

# Epidemiology and surveillance of Pandemic (H1N1) 2009

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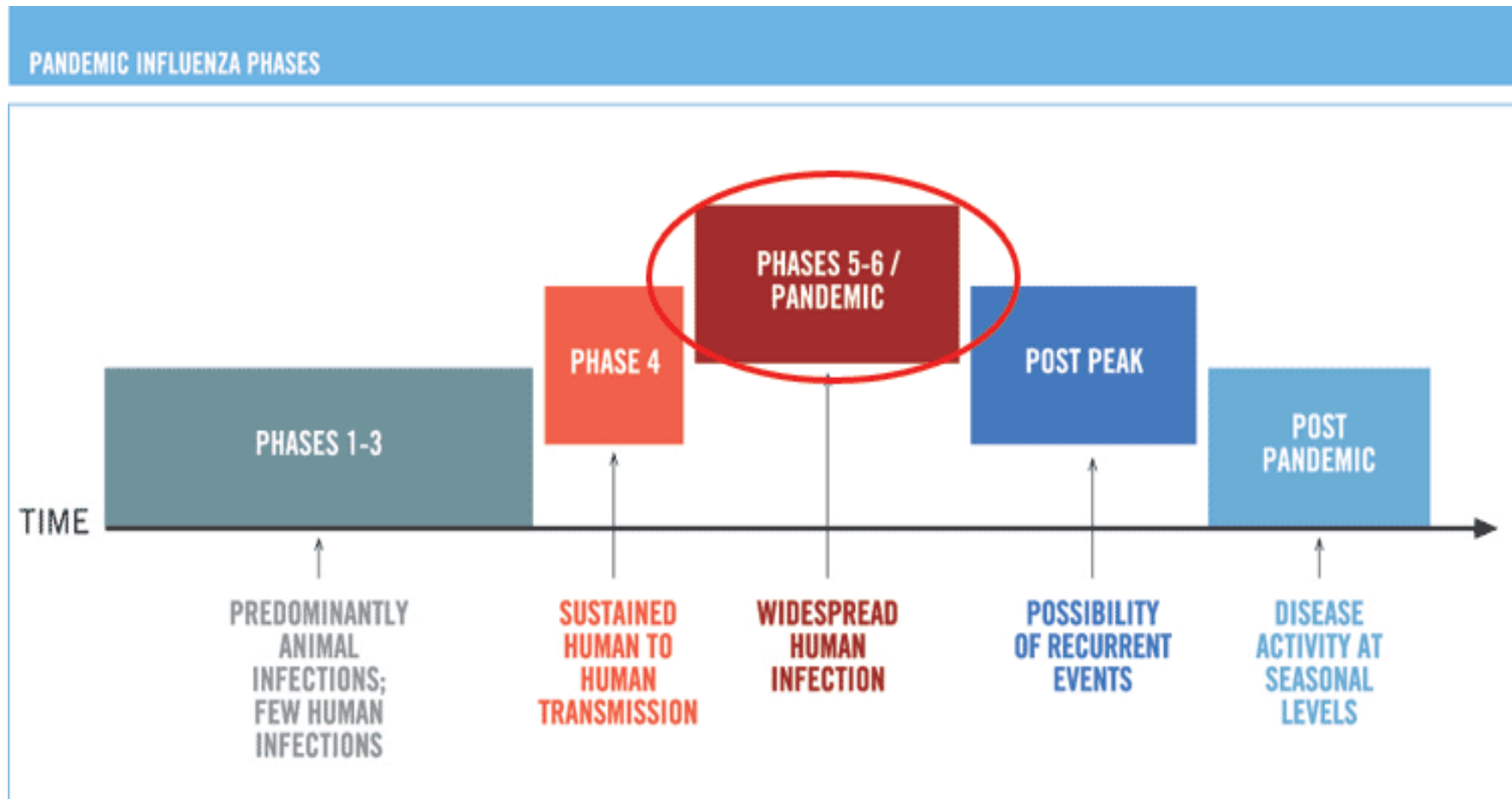
World Health  
Organization

# Introduction

- April 2009: WHO received reports of sustained person to person transmission with a new influenza A (H1N1) virus in Mexico and USA
- Virus currently spread in all regions
- Current alert level: Phase 6
- Group of experts developed advice based on available information on influenza A (H1N1), seasonal and avian H5N1 influenza virus



# WHO Pandemic Phases



- Phases 5 & 6 are based on geographic spread, not severity

# Epidemiology of Pandemic (H1N1) 2009 Virus Infection (1)

- 5-45 yrs of age most commonly affected
- Hospitalization and case/fatality in young adults higher than seasonal influenza
- Epidemiologic and serologic evidence for low susceptibility in older adults
- At risk groups: Pregnant women, people with chronic diseases and underlying health conditions, young children, people with immunosuppression



# Epidemiology of Pandemic (H1N1) 2009 Virus Infection (2)

- Efficient, rapid person-person transmission
- International travel has facilitated geographical spread
- Cases have been reported in all regions.
- More cases in urban centers before wider geographical spread within the countries.
- Most countries reporting an increasing trend.
- Continued circulation outside of usual influenza season



# Surveillance Guidance (1)

(WHO new recommendations- 16 July 2009)

## Early Detection

- For countries not yet affected:
  - The first confirmed pandemic (H1N1) 2009 virus infection detected in a country should be immediately reported by the IHR National Focal Point
- And afterwards:
  - Any changes in the epidemiological, virological or clinical presentation
  - Any unusual or unexpected public health events, e.g. clusters of severe unexplained acute respiratory illness or unexplained deaths



# Surveillance Guidance (2)

## Description and Assessment

- Describe the epidemiological and virological features of cases to guide control and prevention activities
- Assess disease severity
- Laboratory testing priorities
  - confirming infection in new areas
  - Testing severe cases
  - Monitoring the co-circulation of pandemic (H1N1) 2009 virus and seasonal viruses



# Surveillance Guidance (3)

## Continuous Monitoring

Report data to allow tracking of:

- global geographical spread
- disease trend
- prevalence
- impact of the pandemic on health-care services
- changes in viral antigenicity and antiviral sensitivity
- deaths from acute respiratory disease.



# Monitoring (1)

## Output Expected

- A composite picture of severity and transmission characteristics primarily based on local interpretation of data and investigations.
- A description of clinical presentation, course, complications, and risk factors
- Virologic data for strain selection and antiviral sensitivity assessment
- Numbers of cases, hospitalizations, and deaths
  - Reflects laboratory capacity as much as it does disease activity
  - In high demand by the media



# Monitoring (2)

## Key Related Decisions

- Target groups for intervention with vaccine or antivirals
  - Risk groups in need protection.
  - Target groups that might have greatest impact on transmission.
- Strain to use for vaccine.
- Which antivirals to use.
- Role of nonpharmaceutical interventions.
- Appropriate management practices

