


# Pandemic Influenza


## Swine Influenza Influenza A (H1N1)

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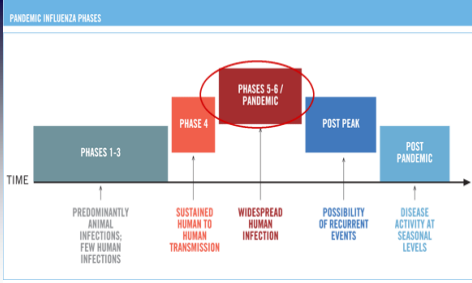


# Learning objectives

- Overview of WHO & Australian pandemic phases & actions
- Summary of the current situation
- The role of triage
- Overview of social distancing, cough etiquette, hand hygiene
- Demonstration of correct use of PPE
- Available resources



# WHO pandemic phases



PANDEMIC INFLUENZA PHASES

TIME


PHASES 1-3  
↑  
PREDOMINANTLY ANIMAL INFECTIONS; FEW HUMAN INFECTIONS

PHASE 4  
↑  
SUSTAINED HUMAN TO HUMAN TRANSMISSION

PHASES 5-6 / PANDEMIC


POST PEAK  
↑  
POSSIBILITY OF RECURRENT EVENTS

POST PANDEMIC  
↑  
DISEASE ACTIVITY AT SEASONAL LEVELS



# Severity of pandemics

- 3 scenarios
- **Mild** — slightly worse than a severe flu season
- **Moderate** — 1957 Asian Flu
  - approx 2 million worldwide died
  - several thousand deaths in Australia with significant absenteeism
- **Severe** — 1918 Spanish Flu
  - approx 50 million worldwide died
  - approx 10,000 Australian died




# ALERT: Australian Pandemic Phase

A novel virus with pandemic potential causes severe disease in humans. There is no effective transmission between humans

**Novel virus has not arrived in Australia**

- Increased vigilance. Remain alert to the risk of a pandemic and increased monitoring of the virus (to look for genetic mutations in the virus)
- Support the overseas response to control the source. Working with the agriculture and health sectors in overseas affected countries to reduce the amount of the pandemic potential virus circulating in animals and to protect humans from infection
- Prepare: Increased pandemic preparedness activities



# DELAY: Australian Pandemic Phase

Novel virus **has not arrived in Australia** but large cluster(s) of cases in one or two countries overseas

- **Delay** entry of the virus to Australia using border measures
- Support overseas response to control the source. Try to avert a pandemic by rapid intervention in the affected areas
- Enhanced vigilance - vigilance for cases (overseas and domestically) increased monitoring of the virus (to look for genetic mutations in the virus)
- Escalate preparedness activities for possible pandemic (that is, get ready to implement)
- Stand-down the response if the pandemic is averted before it arrives in Australia



## Contain: Australian Pandemic phase (6a)

- Pandemic virus arrived in Australia causing small number of cases and/or small number of clusters. Goal to **Contain** the establishment of the pandemic strain in Australia
- Ensure the health system is best able to cope with an influenza pandemic
- Control the pandemic with vaccine
- Careful downscaling of response as the pandemic is brought under control to an eventual standing down of control measures



## Sustain: Australian Pandemic Phase (6B)

Pandemic virus is established in Australia and spreading in the community

- **Sustain** the response while we wait for a customised pandemic vaccine to become available
- Minimise transmission and maintain health services.



## Control: Australian Pandemic Phases (6C)

- Customised pandemic vaccine widely available and is beginning to bring the pandemic under **control**
- Careful downscaling of response as the pandemic is brought under control



## Recover: Australian Pandemic Phases (6D)

- Pandemic controlled in Australia but further waves may occur if the virus drifts and/or is re-imported into Australia.
- **Recover** and restore the health system and return to ALERT phase as quickly as possible
- Enhanced vigilance for a subsequent wave. Increased vigilance for cases and increased monitoring of the virus (look for genetic mutations)



## Current situation overseas

- As of 1600 GMT, 3 May 2009, 18 countries have officially reported 898 cases of influenza A(H1N1) infection.
- Countries that have reported laboratory confirmed cases with deaths- Mexico (506), including 19 deaths. The US (226), including one death.
- The following countries have reported laboratory confirmed cases with no deaths - Austria (1), Canada (85), China, Hong Kong Special Administrative Region (1), Costa Rica (1), Denmark (1), France (2), Germany (8), Ireland (1), Israel (3), Italy (1), Netherlands (1), New Zealand (4), Republic of Korea (1), Spain (40), Switzerland (1) and the United Kingdom (15).



## Current Pandemic Phase

- WHO: pandemic phase 5
- Australia pandemic phase DELAY: marks the move from pandemic 'alert' to pandemic 'threat' – however, no confirmed cases in Australia



## Current case definition

An **acute febrile respiratory illness** with onset:

- Within 7 days of travel to Mexico , USA or Canada (and other countries with evidence of local transmission), OR
- Within 7 days of close contact with a person who is a **confirmed** or **probable** case of swine influenza A (H1N1) virus infection



## Virus transmission

- Extremely contagious and easily transmitted
- Short incubation period
- Infected persons are most contagious during the period of peak symptoms



## Incubation and communicability

- The estimated incubation period is unknown and could range from 1-7 days, and more likely 1-4 days (CDC Interim Guidance for Clinicians on Identifying and Caring for Patients with Swine-origin Influenza A (H1N1) Virus Infection <http://www.cdc.gov/h1n1pd/diagn/clinicians.pdf>)
- Approx 7 days communicability from onset of symptoms
- People are infectious from 24 hours before the onset of symptoms
- = 8 days + of high infectivity



## The virus will survive

- Unwashed hands up to 30 min
- Hard non-porous surfaces (stainless steel) for up to 48hrs
- On cloth, paper and tissues for up to 12 hrs
- On surfaces contaminated with blood or faeces up to 5 days

(Australian Health Management Plan for Pandemic Influenza <http://www.flupandemic.gov.au/internet/panflu/publishing.nsf/Content/ahmpp>)



## Principles of Effective Infection Control

- Good hand hygiene
- Cleaning of contaminated surfaces
- Early isolation of suspected cases
- Correct use of personal protective equipment when required
- Seasonal influenza immunisation



## Hand hygiene

- Hands can be cleaned with soap and water
- Dry with disposable hand towel
- Alternatives used alcohol based hand cleaner (Not effective if hands are visibly soiled – hands must first be cleaned, e.g. use hand wipes)



## Effective cleaning of contaminated surfaces

- Viruses cannot survive on clean dry surfaces
- Surfaces can be cleaned using detergent and water
- Wipe dry
- Disinfectants need 10 mins exposure to the article to work, and are not necessary



## Isolation of suspected cases

- Social distancing principle = more than 1 metre
- Examples of social distancing in general practice
  - Use of masks
  - Seating patients in a different area
  - Keeping patients out of the practice till GP is ready to see them
  - Home visit suspected case



## Correct use of personal protective equipment (PPE)

- Correct order of donning and doffing
- Mask is first item on and last item removed
  - Hand cleaning is essential to prevent self contamination
  - Fit check P2 mask - Refer to RACGP Pandemic Flu Kit for instructions (page 41)
  - Refer to the RACGP poster 'Correct use of personal protective equipment'



## Role of seasonal immunisation

- Vaccination for seasonal influenza is highly encouraged
  - Reduce circulating influenza virus
  - Reduce diagnostic confusion
- Pneumonia vaccination recommended to all at risk groups
  - Follow recommendations in the Australian Immunisation Handbook (9<sup>th</sup> edition)



## Phone triage

- Questions can be thought of in three stages:
1. Questions: routine asked of all patients
  2. Questions: patients indicates signs or symptoms consistent with an infectious disease
  3. Questions: the practice suspects a local outbreak of an infectious disease (eg. measles or a suspected case of pandemic influenza).



## Phone Triage - what next?

- If the patient answers 'YES':
- organise an onsite appointment or a home visit
  - advise the patient to call just before arrival at the practice and use alternative entrance, if available
  - Alert clinical staff of suspect case



## Reception triage

- Provide patient with a surgical mask, instruct on cough etiquette and hand hygiene. Explain why to the patient
- Isolate the patient: 1 metre rule
- Inform the practice team of a patient attending with symptoms of influenza



## Clinical assessment: guided by state/territory PHU

The current recommended protocol

- Contact state/territory PHU & confirm current case definition
- Take advice/action recommended by the PHU
- Examination: both patient and doctor must wear surgical masks
- If patient's mask is removed (e.g. for throat examination or swab collection) the GP MUST don PPE (P2 mask)
- **If PPE unavailable: GP should refer patient to a public health facility that is adequately equipped**
- Remove and dispose of PPE, strictly following correct protocol



## Availability of antivirals

- In current DELAY phase antivirals not available from the National Stockpile
- In Australian Containment phase (6a) antivirals can be prescribed for:
  - patients with confirmed influenza infection or
  - close contacts of confirmed cases



## Indications for the use of antivirals

- Current recommendations for oseltamivir (Tamiflu®) or zanamivir (Relenza®)
- Close contacts of **confirmed or probable** cases (as defined in consultation with the local PHU) within 48 hours of contact
- **Suspected** cases, in consultation with the local PHU, if started **within 48 hours** of onset of symptoms, until influenza A is excluded or an alternative diagnosis is made
- There is no current recommendation for prophylactic oseltamivir to be used by travelers visiting affected countries, apart from Mexico .



## Use of antivirals in pregnancy

- Always consult with the patient's obstetrician before giving antiviral medication to a pregnant woman
- Pregnancy should not be considered a contraindication to oseltamivir or zanamivir use
- No adverse effects have been reported among women who received oseltamivir or zanamivir during pregnancy or among infants born to women who have received oseltamivir or zanamivir



## A H1N1 specific vaccine

- Specific vaccine is currently being developed
- Will take up to 6 months to be available
- Will be in multidose vials
- Two doses 3 weeks apart
- Roll out anticipated:
  - Front line health workers
  - Other essential services
  - General public



## Business continuity

- Plan for worst case scenario: Sustain (6b)
- Employers
  - legal obligation to provide and maintain a safe workplace and must take steps to minimise the risks associated with a pandemic and involve staff in the process
  - Develop other ways of running the business, including considering alternative work practices
  - Plan for 50% absenteeism



## training for staff

- Educate staff in the correct use, application, removal and disposal of PPE
- Ensure infection control practices are part of every day practice
- X-training of staff
  - Cold chain
  - Reception
  - Infection control



## Communication

- Develop alternative delivery and communication systems
  - Business website
  - Telephone hot line
  - Patient leaflets
  - SMS messaging
  - Phone consultations



## Staff roster

- To prevent staff burn-out
  - One day on – one day off
  - Establish working teams (GP, PN, PM, reception staff)
  - Consider combining with a near by practice



## Stock & equipment supplies & services

- Check IT capacity
- Consider stock levels
- Waste management
- General practices will need to identify their 'critical breaking point' – when the organisation can no longer maintain available services in a safe manner due to identified risk in workplace health and safety



## References and resources

RACGP website – updated daily:  
[www.racgp.org.au](http://www.racgp.org.au)

RACGP Pandemic Flu Kit  
<http://www.racgp.org.au/pandemicresources>

Australian Health Management Plan for Pandemic Influenza  
<http://www.health.gov.au/australianhealthmanagementplanforpandemicinfluenza>

World Health Organisation Influenza A (H1N1) updates  
<http://www.who.int/csr/disease/swineflu/en/index.html>

CDC Interim Guidance for Clinicians on Identifying and Caring for Patients with Swine-origin Influenza A (H1N1) Virus Infection  
<http://www.cdc.gov/h1n1flu/identifyingpatients.htm>