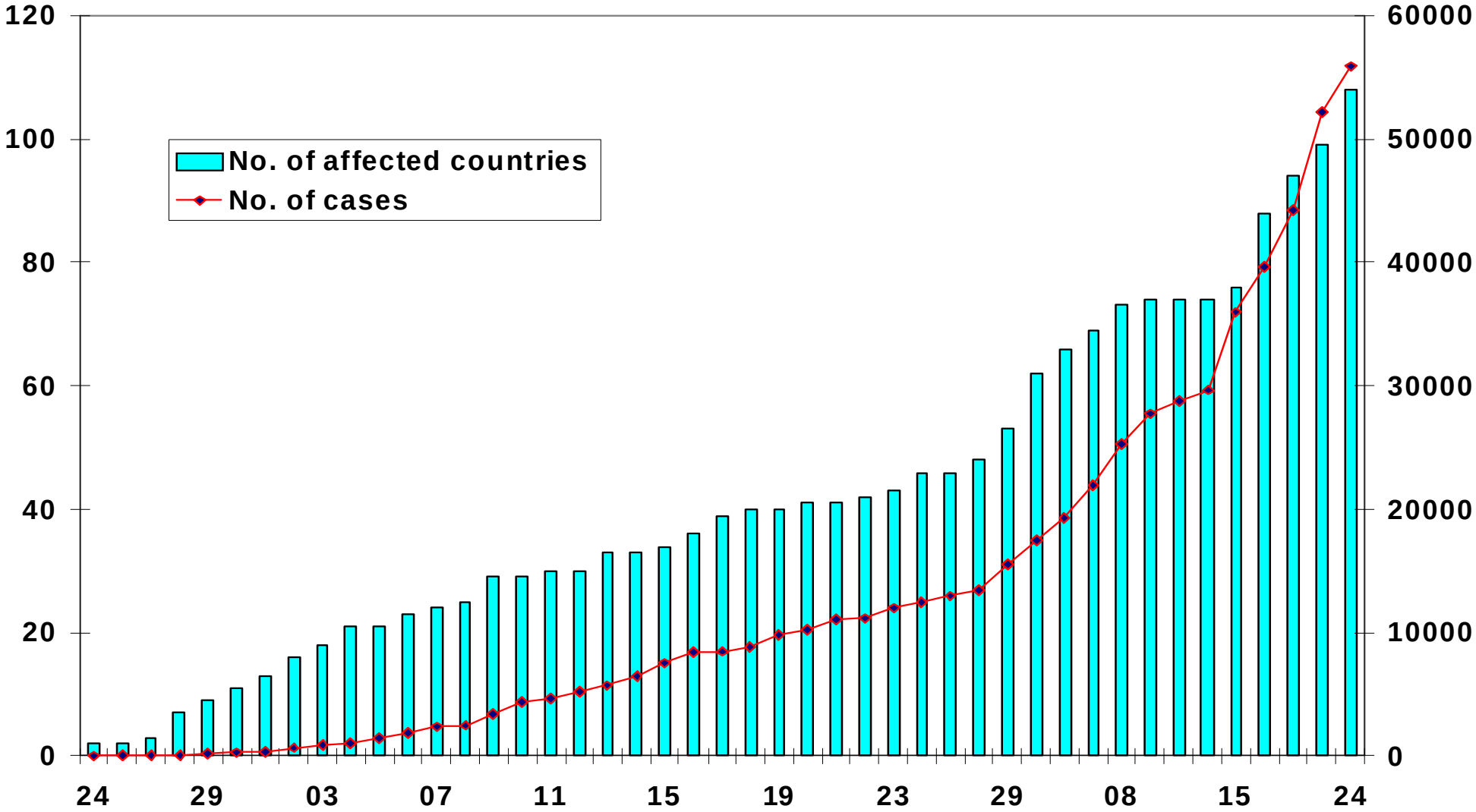
Map produced: 06 July 2009 09:00 GMT

Data Source: World Health Organization
Map Production: Public Health Information and Geographic Information Systems (GIS)
World Health Organization

World Health Organization

th Organization

Global spread: Affected countries and laboratory-confirmed cases (24 April-24 June 2009)



World Health Organization

Turning point in global surveillance

- Case-based surveillance (related to containment strategy) lead to unnecessary burden on national surveillance systems
- Numbers became not representative of the situation and less useful to public health decision making process
- Lack of laboratory reagent for testing severe cases and hospitalised patients.
- Mixed situation: non affected countries, countries with few cases, countries with mature outbreak.

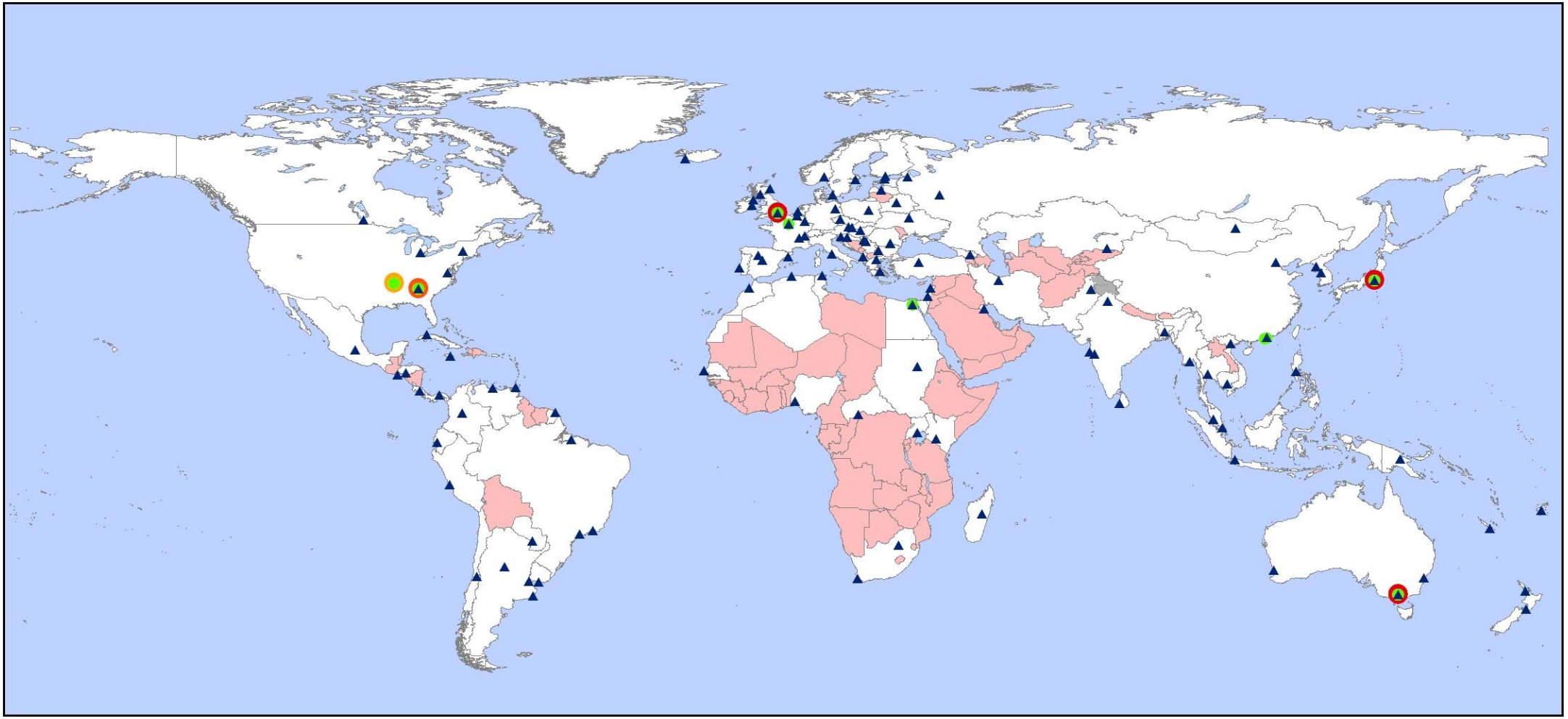
Global monitoring of pandemic H1N1

1. Virus monitoring
2. Disease monitoring
3. Severity/impact assessment

Virus monitoring

- Monitoring of circulating viruses (seasonal and pandemic) to inform vaccine composition
- Monitoring virus changes : reassortment or mutations leading to antiviral resistance or increased virulence
- GISN : global influenza surveillance network used for seasonal influenza (since 1950's), expanded for pandemic monitoring
  - 128 institutions from 99 countries
  - 5 WHO CC

The WHO Global Influenza Surveillance Network (GISN), February 2008



13 February 2008

- National Influenza Centres
- WHO Collaborating Centres for Reference and Research on Influenza
- WHO Collaborating Centre for the Surveillance, Epidemiology and Control of Influenza
- WHO Collaborating Centre for Studies on the Ecology of Influenza in Animals
- H5 Reference Laboratories
- WHO Member States without National Influenza Centre

World Health Organization

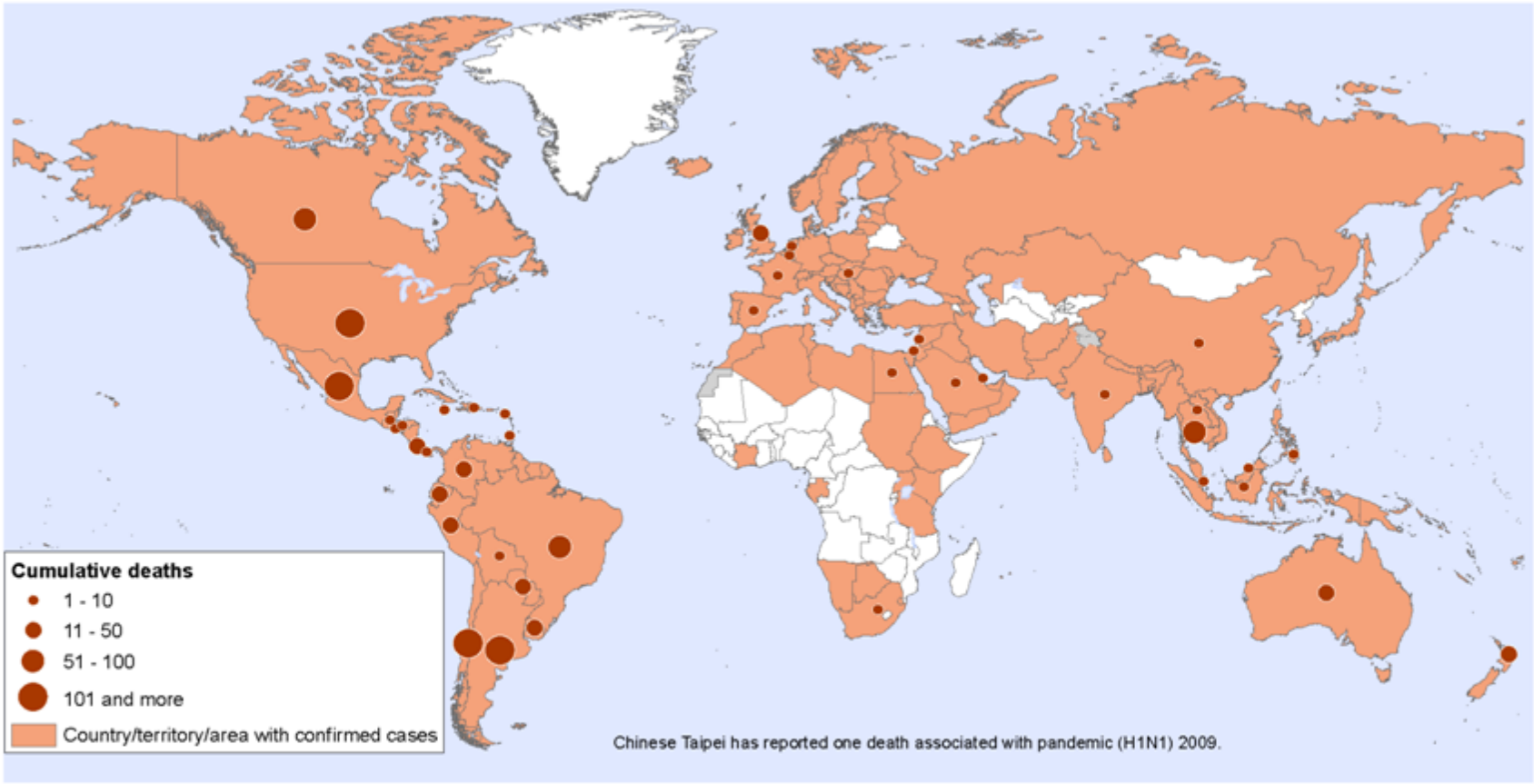
Data Source: WHO FluNet, GISN
Map Production:
CDS/EPR/GIP, CDS/EPR/GIS
World Health Organization

Disease monitoring

Pandemic (H1N1) 2009

Status as of 06 August 2009

Countries, territories and areas with lab confirmed cases and number of deaths as reported to WHO



Data Source: World Health Organization
Map Production: Public Health Information and Geographic Information Systems (GIS)
World Health Organization

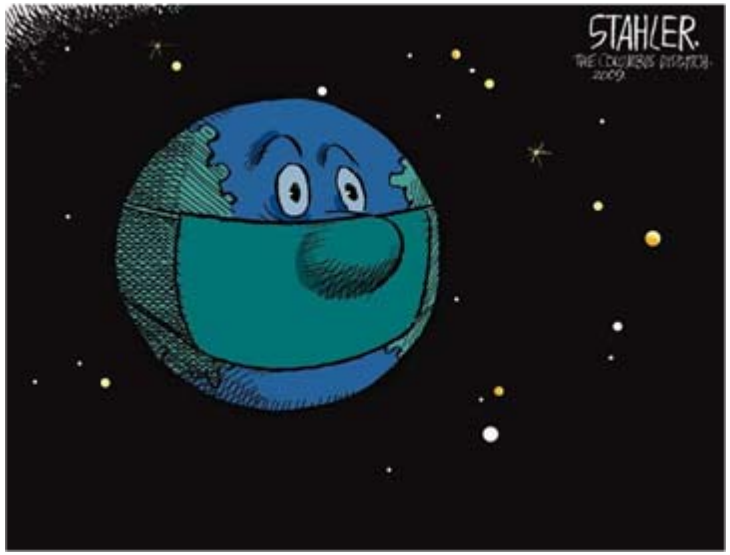
World Health Organization

Map produced: 10 August 2009 14:00 GMT

World Health Organization

Global Disease Monitoring system

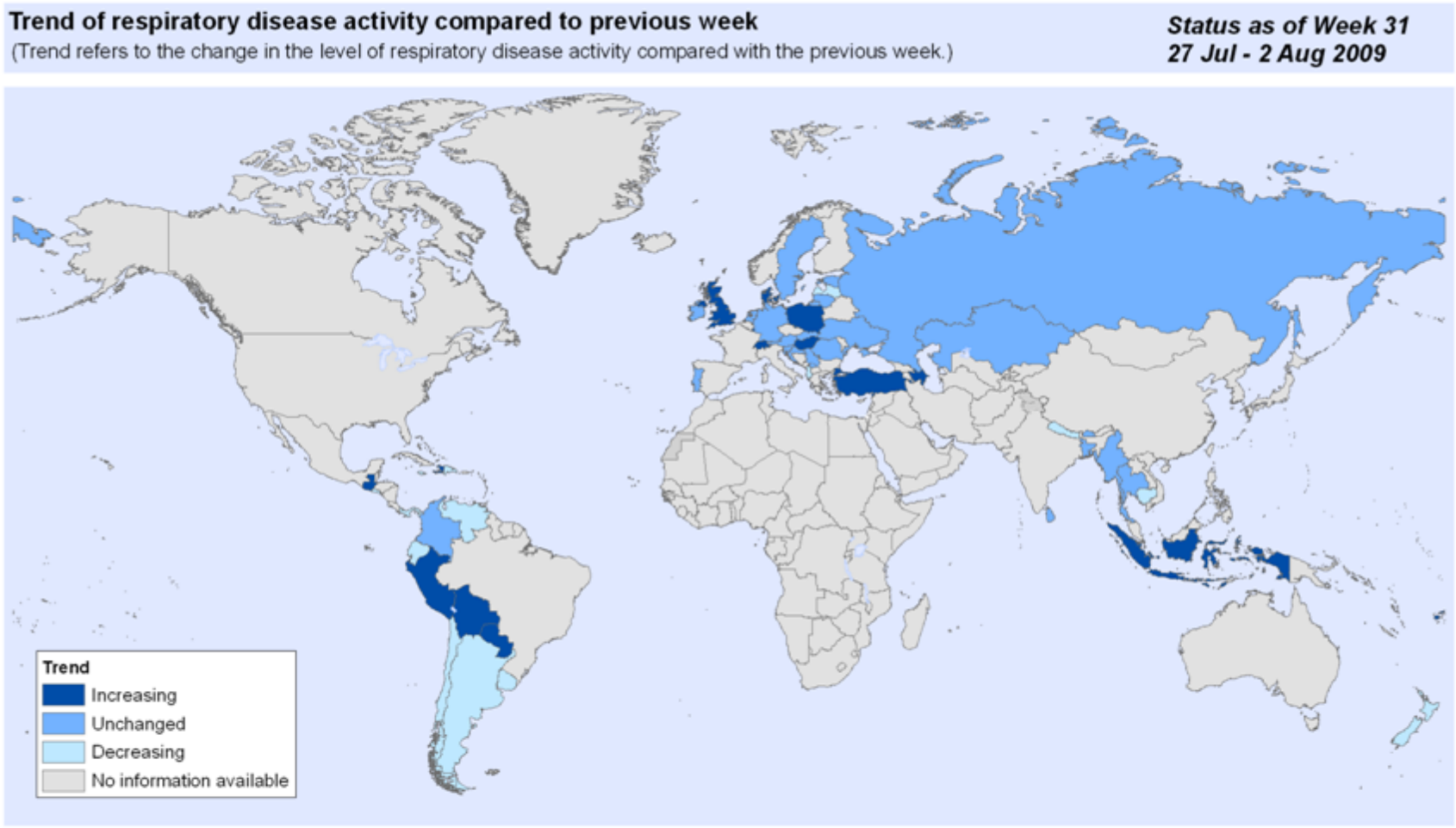
- Qualitative indicators
  - Geographical spread
  - Intensity /prevalence
  - Trend
  - Impact on health care system



- Seasonal influenza system.
  - ILI rates
  - SARI
  - Mortality

- For all countries Pandemic H1N1 related deaths

Disease trends (week 31, August 2009)



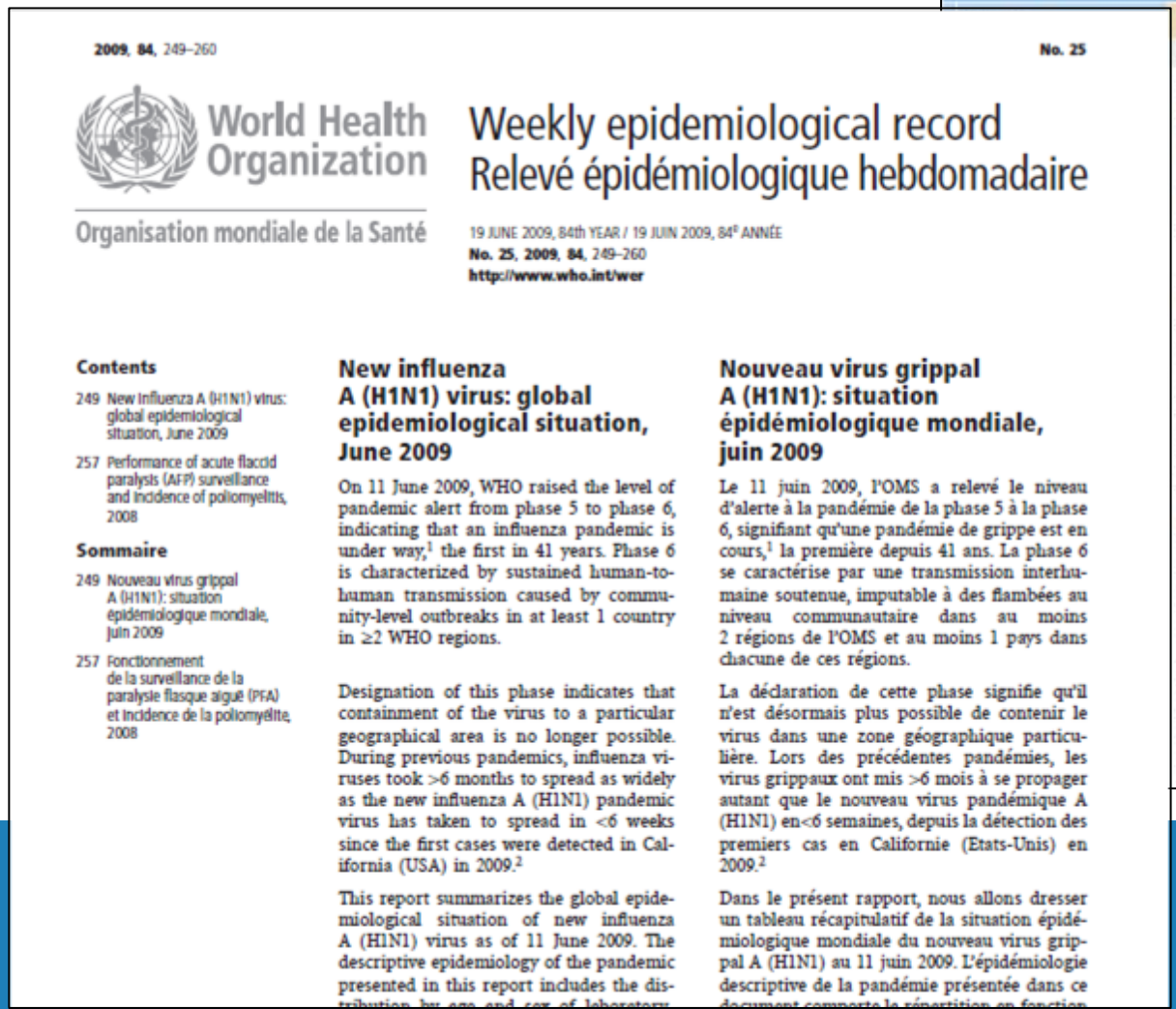
World Health Organization

Assessment of pandemic severity /impact at global level

- The severity assessment is important for :
  - The update of pandemic preparedness plans
  - The implementation mitigation measures
  - The deployment of supply and human resources
- Based on different information sources: experts networks, global teleconferences, review of scientific literature
- Basket of indicators
- Impact
  1. Speed and effectiveness of transmission
  2. Severity of the disease
  3. Groups at risk for complications and severe outcome
  4. Burden on the health care sector

Information dissemination

- Web updates, WER,



2009, 84, 249–260 No. 25

World Health Organization

Organisation mondiale de la Santé

Weekly epidemiological record
Relevé épidémiologique hebdomadaire

19 JUNE 2009, 84th YEAR / 19 JUIN 2009, 84e ANNÉE
No. 25, 2009, 84, 249–260
http://www.who.int/wer

Contents

Sommaire

New influenza A (H1N1) virus: global epidemiological situation, June 2009

On 11 June 2009, WHO raised the level of pandemic alert from phase 5 to phase 6, indicating that an influenza pandemic is under way,[1] the first in 41 years. Phase 6 is characterized by sustained human-to-human transmission caused by community-level outbreaks in at least 1 country in ≥2 WHO regions.

Designation of this phase indicates that containment of the virus to a particular geographical area is no longer possible. During previous pandemics, influenza viruses took >6 months to spread as widely as the new influenza A (H1N1) pandemic virus has taken to spread in <6 weeks since the first cases were detected in California (USA) in 2009.[2]

This report summarizes the global epidemiological situation of new influenza A (H1N1) virus as of 11 June 2009. The descriptive epidemiology of the pandemic presented in this report includes the distribution by age and sex of laboratory-

Nouveau virus grippal A (H1N1): situation épidémiologique mondiale, juin 2009

Le 11 juin 2009, l'OMS a relevé le niveau d'alerte à la pandémie de la phase 5 à la phase 6, signifiant qu'une pandémie de grippe est en cours,[1] la première depuis 41 ans. La phase 6 se caractérise par une transmission interhumaine soutenue, imputable à des flambées au niveau communautaire dans au moins 2 régions de l'OMS et au moins 1 pays dans chacune de ces régions.

La déclaration de cette phase signifie qu'il n'est désormais plus possible de contenir le virus dans une zone géographique particulière. Lors des précédentes pandémies, les virus grippaux ont mis >6 mois à se propager autant que le nouveau virus pandémique A (H1N1) en<6 semaines, depuis la détection des premiers cas en Californie (Etats-Unis) en 2009.[2]

Dans le présent rapport, nous allons dresser un tableau récapitulatif de la situation épidémiologique mondiale du nouveau virus grippal A (H1N1) au 11 juin 2009. L'épidémiologie descriptive de la pandémie présentée dans ce document comporte la répartition en fonction

World Health Organization

العربية | 中文 | English | Français | Русский | Español

Search

All WHO | This site only

Global Alert and Response (GAR)

Country activities | Outbreak news | Resources | Media centre

WHO > Programmes and projects > Global Alert and Response (GAR) > Diseases covered by GAR > Pandemic (H1N1) 2009 > Briefing notes

printable version

Preliminary information important for understanding the evolving situation

Pandemic (H1N1) 2009 briefing note 4

24 JULY 2009 | GENEVA -- The number of human cases of pandemic (H1N1) 2009 is still increasing substantially in many countries, even in countries that have already been affected for some time.

Our understanding of the disease continues to evolve as new countries become affected, as community-level spread extends in already affected countries, and as information is shared globally. Many countries with widespread community transmission have moved to testing only samples of ill persons and have shifted surveillance efforts to monitoring and reporting of trends. This shift has been recommended by WHO, because as the pandemic progresses, monitoring trends in disease activity can be done better by following trends in illness cases rather than trying to test all ill persons, which can severely stress national resources. It remains a top priority to determine which groups of people are at highest risk of serious disease so steps to best to protect them can be taken.

In addition to surveillance information, WHO is relying on the results of special research and clinical studies and other data provided by countries directly through frequent expert teleconferences on clinical, virological and epidemiological aspects of the pandemic, to gain a global overview of the evolving situation.

Average age of cases increasing

In most countries the majority of pandemic (H1N1) 2009 cases are still occurring in younger people, with the median age reported to be 12 to 17 years (based on data from Canada, Chile, Japan, UK and the United States of America). Some reports suggest that persons requiring hospitalization and patients with fatal illness may be slightly older.

World Health Organization

Global Surveillance for Pandemic Influenza

- A unique and historical opportunity for building a global system to meet global challenges
  - The example of Polio surveillance for polio eradication
  - The specificity of flu (seasonal epidemic/endemic, changing viruses, many circulating viruses, etc.)
  - Opportunity to find the right balance between standardization and respect of different approaches

- An opportunity to address key surveillance issues:
  - Information for action (which action? Vaccine production, panic reduction, economic damage control, and so on)
  - Some information (accessible) is better than no information
  - Qualitative versus quantitative
  - Surveillance during emergency
  - Surveillance /research

THANK YOU

World Health Organization