

## PANDEMIC INFLUENZA (PI) RESPONSE PROTOCOL FOR PUBLIC HEALTH UNITS



### Response summary

#### Public health priority

Urgent.

#### PHU response time

In the containment stage, respond to suspected case(s) immediately on notification. Report details of the suspected case to the relevant Communicable Disease agency immediately notification of the suspected case is received.

#### Case management

##### Containment stage

Suspected cases must be cared for in either a single room or cohorted hospital ward if hospitalisation is required, or at home if hospitalisation is not required and strict home isolation can be arranged. If identified within 48 hours of illness onset, cases should be treated with anti-influenza medications (neuraminidase inhibitors – oseltamivir or zanamivir). At all times the suspected case is to be managed with strict infection control precautions in place. A thorough and urgent investigation of the cases exposures, clinical course and contacts is required.

##### Maintenance stage (post-containment)

Mainly supportive care as anti-influenza drugs may not be available or in limited supply. Routine public health investigation of case(s) is not required.

#### Contact management

##### Containment stage

Contacts of suspected cases must be rapidly identified, counselled about their risk, and placed under quarantine and surveillance by the Public Health Unit.

##### Maintenance stage (post-containment)

Routine public health investigation of cases and contacts is not required.

**Note.** This chapter is concerned with the public health response to people with suspected or confirmed pandemic influenza infection, and people who have been exposed to another person with pandemic influenza infection. The case definitions have been developed based on the behaviour of H5N1 avian influenza in humans, and it is recognized these may need to change should a pandemic strain that behaves substantially differently from this form of influenza infection emerge.

### 1 Reason for surveillance

- In the containment stage, to inform public health activities aimed at delaying the onset of a pandemic, and thereby provide additional time for the development and administration of a vaccine to the community. Containment depends on:
  - the rapid identification and isolation of suspected cases, and

- the rapid identification, quarantine, prophylaxis and monitoring of contacts.

- At all stages, to provide information about effective control and prevention measures, based on:
  - data gathered on the natural history of the disease, and factors that influence outcome.
  - the epidemiology of pandemic influenza in Australia.

### 2 Case definition

It is recognized that the case definitions may need to change depending on the epidemiological characteristics of the new influenza virus, and the stage of the pandemic.

#### Suspected Case:

A suspected case requires clinical evidence and epidemiological evidence.

##### *Clinical evidence*

A person with acute influenza like illness, characterized by fever (temperature  $\geq 38$  C) or history of fever, cough or breathing difficulty, and fatigue, or only cough or breathing difficulty and fatigue if there is concurrent immunosuppression.

##### *Epidemiological evidence*

Onset of symptoms within seven days of:

- travel to a region that has been reported to have cases of pandemic influenza, or
- contact with a suspected or confirmed case of pandemic influenza during the infectious period
- exposure to specimens suspected to have been contaminated with pandemic influenza virus.

#### Confirmed Case:

A confirmed case requires clinical evidence and laboratory definitive evidence. Although a number of laboratory tests may be considered as providing definitive evidence of pandemic influenza, testing in the containment phase will rely on nucleic acid testing (NAT - refer to the *Interim Laboratory Guidelines for Pandemic Influenza*). If clinical evidence is not available, a confirmed case requires laboratory evidence only.

##### *Laboratory definitive evidence*

One or more of the following positive laboratory tests:

- isolation of the pandemic influenza (PI) strain by culture, OR
- detection of the PI strain by nucleic acid testing (e.g. NAT), OR
- immunofluorescence antibody (IFA) test positive using specific PI antiserum, OR
- a single high antibody titre to the pandemic influenza strain (according to the testing laboratories'

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interpretation criteria, usually a titre  $\geq 64$  where no evidence of recent immunisation exists) OR

- a fourfold or greater rise in titre.

## Factors to be considered in case identification

### Definitions

**Containment stage** refers to Australian pandemic alert period 4-6a (see appendix for the pandemic phase descriptions). The PHU response must be aggressive to halt spread of disease as containment may significantly delay the onset of a pandemic (and thus allow more time for vaccine to be administered to the population). In the early containment stage, extraordinary efforts should be made to provide rapid assessment of cases and contacts, to arrange isolation of cases and home quarantine of contacts, and to obtain clinical specimens for influenza testing. These methods may include arrangement for air transport of specimens, and police assistance in the tracing of cases and contacts).

**Post-containment stage** refers to Australian pandemic alert period 6b and 6c. During this stage it is likely that the number of cases will severely strain the health system and the public health response will become population based rather than case based. The point at which the containment stage changes to the post-containment stage will be identified by the relevant health department, following advice from the Chief Health Officer.

It is likely that a pandemic will affect different communities within Australia at different times and with different intensity. With this in mind, it may be necessary to quarantine some communities within Australia in an effort to contain the outbreak. PHUs may therefore be required to consider parts of their Area Health Service (AHS) to be in the containment stage, and other parts to be in the post-containment stage simultaneously, and respond accordingly.

**During the containment phase**, laboratory diagnosis must be performed for all suspected cases as a matter of urgency. Laboratory testing should be directed to the positive identification or exclusion of pandemic influenza as a cause of illness in a suspected case. Early in the containment phase, when there is uncertainty whether pandemic influenza is present in the population, additional tests may be performed to establish differential diagnosis such as infection by other respiratory viruses. Later if the existence of pandemic influenza in the community is confirmed, differential tests will not be necessary or feasible within the capacity constraints of many laboratories.

Rapid antigen tests for influenza are currently not definitive as they lack sensitivity. For pandemic influenza specific testing, NAT will be the recommended method as it has high sensitivity and specificity and rapid turnaround time. Viral culture and serology should also be performed to supplement the NAT results

Until the positive predictive value of pathology tests are established, diagnosis will largely depend on clinical and epidemiological factors. In practical terms this means that suspected cases should be managed according to risk and exposure factors unless compelling laboratory evidence suggests otherwise.

**During the post-containment stage**, notification of individual confirmed cases will be required from laboratories only. Routine laboratory diagnosis for each individual case of suspected PI will not be feasible, and will not be necessary to guide public health action.

## Factors to be considered when a pandemic appears imminent

Apart from case identification, investigation and contact tracing, once a pandemic appears imminent, the PHU should consider:

- identifying PHU staff surge capacity
- activating the AHS Immunisation Plan
- ensuring that PHU staff who may have contact with cases are trained in the use of personal protective equipment (PPE)
- encouraging immunisation against normal seasonal influenza in order to reduce the number of people with fever and influenza-like symptoms for assessment
- activating additional surveillance systems as required.

The Area Health Service is responsible for:

- activating the AHS Pandemic Action Plan and Emergency Management Plan as appropriate
- opening the Area Health Service Operations Centre
- ensuring systems are in place to distribute antiviral medication for treatment of cases and prophylaxis of contacts
- disseminating information about the pandemic and actions required, including surveillance, disease control and prevention strategies to all staff and the community in collaboration with relevant Health Media Unit
- the operation of enhanced ED triage, ED screening stations, influenza clinics, staging facilities and designated influenza facilities / influenza wards
- collaborating with other agencies to ensure coordination of community care of contacts in home isolation
- identifying AHS surge capacity
- providing education and ensuring compliance with infection control precautions.

## 3 Notification criteria and procedure

### Containment stage:

Suspected cases of PI should be notified by:

- medical practitioners and hospital chief executives.

Confirmed cases of PI should be notified by:

- laboratories.

During early containment PHUs should report suspected and confirmed cases to the CDB by telephone immediately notification is received. During the later containment stages NetEpi may be used to notify the relevant health department of suspected and confirmed cases.

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## Post-containment stage:

Individual case reporting is not warranted. At a population level, disease activity will be monitored using influenza clinic activity, hospital admissions information, and laboratory reports of confirmed cases, as well as mortality data.

## 4 The disease

### Infectious agent

Influenza pandemics are caused by the development of a novel influenza A virus. The virus is composed of a RNA core surrounded by an envelope containing two surface glycoproteins - haemagglutinin and neuraminidase. These antigens have the ability to rapidly mutate and produce minor or major changes to the antigenic structure, known as antigenic drift and antigenic shift respectively. Pandemic influenza results from antigenic shift or through reassortment between avian and human strains, creating an influenza strain against which the population has little or no immunity. Influenza A subtypes are characterized according to the haemagglutinin (H) and neuraminidase (N) antigens e.g. H5N1, H7N3.

### Mode of transmission

Pandemic influenza is most commonly spread from person-to-person by inhalation of infectious droplets produced by talking, coughing and sneezing. Transmission may also occur through direct and indirect (fomite) contact. The virus may persist on hard surfaces for 1-2 days, particularly in cold or low humidity conditions. The virus can remain on hands for 5 minutes.

### Timeline

For the purposes of this document, an incubation period of 7 days will be assumed, based on the typical incubation period for avian influenza, and this may change when information about the pandemic influenza virus is available. The infectious period will be assumed to be from 24 hours (one day) prior to the onset of symptoms until the case has been isolated, or until the infectious period is over. Adults with seasonal influenza may be infectious from the day before symptoms begin to approximately 5 days after the onset of illness. Children between 5 and 12 years old may be infectious for up to 14 days, and younger children may be infectious for up to 21 days. Severely immunocompromised people may shed virus for weeks or months after illness.

### Clinical presentation

Seasonal influenza typically commences with symptoms of fever ( $\geq 38$  C), cough, fatigue, sore throat, headache, myalgia, arthralgia and rigors or chills. Human infection with the H5N1 strain has also been associated with diarrhoea, vomiting and abdominal pain early in the course of the illness. Symptoms of pneumonia may be present if lower respiratory tract infection occurs (breathing difficulty, productive cough, bloody sputum, pain when breathing). Chest X-rays may show pneumonia. Acute respiratory distress syndrome (ARDS) may develop several days after disease onset.

## 5 Managing notifications

### Investigation

**Containment stage:** Immediately on notification of a suspected case, PHUs should commence investigation using the *Data collection form for cases of pandemic influenza*. This should be completed on the Web using NetEpi Case Manager (if available) or emailed or faxed to the relevant health department each day.

**Post-containment stage:** individual case investigation not routinely required.

**Data entry:** Within 1 working day enter the confirmed case on NDD as: **Disease:** influenza (pandemic); **Organism:** influenza virus; **subtype:** (for example, H5N1).

### Response procedure

**Containment stage:** PHU staff should:

- confirm the onset date and symptoms of the illness
- confirm results of relevant pathology tests, and recommend that testing for other respiratory pathogens be considered (see appendix)
- determine if the case or relevant care-giver has been informed of the diagnosis before beginning the interview
- contact the case or relevant care-giver
- commence identification and tracing of all close contacts
- review case and contact management
- ensure appropriate infection control guidelines are followed
- identify the likely source of infection

**Post-containment stage:** Routine follow up of individual cases is not required.

### Case management

#### Investigation

**Containment stage:** PHU staff should:

- follow up clinical findings and laboratory results
- obtain an exposure history (including a travel history if appropriate)
- determine any contact with other cases or high-risk exposures e.g., contact with other suspected or confirmed case(s) or a laboratory worker
- document clinical status and risk factors
- follow-up the case and record outcome.

**Note.** If interviews with suspected cases are conducted face-to-face, the person conducting the interview must have a thorough understanding of infection control practices, be competent in using appropriate PPE, and ideally have been vaccinated with the current (human) pandemic influenza vaccine, if available.

**Post-containment stage:**

- Routine follow-up of individual cases is not required.
- Control measures and containment may still be required in isolated communities or where there are only discrete clusters of disease.

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## Treatment

Treatment is the responsibility of the managing clinician, and should follow the latest version of the *Interim National Pandemic Influenza Clinical Guidelines*.

**Containment stage:** anti-influenza treatment should be offered to suspected and confirmed cases, and anti-influenza prophylaxis to contacts of confirmed cases, to reduce the spread of infection. Anti-influenza medications have been shown to attenuate disease in cases of human influenza if given early in the course of the illness (within 48 hours of developing symptoms). Their effectiveness for treating infection with a novel strain of influenza will not be fully determined until clinical trials have been conducted during the course of the pandemic, however, it is likely that they will be the principal form of medication and in considerable demand.

**Post-containment stage:** the use and availability of anti-influenza therapy will be determined by national protocols.

## Education

Provide the *Pandemic Influenza Fact Sheet* and *Fact Sheet on Medications to treat or prevent influenza* to cases and their close contacts. Ensure that they are aware of the signs and symptoms of PI, the requirements of isolation and quarantine, contact details of the PHU, and the infection control practices and precautions that can prevent the transmission of PI.

## Isolation and restriction

**Containment stage:** Cases must be isolated until no longer infectious (see section 4: Timeline). Cases during the early containment stage should be isolated and admitted to hospital until the diagnosis is excluded or the infectious period is over. During the later containment stage cases may be admitted to hospital or isolated at home, according to their clinical condition and level of compliance. Where cases refuse to comply with isolation voluntarily, they should be placed in a facility with appropriate monitoring and security to ensure compliance.

The facility's infection control professional must review the clinical team's infection control practices and procedures. Health care workers and others who come into contact with the case(s) must use full PPE (gown, gloves, protective eyewear and P2 (or N95) mask), if within 1m of the case and providing direct clinical care, or within a room where an aerosol-generating procedure is being performed (e.g., tracheal suctioning, intubation, bronchoscopy).

**Criteria for lifting case isolation:** Case isolation may be ceased when the case is no longer in the infectious period (see Section 4 - Timeline), or when pandemic influenza has been excluded and an alternative diagnosis that is consistent with the case's symptoms has been made.

**Post-containment stage:** Staff in influenza clinics will manage patients and determine the best place to care for them. The PHU should ensure that influenza clinics provide the CDNA *Pandemic Influenza Fact Sheet on infection control* to patients and their families.

## Environmental investigation

If hospital or multi-purpose service-associated infection is suspected, the PHU should perform or arrange a review

of infection control procedures, preferably in collaboration with an infection control professional. Staff conducting the review must have a thorough understanding of infection control practices, be competent in using PPE and have been vaccinated with both the current seasonal influenza vaccine, and the pandemic influenza vaccine, if available. They must wear full PPE, including a P2 mask, when they are in direct contact or within 1m of a suspected or confirmed case of pandemic influenza, or within a room where an aerosol-generating procedure is being performed.

## Contact management

### Identification of contacts

The definition of a contact includes people who, during the infectious period of the confirmed case (see section 4: Timeline), were:

- passengers and crew travelling on aircraft with the confirmed case as defined below:
  - passengers seated in the same row, and within two (2) rows in front of and behind the case (where the case was in a group of seats adjacent to the windows of the plane, passengers seated more than a seating block away on the far side of the aircraft should not be treated as contacts)
  - any passengers who moved from elsewhere in the aircraft to spend large amounts of flight time near the case
  - airline staff, only if they spent the majority of the flight working or seated near the case.
- household members of the confirmed cases
- close workplace contacts of the confirmed case, including people sharing an office or cubicle area or whose work brought them into close physical proximity (sitting within one metre for at least 15 minutes) with the confirmed case, but not people who share general office space
- members of the case's class or child care group and their teacher / child care supervisor, where the case is a child aged between 0-12 years old
- others identified by the confirmed case, household members or workplace contacts as having been in close physical contact (hugging, kissing, sitting within one metre for at least 15 minutes) with the confirmed case.

Contact the relevant health department if further guidance is required.

**Containment stage:** Following a report of any suspected case, the relevant Pandemic Influenza Expert Panel will be convened to help plan the public health response, including identification of contacts. PHU staff should arrange urgent tracing of contacts of suspected and confirmed cases.

**Post-containment stage:** Quarantine and monitoring of contacts will no longer be feasible. Influenza clinics should provide PI fact sheets about prevention to cases and carers.

### Chemoprophylaxis

**Containment stage:** Contacts of confirmed cases should receive anti-influenza medication as a matter of urgency, in order to reduce the risk of infection and transmission.

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**Post-containment stage:** Contacts of confirmed or suspected cases should receive anti-influenza medication, if available, however anti-influenza medication may not be generally available for contacts.

## Education

**Containment stage:** PHUs should counsel contacts about their risk and about the symptoms of PI, and place them in home quarantine (see the *Fact sheet for people exposed to pandemic influenza*). PHUs should ensure that each contact has their own thermometer, and are educated on how to take their own temperature.

**Post-containment stage:** Individual follow up of contacts will not be feasible. Education on disease prevention and control should be delivered via mass media.

## Quarantine and restriction

**Containment stage:** Contacts should be placed in quarantine (usually in their home), and provided with counselling, and fact sheets about PI and its control and preventive therapy. The PHU should ensure that contacts are followed-up on a daily basis for 7 days after the last contact to determine whether symptoms of PI have developed, and to ensure that the contact is observing quarantine restrictions and is taking any prescribed anti-influenza medication. This follow-up may be performed directly by PHU staff or other Area Health Service staff as necessary.

If symptoms develop, the PHU should arrange medical assessment in an isolated area – either a isolation room within an ED or in an influenza clinic, depending on the pandemic stage. This assessment must take place in a setting where risk is managed through the use of appropriate infection control precautions.

Where contacts refuse to comply with quarantine voluntarily, they should be placed in a facility with appropriate monitoring and security to ensure compliance.

**Criteria for lifting quarantine:** Quarantine of contacts may be ceased when 7 full days have elapsed since the last exposure to pandemic influenza, if the contact has not become symptomatic during that time.

**Post-containment stage:** No individual follow up of contacts will be feasible.

## 6 Managing special situations

### Isolated outbreaks in defined communities during any stage of the pandemic

Regardless of the stage, an outbreak of PI may still be containable if it occurs in a relatively isolated community. Therefore PHUs should carefully consider whether control action is feasible under such circumstances, and contact CDB for advice.

### Suspected cases occurring on international aircraft and ships

International travellers may present as suspected cases at airports and seaports. The relevant health department will coordinate the management of such cases. PHUs may be required to assist in the screening and management of

suspected cases and contacts. Contact the relevant health department for advice.

## 7 Supporting documentation

- Pandemic influenza fact sheet
- Fact sheet for people exposed to pandemic influenza
- Fact sheet on the role of health care providers in responding to pandemic influenza
- Standing orders for mass administration of anti-influenza prophylaxis to defined community contacts of influenza.
- Data collection form for cases of pandemic influenza (PI case)
- Data collection form for contacts of pandemic influenza (PI contact)
- Antiviral fact sheets for clinicians and the public: Medications to treat or prevent influenza (“the flu”) and Medications used for treatment and prevention of influenza: advice for clinicians

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## Instructions for collection of specimens for viral testing

(To be replaced by the instructions provided in the *Interim Laboratory Guidelines for Pandemic Influenza* annex to the AHMPPI, once available)

- Wherever possible this procedure should be undertaken with two people, one person inside the room to collect the specimen, the other person outside the room to receive the specimen to prevent contamination of the biohazard bag.
- Write on specimen forms and containers before entering the patient's room to collect the specimens. Do not take the biohazard bag into the room. Specimens should be clearly marked **SUSPECTED PANDEMIC INFLUENZA** to ensure prioritisation by the laboratory.
- Taking nasal and throat swabs or nasopharyngeal aspirates may induce coughing and should preferably be collected in a negative pressure room, if available, by health care workers wearing full personal protective equipment, including goggles or face shield, gloves, impermeable gown and a P2 mask.
- If a negative pressure room is unavailable, ensure the specimen is collected in a single room with the door closed.
- Wash your hands.
- Don personal protective equipment (PPE) in order:
  - gown
  - P2 mask
  - eye protection
  - gloves.
- Stand to the side of the patient to **obtain ONE throat and TWO nasal swabs** (in older children and adults), or **TWO nasopharyngeal aspirates** (for children <2 years) as appropriate, using a dry polyester swab. Ensure the swabs used are for viral specimens, and NOT for bacterial specimens.
- Place the swabs or aspirates into vials containing viral transport media and secure.
- Place the specimen container in a biohazard bag held open by a second staff member, who is standing outside of the door or in the anteroom, without contaminating the second staff member or the outside of the biohazard bag. The second staff member should seal the biohazard bag.
- Remove gloves, eye protection, gown and mask at the doorway/anteroom and place them in the appropriate waste bin or receptacle for reprocessing.
- Wash your hands.
- Enclose viral specimens in a leak proof container with a secure closure. The container must be placed in an appropriate biohazard bag with the biohazard symbol displayed. Specimens should not be transported in a pneumatic tube system.
- Arrange **URGENT** couriered transport of microbiological specimens, and send for testing for pandemic influenza to the closest viral reference laboratory (i.e., ICPMR or SEALS in Sydney, VIDRL in Melbourne)
- Ensure the room is cleaned before the next patient enters.

If bacterial testing or nucleic acid testing (NAT) is required, additional appropriate swabs need to be taken for this purpose.

In addition to the above specimens for viral testing, obtain a full blood count (FBC), electrolytes/urea/creatinine (EUC), and liver function tests (LFT) at presentation. These routine blood tests should be conducted by the usual laboratory.

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## Recommended specimens for microbiological workup for suspected cases of pandemic influenza during the containment stage

(To be replaced by the recommendations provided in the *Interim Laboratory Guidelines for Pandemic Influenza* annex to the AHMPPI, once available)

### RESPIRATORY TRACT SPECIMENS

#### 1. Combined nose AND throat swabs (usually for adults) or nasopharyngeal aspirates (NPA) (usually for children < 2 years old)

**Specimen Collection** - See previous page.

##### Tests

- Viral culture, immunofluorescence (IF) and NAT for influenza A and B, parainfluenza 1-3, RSV, adenovirus, human metapneumovirus, rhinovirus, enterovirus, human coronavirus
- NAT for *Chlamydomphila pneumoniae* and *Mycoplasma pneumoniae* can be performed on dry swabs (i.e., swabs that were not transported in viral transport media)
- Routine bacterial and fungal culture will need separate bacterial swabs
- NAT for pandemic influenza strain if tests for influenza A are positive.

#### 2. Sputum and/or bronchoalveolar specimens

##### Specimen Collection

- Bronchoalveolar specimens will only be available in certain clinical settings (e.g., in ventilated patients or when bronchoscopy is carried out).

##### Tests

- Routine Gram stain and bacterial/fungal/viral culture, including TB if indicated.
- *Legionella* culture / NAT.

### SEROLOGY

##### Specimen Collection

- Collect two 10ml serology tubes (same tube as the EUC tube)
- Take specimens at presentation and > 21 days after symptom onset.

##### Tests

- Influenza A and B, parainfluenza 1-3, RSV, adenovirus, *Chlamydomphila psittaci*, *Chlamydomphila pneumoniae*, *Mycoplasma pneumoniae*, *Legionella pneumophila*, *Coxiella burnetii* (Q fever) depending on clinical details.

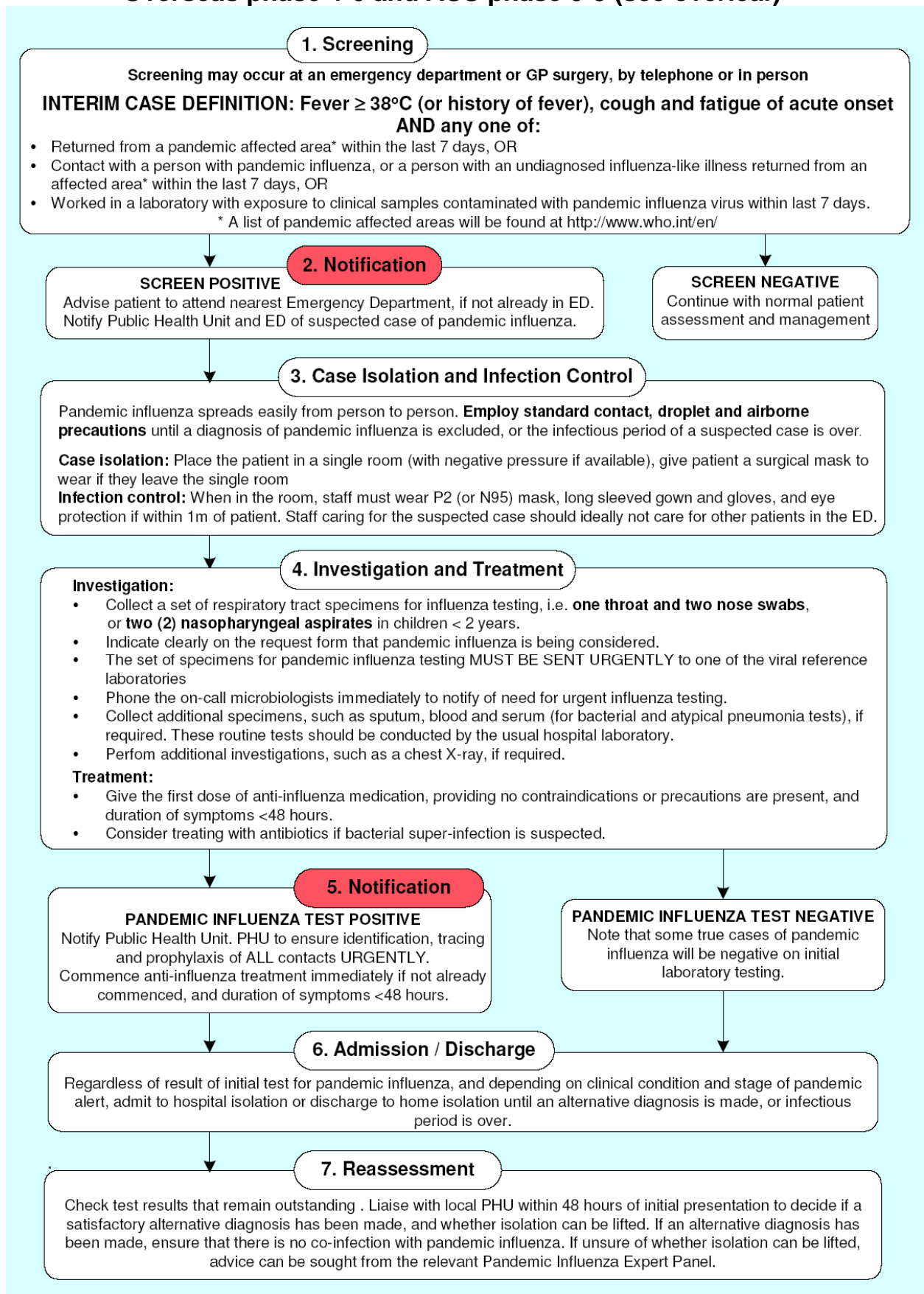
### URINE

##### Tests

- *Legionella pneumophila* type 1 antigen.

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## TRANSMISSION OF NEW INFLUENZA VIRUS OVERSEAS ONLY Containment stage interim response protocol for pandemic influenza Overseas phase 4-6 and AUS phase 0-3 (see overleaf)



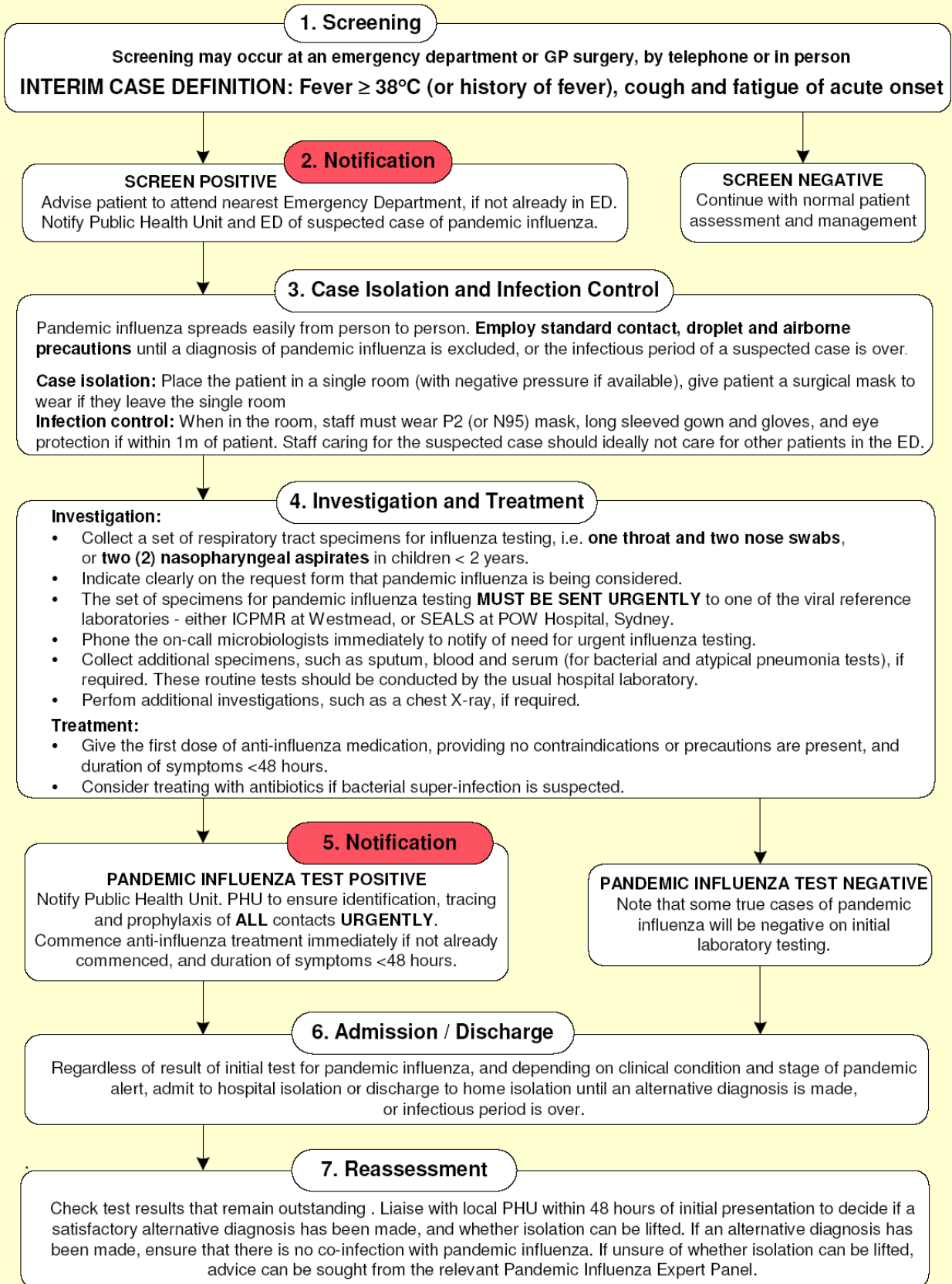
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## Overseas and Australian phases of an influenza pandemic alert (adapted from the *Australian Health Management Plan for Pandemic Influenza*)

Period	Global Phase	Australian Phase	Description of Phase	Main strategy and stage	
Inter-pandemic	1	Aus 0	No circulating animal influenza subtypes in Australia that have caused human disease.	Preparation	
		Overseas 1	Animal infection overseas: the risk of human infection or disease is considered low.		
	2	Aus 1	Animal infection in Australia: the risk of human infection or disease is considered low.		
		Overseas 2	Animal infection overseas: substantial risk of human disease.		
		Aus 2	Animal infection in Australia: substantial risk of human disease.		
Pandemic alert	3	Overseas 3	Human infection overseas with new subtype(s) but no human-to-human spread or at most rare instances of spread to a close contact.	Preparation	
		Aus 3	Human infection in Australia with new subtype(s) but no human-to-human spread or at most rare instances of spread to a close contact		
	4	Overseas 4	Human infection overseas: small cluster(s), limited human-to-human transmission, spread highly localised, suggesting the virus is not well adapted to humans.	Containment	
		Aus 4	Human infection in Australia: small cluster(s), limited human-to-human transmission, spread highly localised, suggesting the virus is not well adapted to humans.	Containment	
	5	Overseas 5	Human infection overseas: larger cluster(s) but human-to-human transmission still localised, suggesting the virus is becoming increasingly better adapted to humans, but may not yet be fully adapted (substantial pandemic risk).	Containment	
		Aus 5	Human infection in Australia: larger cluster(s) but human-to-human transmission still localised, suggesting the virus is becoming increasingly better adapted to humans, but may not yet be fully adapted (substantial pandemic risk).	Containment	
	Pandemic	6	Overseas 6	Pandemic overseas- not in Australia: increased and sustained transmission in general population.	Containment
			Aus 6a	Pandemic in Australia: localised (one area of country)	Containment
Aus 6b			Pandemic in Australia: widespread	Maintenance (Maintenance of social functioning)	
Aus 6c			Pandemic in Australia: subsided		
Aus 6d			Pandemic in Australia: next wave		

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## TRANSMISSION OF NEW INFLUENZA VIRUS WITHIN AUSTRALIA Containment stage interim response protocol for pandemic influenza AUS phase 4-6a (see overleaf)



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## Overseas and Australian phases of an influenza pandemic alert (adapted from the *Australian Health Management Plan for Pandemic Influenza*)

Period	Global Phase	Australian Phase	Description of Phase	Main strategy and stage	
Inter-pandemic	1	Aus 0	No circulating animal influenza subtypes in Australia that have caused human disease.	Preparation	
		Overseas 1	Animal infection overseas: the risk of human infection or disease is considered low.		
		Aus 1	Animal infection in Australia: the risk of human infection or disease is considered low.		
	2	Overseas 2	Animal infection overseas: substantial risk of human disease.		
		Aus 2	Animal infection in Australia: substantial risk of human disease.		
Pandemic alert	3	Overseas 3	Human infection overseas with new subtype(s) but no human-to-human spread or at most rare instances of spread to a close contact.		
		Aus 3	Human infection in Australia with new subtype(s) but no human-to-human spread or at most rare instances of spread to a close contact		
	4	Overseas 4	Human infection overseas: small cluster(s), limited human-to-human transmission, spread highly localised, suggesting the virus is not well adapted to humans.	Containment	
		Aus 4	Human infection in Australia: small cluster(s), limited human-to-human transmission, spread highly localised, suggesting the virus is not well adapted to humans.	Containment	
	5	Overseas 5	Human infection overseas: larger cluster(s) but human-to-human transmission still localised, suggesting the virus is becoming increasingly better adapted to humans, but may not yet be fully adapted (substantial pandemic risk).	Containment	
		Aus 5	Human infection in Australia: larger cluster(s) but human-to-human transmission still localised, suggesting the virus is becoming increasingly better adapted to humans, but may not yet be fully adapted (substantial pandemic risk).	Containment	
	Pandemic	6	Overseas 6	Pandemic overseas- not in Australia: increased and sustained transmission in general population.	Containment
			Aus 6a	Pandemic in Australia: localised (one area of country)	Containment
Aus 6b			Pandemic in Australia: widespread	Maintenance (Maintenance of social functioning)	
Aus 6c			Pandemic in Australia: subsided		
Aus 6d			Pandemic in Australia: next wave		