Managing pandemic influenza in general practice

A guide for preparation, response and recovery

Pandemic flu kit
Managing pandemic influenza in general practice:
A guide for preparation, response and recovery

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Managing pandemic influenza in general practice

A guide for preparation, response and recovery
Acknowledgements

Managing pandemic influenza in general practice: A guide for preparation, response and recovery forms part of The Royal Australian College of General Practitioners’ (RACGP) second edition of the Pandemic flu kit (PFK). This guide and supplementary resources have been developed by the RACGP under the guidance of the project’s steering committee, the Pandemic Taskforce.

The RACGP received project funding from the Department of Health (DoH), Office of Health Protection to develop the second edition of the PFK.

The RACGP undertook an extensive consultation process to develop this resource and would like to thank those who offered ideas and suggestions and those who provided feedback on drafts. This collective effort has resulted in the production of a comprehensive suite of resources that provides general practices with practical advice on how to best prepare for and respond to an influenza pandemic.

The RACGP would particularly would like to thank:

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- Australian Association for Practice Managers
- Australian Medicare Local Alliance
- All other GPs and practice staff who provided feedback during the consultation process.
Foreword

The outbreak of an infectious disease such as pandemic influenza will challenge all facets of Australia’s already stretched health system. GPs and practice teams play an integral role in providing essential health services to patients and supporting public health goals in disease control.

When faced with a disease outbreak like a pandemic, the community will turn to general practice. To ensure the continuation of high-quality clinical care to patients, it is vital that practices have an up-to-date pandemic plan in place so they are prepared, well stocked and ready to respond.

The RACGP is committed to supporting GPs and practice teams in delivering quality healthcare.

Practices that are prepared for a pandemic are more likely to have effective continuity of care arrangements for their patients while ensuring that business operations continue to run as smoothly as possible. Furthermore, practices that have a pandemic response plan in place will ultimately be better positioned to meet the health needs of their community.

We would like to thank the people and organisations listed in the acknowledgements for their dedication and support. We particularly would like to thank members of the Pandemic Taskforce and RACGP staff for their efforts in contributing to the development of this innovative resource.

It is with great pride that we present the RACGP’s Pandemic flu kit (2nd edition).

Dr Penelope Burns
Chair

Dr Elizabeth Marles
President
The Royal Australian College of General Practitioners
Pandemic Taskforce
Executive summary

The RACGP’s PFK was first published in 2008 and revised in 2009. This second edition of the PFK has been designed as an appendix to the Managing emergencies and pandemics in general practice: A guide for preparation, response and recovery (Emergency guide) resource and includes the following documents:

- Managing pandemic influenza in general practice: A guide for preparation, response and recovery (Pandemic influenza guide)
- Implementation guide
- Pandemic influenza toolkit.

This guide and complementary resources have been developed to provide general practices with simple information to ensure that they are prepared and able to respond to an influenza pandemic. These resources align with Australia’s national health sector plan, the Australian Health Management Plan for Pandemic Influenza (AHMPPPI), and are based on the principles of an all-hazards approach to emergency risk management for health (ERMH). Additionally, these pandemic resources build upon the lessons learned from the 2009 influenza A (H1N1) pandemic.

The traditional focus of the health sector has been on response, whereas a risk management approach is broader and covers the four cyclic stages of an emergency or disaster: prevention, preparedness, response and recovery (PPRR). This approach to pandemic influenza allows general practices to develop flexible plans that suit their unique situation and that can be scaled up or down to meet the level of pandemic influenza threat.

The principles covered in these resources can also be used to develop plans for other relevant infectious disease surges, or pandemics, such as severe acute respiratory syndrome (SARS), Middle Eastern respiratory syndrome coronavirus (MERS-CoV), measles, or a currently unknown future virus.

While these resources touch on all four stages of PPRR, the primary focus is on preparedness and response as these stages require a greater need for planning and coordination.
These stages of planning and management align with the World Health Organization (WHO) continuum of pandemic phases (see Figure 1):

1. Interpandemic phase – between pandemics
2. Alert phase – when a new subtype has been identified and increased vigilance and risk assessment are warranted
3. Pandemic phase – a period of global spread of a new subtype as indicated by global risk assessment based on virologic, epidemiologic and clinical data
4. Transition phase – when global risk drops, promoting step-downs in response activities.

Phases of pandemic influenza and the stages of management can change rapidly and often overlap. In a country the size of Australia, it is likely that different geographical regions will be in different pandemic phases at any one time.
### Acronyms

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AHMPPPI</td>
<td>Australian Health Management Plan for Pandemic Influenza</td>
</tr>
<tr>
<td>CALM</td>
<td>communication, coordination, capacity, adaptability/flexibility, leadership, and mutual support</td>
</tr>
<tr>
<td>COPD</td>
<td>chronic obstructive pulmonary disease</td>
</tr>
<tr>
<td>ERMH</td>
<td>emergency risk management for health</td>
</tr>
<tr>
<td>GP</td>
<td>general practitioner</td>
</tr>
<tr>
<td>HA</td>
<td>haemagglutinin</td>
</tr>
<tr>
<td>MERS-CoV</td>
<td>Middle Eastern respiratory syndrome coronavirus</td>
</tr>
<tr>
<td>NA</td>
<td>neuraminidase</td>
</tr>
<tr>
<td>PFK</td>
<td>Pandemic flu kit</td>
</tr>
<tr>
<td>PPE</td>
<td>personal protective equipment</td>
</tr>
<tr>
<td>PPRR</td>
<td>prevention, preparedness, response and recovery</td>
</tr>
<tr>
<td>RACGP</td>
<td>The Royal Australian College of General Practitioners</td>
</tr>
<tr>
<td>SARS</td>
<td>severe acute respiratory syndrome</td>
</tr>
<tr>
<td>WHO</td>
<td>World Health Organization</td>
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1. Introduction

Pandemics are unpredictable but recurring events that can have consequences on human health and economic wellbeing worldwide. Advanced planning and preparedness are critical to help mitigate the impact of a pandemic.¹

All pandemics differ – not only from each other but in impact across countries and communities. This makes them difficult to predict and therefore to prepare for. One of the most important lessons learned from the 2009 pandemic (H1N1) was that planning must be flexible to accommodate the biological variations in the clinical picture and potential uniqueness of each pandemic scenario – enabling resources to be effectively directed to achieve optimal outcomes.²

The influenza A (H1N1) 2009 pandemic provided a wealth of information on the influenza virus at the human–animal ecosystem interface. Although the 2009 influenza pandemic was of low severity compared with those of the 20th century, it was the first opportunity to implement pandemic plans in response to a real threat.³ It also showed that many countries had prepared for a pandemic of high severity, following the emergence of a new avian influenza virus (H5N1) in 2003, and appeared unable to adapt their national and regional responses adequately to a more moderate event. In some instances, plans were considered overly rigid and the recommended responses were not appropriate for a more moderate event.¹ Since 2009, capability to respond to pandemic influenza has improved in many countries.⁴

The 2009 pandemic also revealed that, as with influenza epidemics, the main burden of managing patients fell on the primary care sector.⁵,⁶ National and state planning is necessary; however, practices need their own flexible pandemic plans as no one size fits all.

The lessons learned by general practice from that experience are now used to strengthen preparedness to future pandemics. Six consistent major themes are considered to be essential for successful pandemic preparedness – communication, coordination, capacity, adaptability/flexibility, leadership and mutual support, which are collectively represented by the acronym CALM.³

The RACGP’s pandemic resources provides practices with information across these themes for use in developing integrated but practice-specific pandemic preparedness and response plans.
2. About the Pandemic flu kit

2.1 What is the PFK?

The PFK is a set of documents to help general practices prepare for and manage an outbreak of pandemic influenza, consisting of three main components:


This guide contains current evidence based information about pandemic influenza and includes comprehensive information regarding PPRR principles and activities. Figure 2 shows this cycle.

Figure 2. Emergency cycle
2. Implementation guide

This is a shorter document in flipchart format that contains clear tangible actions specifically aligned with pandemic stages (including colour coding) as outlined within the AHMPPI.

The key stages of this resource are discussed in more detail in the Implementation guide; they include the following.

<table>
<thead>
<tr>
<th>Preparedness</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Response) Standby stage</td>
</tr>
<tr>
<td>(Response) Initial action stage</td>
</tr>
<tr>
<td>(Response) Targeted action stage</td>
</tr>
<tr>
<td>(Response) Stand down stage</td>
</tr>
</tbody>
</table>

3. Pandemic influenza toolkit

The Pandemic influenza toolkit is a collection of operational documents developed to support general practices in their preparedness and response efforts. The toolkit comprises pandemic planning templates, checklists, triage algorithms, scripts and downloadable posters.

By completing the planning templates and using the additional resources, practices will have developed a pandemic plan that is individually tailored to their practice.


3. About pandemic influenza

3.1 What is influenza?

Influenza is an illness of the respiratory tract caused by one of a number of influenza viruses. There are three virus types: influenza A, B and C. Influenza C causes only mild and usually sporadic respiratory illness. Regional and widespread epidemics are most often attributed to influenza A or B. Influenza A – which is found in humans and animals – causes the most severe disease and is the only type known to cause influenza pandemics.

Influenza A and B viruses have two main proteins on the outside of the virus: haemagglutinin (HA), which helps the virus enter the host respiratory cells, and neuraminidase (NA), which facilitates the release of virus particles from infected host cells. These proteins (also called antigens) are used in naming various viruses; for example, H5N1 is avian influenza or ‘bird flu’. H1N1 is also known as ‘swine flu’ and was the cause of the 2009 pandemic.

Influenza viruses have a high mutation rate – where the H and N antigens undergo change. Small mutations (called antigenic drift) are common and every 1–2 years virus change is seen. These changes are the cause of seasonal flu epidemics. The changes to the virus mean that little immunity is gained from previous infection, exposure or vaccination. This is why a new seasonal influenza vaccine is required each year.

Large mutations (called antigenic shift) cause the emergence of a new virus and the potential for a pandemic as there is no immunity in the population. Without any immunity, the virus can spread quickly from person to person, worldwide.

Three distinct influenza scenarios may be encountered in general practice:

- **seasonal influenza**, which occurs each winter. Most people experience 1–2 weeks of symptoms that are unpleasant but not usually life-threatening, except in the very young, pregnant women, or people with chronic health diseases
- **epidemic influenza**, which occurs when a new highly pathogenic and more severe influenza strain emerges. This can result in increased mortality and morbidity in local populations, especially in at-risk groups
- **pandemic influenza**, which occurs when a new highly pathogenic influenza strain emerges and spreads globally.

3.2 How does a pandemic occur?

A pandemic is a global infectious disease outbreak. The term ‘pandemic’ relates to how the disease spreads, not how widespread it is or how many deaths occur (eg. cancer is widespread and kills many people but is not a pandemic).

From studies done by the WHO, pandemic influenza develops in three stages (also see Figure 3):

**Stage 1:** An influenza virus in an animal develops the ability to infect humans and cause serious disease. During this phase, the virus is not able to transmit efficiently between humans. Contact with infected animals is needed for human infection to occur.

**Stage 2:** Following a genetic change, the virus becomes more efficient at passing from human to human, first within small groups (eg. families or community networks) and later over wider but still localised areas.

**Stage 3:** Finally, the virus is able to transmit readily between humans. It spreads rapidly due to a short incubation period, period of communicability and the infectious nature of influenza. Rapid global spread is aided by extensive international travel, which takes place every day between virtually every country in the world.

Novel influenza viruses such as avian influenza (H5N1) continue to circulate globally and are a potential source for a pandemic.
Figure 3. Antigenic shift

The genetic change that enables a flu strain to jump from one animal species to another, including humans, is called “ANTIGENIC SHIFT.” Antigenic shift can happen in three ways:

A. When the viruses infect the same cell, the genes from the bird strain mix with genes from the human strain to yield a new strain.

B. Without undergoing genetic change, a bird strain of influenza A can jump directly from a duck or other aquatic bird to humans.

C. Without undergoing genetic change, a bird strain of influenza A can jump directly from a duck or other aquatic bird to an intermediate host such as a chicken or pig.

D. A duck or other aquatic bird passes a bird strain of influenza A to an intermediate host such as a chicken or pig. (Note that reassortment can occur in a person who is infected with two flu strains.)

E. The new strain can spread from the intermediate host to humans.

Reproduced with permission from the National Institute of Allergy and Infectious Diseases. Links Studio. Available at www.niaid.nih.gov/topics/flu/research/basic/pages/antigenicshiftIllustration.aspx
3.3 How is it different from seasonal influenza?

Seasonal influenza and pandemic influenza cause the same (or very similar) signs and symptoms. However, how often the influenza occurs, who gets ill and the severity of the disease may be quite different. Table 1 shows similarities and differences between seasonal and pandemic flu.

Seasonal influenza imposes a moderate but variable burden every year. The WHO estimates that seasonal influenza causes between 250,000 and 500,000 deaths each year.\(^7\)

Unlike seasonal influenza, it is impossible to predict when and where the next pandemic will start, how quickly it will spread and what impact it will have on public health. The majority of deaths from seasonal influenza occur among people aged 65 years or older, but in a pandemic the proportion of deaths among the young increases.\(^8\)

<table>
<thead>
<tr>
<th>Seasonal flu</th>
<th>Pandemic flu</th>
</tr>
</thead>
<tbody>
<tr>
<td>Happens annually, usually in winter</td>
<td>Rarely happens (approximately every 30 years – three times in the 20th century)</td>
</tr>
<tr>
<td>Usually some immunity is built up from previous exposure</td>
<td>People have little or no immunity because the virus is new (hence no previous exposure)</td>
</tr>
<tr>
<td>Usually only people at high risk (eg. infants, elderly, immunocompromised, chronic illness such as chronic obstructive pulmonary disease [COPD]), not healthy adults, are at risk of serious complications</td>
<td>Healthy people may be at higher risk for serious complications and even death</td>
</tr>
<tr>
<td>Vaccination is available for annual flu season</td>
<td>Vaccination is unlikely to be available in the early stages of a pandemic</td>
</tr>
<tr>
<td>Adequate supply of antivirals is usually available</td>
<td>Effective antivirals may be in limited supply</td>
</tr>
<tr>
<td>Symptoms include fever, sore throat, weakness, headache, joint and muscle pain and cough</td>
<td>Symptoms may be more severe</td>
</tr>
<tr>
<td>Usually causes minor impact</td>
<td>May cause major impact on general public, including travel restrictions, closure of schools and businesses</td>
</tr>
<tr>
<td>Deaths occur each year (approximately 2800 per year)(^9)</td>
<td>Potential for high death rate</td>
</tr>
</tbody>
</table>

Adapted from and available at www.flu.gov/pandemic/about/index.html

As was seen with the 2009 H1N1 pandemic, high death rates are not necessarily a feature of all influenza pandemics. Australia experienced 20-fold less mortality than several countries in the Americas.\(^8\)

A number of factors may influence the mortality rate; these include:

- the strength (virulence) of the virus
- the number of people infected
- the vulnerability of the affected populations
- implementation of public health mitigation strategies
- the effectiveness of preventative measures
- the number and duration of pandemic waves
- influenza vaccination coverage in preceding seasons
- the use of antivirals (where indicated)
- access to intensive care.
Although Australia as a whole experienced only a mild pandemic with H1N1, causing fewer deaths than seasonal influenza, not all Australians were affected equally. Indigenous Australians were found to be more vulnerable than the general Australian population. Aboriginal and Torres Strait Islander peoples had disproportionately high rates of complications with a mortality rate six times higher than non-Indigenous Australians. Research suggests that Australian Indigenous people may be particularly vulnerable to future infections (e.g. H7N9) due to a lack of pre-existing T-cell immunity.

3.4 What are the symptoms?

Influenza symptoms develop 1–3 days after the patient becomes infected and can include:

- fever, chills and sweating
- sore throat
- weakness
- headache and generalised muscle and joint pains (legs and back)
- a nonproductive cough that can later become severe and productive.

These symptoms can last up to approximately 1 week.

Influenza is more than a ‘bad cold’. Colds cause a runny nose, occasional mild fever but no muscle pains. Colds usually last 1–2 days.

3.5 How is it transmitted?

The influenza virus is highly infectious. This combined with a short incubation period (likely 1–3 days, maximum 7 days) and a period of viral shedding (when a person can infect others – 1 day before symptoms and up to 7 days after onset of illness in adults and up to 21 days in young children), accounts for the rapid spread of the influenza virus.

The primary mode of transmission is by large respiratory droplets, which can be propelled up to 1 metre from an infected person who is coughing or sneezing, onto the mouth, nose or eyes (mucous membranes) of another person.

Spread is also by direct or indirect (fomite) contact, when a person touches respiratory droplets that are on either another person or an object and then touches their own mouth or nose.

Airborne (small particles) transmission can occur in the general practice setting by particles being dispersed during the use of nebulisers, oxygen administration and intubation. These procedures should not be undertaken without appropriate personal protective equipment (PPE).

Evidence shows that physical barriers, especially hand hygiene, wearing a mask, and using social distancing or isolation of potentially infected people, are effective in preventing the spread of respiratory virus infections.

Animal studies regarding the transmission of influenza viruses have pointed to a number of environmental factors, including relative humidity and temperature, that may influence transmission.
3.6 Influenza vaccination

Vaccines are the leading pharmacological measure for limiting the impact of pandemic influenza in the community.\(^{15}\)

While pandemic influenza vaccines are only available some months after an outbreak starts, seasonal influenza vaccinations are developed each year. Candidate pandemic vaccines are also available for particular strains.

Seasonal influenza vaccination will not protect an individual against a pandemic influenza strain; however, it can reduce circulating influenza virus in the community and the chances that seasonal influenza will be confused with an outbreak of a novel strain.

Seasonal influenza vaccination is encouraged according to the current immunisation guidelines as outlined in the National Health and Medical Research Council (NHMRC)’s *Immunisation handbook* (10th edition).

Influenza vaccine is the only vaccine reformulated each year to optimise the match between vaccine and circulating virus strains. The WHO issues recommendations for the different strains of influenza viruses (type A and type B) which are included in the vaccine based on the prevailing strains in the northern and southern hemispheres. Once the recommendation is made, vaccine producers require at least 6 months to manufacture and distribute the vaccine.\(^{16}\) Unfortunately, not all influenza vaccines (especially influenza A) have high vaccine effectiveness.\(^{17}\)

In the case of pandemic influenza, once the viral strain has been identified it takes at least 3–6 months for vaccination development.

The development of a vaccine that could block all strains of influenza virus is an intense area of research. There have been some promising leads but there is no vaccine for the foreseeable future.\(^{18}\)

3.7 What has been the impact of previous influenza pandemics?

There were three influenza pandemics during the 20th century:

- Spanish flu (H1N1) swept across the world in three waves in 1918 and 1919. It caused an estimated 50 million deaths worldwide (1–2% of the global population) and approximately 10,000 Australians died. The highest number of deaths was in young and healthy people aged 15–35 years; pregnant women were especially vulnerable.

- Asian flu (H2N2) in 1957 caused approximately 2 million deaths worldwide. During the first wave, school children, young adults and pregnant women were mainly affected. In the second wave, the elderly had the highest death rates.

- Hong Kong flu (H3N2) occurred in 1968 and 1969 and caused approximately 1 million deaths worldwide. It mainly affected the elderly.

Along with millions of deaths, these influenza pandemics caused social disruption and profound economic losses worldwide.

The first influenza pandemic this century was in 2009; it was referred to as ‘swine flu’ (H1N1). The virus contained genetic material of swine, avian and human origin.\(^{19}\) The virus has also been isolated in turkeys, cats and domestic ferrets.\(^{19}\) While the infection rate was high, there was a comparatively low mortality rate (18,449 laboratory-confirmed deaths as of 31 August 2010 by the WHO).

However, laboratory-confirmed deaths greatly underestimate the real mortality burden; for example, deaths from secondary bacterial infections and exacerbation of pre-existing chronic conditions are not recorded as being in any way related to influenza infection.\(^{6}\)

Global mortality estimates by the Global Pandemic Mortality project suggest that there were between 123,000 and 203,000 pandemic respiratory deaths for the last 9 months of 2009 (which is approximately 10-fold higher than the WHO mortality count). The majority (62–85%) were attributed to persons under 65 years of age.\(^{6}\)
3.8 What can we predict about the next influenza pandemic?

“What is clear is that it is when, not if.” Frederick Hayden, University of Virginia School of Medicine, 2011.

There are more factors that are not known about a future influenza pandemic than that are known (see Table 2). The uncertainty factor makes preparedness particularly challenging.

While the 2009 pandemic was considered mild, future emerging pandemic virus strains may be highly pathogenic.\textsuperscript{18} The impact of a future pandemic will depend on its transmissibility and severity.\textsuperscript{20}

\begin{table}[h]
\centering
\begin{tabular}{|l|l|}
\hline
\textbf{What can probably be assumed or predicted} & \textbf{What cannot be assumed} \\
\hline
- Mode of transmission (droplet or contact) & - Virulence \\
- Incubation time (likely to be short) & - Age groups with most transmission \\
- When a person becomes infectious & - Who will be the most susceptible \\
- Clinical presentation (influenza symptoms) & - Precise periods of viral shedding in different age groups \\
- The general effectiveness of standard precautions (hand hygiene, cough etiquette) & - The severity of the pandemic and fatality rates \\
\hline
\end{tabular}
\caption{What can and cannot be assumed about future influenza pandemics}
\end{table}

Adapted and reproduced with permission from European Centre for Disease Prevention and Control (ECDC). Available at www.ecdc.europa.eu
4. Overview of PPRR

The next four chapters of this guide provide an overview of the key areas of PPRR. These key areas are consistent with Australia’s overall strategic approach to emergency management.

In general practice, prevention and preparedness activities should form part of everyday practice. How prepared a practice is will ultimately determine the effectiveness of their overall response and recovery efforts. While it is widely recognised that general practice services are extremely busy, it is strongly recommended that practices take time to undertake rigorous preparedness activities.

It is recommended that practices develop or revise and update their pandemic plan for the practice annually. It is suggested that this is done every February, so that practices are also prepared for the regular flu season.

General practices will be required to implement their response strategies just prior to and during a pandemic. The level of response required will be dependent on the current pandemic stage as determined by the Commonwealth Government. While the response chapter of this guide provides advice regarding the key response activities that practices should undertake during a pandemic, the Implementation guide provides direction regarding the specific tasks to undertake during the relevant stages of the pandemic (as outlined in the AHMPPI).

During the recovery phase, practices should assess the impacts of the pandemic and learn from what was managed well or poorly during their response efforts. It is suggested that practices incorporate all learnings into future pandemic planning (preparedness stage). As described earlier, preparedness activities are crucial and help ensure the effectiveness of a practice’s response efforts.

Figure 4 shows how preparedness is central to all other pandemic activities. In the context of pandemic influenza, preparedness is the capability to “prevent, protect against, respond quickly to, and recover from health emergencies, particularly those whose scale, timing, or unpredictability threatens to overwhelm routine capabilities”.

Figure 4. Preparedness capabilities
5. Prevention

Preventing the emergence of a novel virus capable of causing a pandemic is practically impossible. However, implementing evidence based infection prevention and control strategies can vastly mitigate the impact of all infections, including a pandemic.

The prevention stage for pandemic influenza centres on actions to identify and manage risks. Prevention activities for general practices should be integrated into and become part of everyday practice.

During the prevention stage, general practices will need to:

**Have**
- an appointed infection prevention and control coordinator who oversees the development, implementation and review of infection prevention and control policies, protocols and staff education based on risk assessment

**Know**
- what pandemic influenza is, including mechanisms for transmission
- current infection prevention and control principles

**Do**
- maintain year-round influenza surveillance
- environmental cleaning
- educate staff and patients about the signs and symptoms of influenza, hand hygiene and respiratory etiquette

**Essential resources**
- NHMRC Australian guidelines for the prevention and control of infection in healthcare
- RACGP Infection control standards for office based practices, 5th edition
  www.racgp.org.au/your-practice/standards/infectioncontrol
- RACGP Guidelines for preventive activities in general practice, 8th edition (the Red Book)
  www.racgp.org.au/your-practice/guidelines/redbook
- ASPREN – The national GP disease surveillance network
  www.aspren.com.au
6. Preparedness

‘Hoping for the best, prepared for the worst, and unsurprised by anything in between.’ Maya Angelou

As with prevention activities, preparedness activities should be standard in general practices. However, preparedness is more about building the capacity to prevent, protect against, recognise and respond effectively to pandemic influenza (ie. to reduce the impact of the disease).

Planning and preparing are not quick processes. As with any disaster preparedness, planning and preparing needs to be done well in advance of a pandemic. In the case of pandemic influenza, being well prepared is likely to minimise the number of people affected, protect critical infrastructure and essential services, and improve the health outcomes of those affected. Lessons learned from previous disease outbreaks should be incorporated into current plans.

Plans developed for pandemic influenza can easily be used more broadly for other new, highly transmissible or severe communicable diseases.

**Have**
- an appointed pandemic coordinator and pandemic leader

**Know**
- principles for managing outbreaks of infectious disease
- how to order critical supplies
- your vulnerable patients
- effective communication strategies

**Do**
- develop a comprehensive pandemic plan that is tailored to the practice
- educate staff on the practice’s pandemic plan
- ensure the practice is appropriately stocked with clinical and non-clinical supplies and equipment
6.1 Planning for a pandemic

The main strategy for practice preparedness is to develop a pandemic plan for the practice that identifies key risks and key tasks, and clarifies key roles and responsibilities. The plan explains how the practice intends to operate before and during a pandemic.

Plans considered the most useful offer a framework rather than overly specified and complex responses. Planning should be based not only on worst-case scenarios, but be flexible and adaptable to accommodate pandemics of varying impact.22

So that general practices can operate effectively, both during and after a pandemic, a well-thought-out pandemic plan is essential. A comprehensive and useful pandemic plan needs to:

- clearly identify the pandemic leader and pandemic coordinator and outline the responsibilities for these roles and other practice staff (these two roles may be undertaken by the same person)
- list essential pandemic resources including key stakeholders, such as hospitals and diagnostic services
- describe effective communication strategies to utilise existing health networks and available infrastructure
- document infection control policies and identify triage algorithms for the management of suspected and known cases
- identify contingency arrangements for business continuity, including planning for absenteeism and use of alternative work processes (eg. work from home, e-consulting, hospital in the home, flu clinics and re-arrangement of workflow)
- identify contingency arrangements for patients with particular needs (eg. vulnerable groups, patients with comorbidities)
- outline the support the practice will provide for people in home isolation and/or quarantine.

Once the plan has been developed, it is crucial that staff are aware of the plan and receive appropriate education and training.

6.2 Roles and responsibilities

Strong leadership and good governance are key requirements for effective preparedness.

6.2.1 National arrangements, organisations and committees

The Australian Government will provide leadership for overall pandemic coordination and communication efforts, and has the task of helping other public and private agencies and organisations by providing guidance, planning assumptions and making appropriate modifications to laws or regulations to enable an appropriate pandemic response.1

The government needs to collect information on suspected cases of pandemic influenza in a coordinated manner between federal, state, territory and local governments as well as coordinate appropriate public health responses according to their pandemic plans.

A comprehensive understanding of emergency planning and management processes is essential. To ensure this occurs, it is important to firstly understand the roles and responsibilities that the different agencies and organisations play.

Refer to:

6.2.2 Pandemic coordinator

The first step in preparing for a pandemic is appointing a pandemic coordinator. This person should have a level of experience and knowledge that allows them to act on all practice activities related to pandemic planning. The pandemic coordinator could also be the infection prevention and control coordinator. Where possible, practices may consider appointing a deputy coordinator for back-up.

Key activities for the pandemic coordinator include:

- reviewing relevant and current materials such as the RACGP's Managing emergencies and pandemics in general practice and Infection prevention and control standards, as well AHMPPI, and the relevant state or territory pandemic plan
- holding regular practice team meetings to discuss pandemic planning and management
- developing a flexible plan for the management of pandemic influenza for the practice
- identifying barriers to an effective response (eg. difficulties obtaining PPE and antivirals or lines of communication between practices and government health departments)
- subscribing to and monitoring appropriate communication networks regarding Australian pandemic alerts (eg. the RACGP health alerts and the Department of Health website)
- maintaining close contact with key stakeholders
- communicating and coordinating with other healthcare and community organisations
- obtaining regular advice from state and territory governments regarding the management of pandemics
- maintaining the practice's stock of PPE
- providing the practice team with ongoing training regarding the plan, including mini-drills and 'dry runs'.

The pandemic coordinator may not be the person who takes the lead during a pandemic (this role will be known as the pandemic leader; this is discussed in the response chapter).

6.3 Infection prevention and control

General practices can reduce the risk or prevent the transmission of infectious diseases by embedding infection control measures in everyday practice. All GPs, clinical staff and non-clinical staff should have a good understanding of infection control principles.

6.3.1 Standard precautions

Standard precautions are applied to the care of all patients. Hand hygiene is a key standard precaution.

Standard precautions should be used routinely and consistently to achieve a basic level of infection prevention and control when staff are likely to be in contact with:

- blood
- other body fluids, secretions or excretions, except sweat (eg. urine, faeces)
- non-intact skin
- mucous membranes.

In preparing for a pandemic, practices may wish to scale up the use of standard precautions. For example, by providing conveniently located dispensers of alcohol-based hand rub – near each workstation, in patient waiting areas, in consulting and treatment rooms, including allied health rooms, and in reception and staff meeting rooms.

Additionally, practices may prohibit staff from wearing ties.

Refer to the RACGP’s Infection prevention and control standards (5th edition).
6.3.2 Transmission-based precautions

Transmission-based precautions (previously known as additional precautions) are used where patients have suspected or known infectious conditions.

To minimise the spread of influenza, contact, droplet and airborne precautions (transmission-based precautions) are used in addition to standard precautions:

- **Contact** precautions are used to prevent both direct and indirect contact transmission. Contact precautions involve the use of gloves, gowns and distancing. Gloves need to be worn for all manual contact with patients, associated equipment and the immediate environment. A water-impermeable apron or gown needs to be worn if clothing could be in substantial contact with the patient or their immediate environment.

- **Droplet precautions** are used to minimise transmission of droplets generated by coughing, sneezing and talking. Droplet precautions involve the use of surgical masks (worn by staff and patients), protective eyewear (goggles or face shield) and distancing. Patients should be asked to observe respiratory (cough) hygiene.

- **Airborne precautions** should be used to minimise transmission of micro-organisms suspended in the air. Airborne precautions involve the use of P2/N95 masks, protective eyewear (goggles or face shield) and minimising exposure time to other patients (scheduling influenza patients at the end of the day, distancing, home visits). Where possible, avoid aerosoling procedures such as nebulisers. Additionally, preference should be given to the use of spacers for the delivery of salbutamol when needed.

Refer to the RACGP’s *Infection prevention and control standards* (5th edition).

6.3.3 Implementing infection prevention and control measures

Prevention of infection and disease transmission relies on the implementation of effective infection prevention and control measures. These measures can be viewed as three separate components: individual measures, organisational and environmental measures and PPE.

<table>
<thead>
<tr>
<th>Individual measures</th>
<th>Organisational and environmental measures</th>
<th>Personal protective equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Hand hygiene</td>
<td>• Modifications to the practice</td>
<td>• Use of appropriate type of PPE (dependent on risk)</td>
</tr>
<tr>
<td>• Respiratory hygiene</td>
<td>• Patient placement and segregation</td>
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<tr>
<td>• Cough etiquette</td>
<td>• Practice cleaning</td>
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<tr>
<td>• Distancing</td>
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</table>

The implementation of all three components will help to reduce the risk of practice staff and patients being exposed to the influenza virus; an individual component will not be effective if undertaken/used in isolation (eg. PPE only).
Preparing for the management of outbreaks of respiratory (and other) infections should focus on good
governance with planned, practised and habitual infection prevention and control measures, and a stepwise
response according to the extent and severity of the outbreak.23

Practice staff should be familiar with infection prevention and control principles and how to appropriately
scale usual measures in response to an outbreak of disease.

6.3.4 Individual-based precautions

Staff education on preventing the spread of infection

All members of the practice team need to be educated about their role in preventing the spread of infection.

Education includes the teaching of the principles of infection prevention and control, including the various
infectious agents, their modes of transmission, appropriate work practices for infection prevention and
control and what personal protection is required and when to use it.

All staff need to demonstrate competency (appropriate to their role) in:

- identifying the signs and symptoms of influenza
- hand-hygiene procedures
- standard precautions
- transmission-based precautions
- managing blood and body fluid spills
- managing blood or body fluid exposure
- waste management
- principles of environmental cleaning and reprocessing medical equipment
- notification and referral pathways to appropriate health authorities
- where to find information on other aspects of infection control and pandemic protocols in the practice.

Understanding why precautions (such as masks) are used and the factors that have an impact on their
effectiveness is critical to ensuring that staff are adequately protected, comfortable and can perform their
jobs.14

During a pandemic, roles within the practice team may change. Some staff will need to multitask and take
on additional responsibilities. This may mean additional training in infection prevention and control practices.

Refer to online hand-hygiene course at www.hha.org.au/LearningPackage.aspx

Patient education on preventing the spread of infection

Patient education and engagement is vital for effective pandemic management. The public needs to be
empowered to take responsibility for their own health.24 Educating patients on the issues around pandemics
increases awareness of risks, engenders cooperation, facilitates co-ownership and commitment, and
assists in the prevention of transmission and complications.

Patients should be educated about infection prevention and control strategies (eg. cough etiquette, hand
hygiene) and be encouraged to report any potential infectious disease to practice staff as soon as possible.
Research shows that providing information about influenza prevention at the community level can help
reduce severe and complicated cases of influenza requiring hospitalisation.25

During flu season and/or the standby stage, it is recommended that practices display posters to remind
patients of the importance of handwashing and cough etiquette.
Seasonal vaccinations

The WHO position on seasonal influenza vaccines is that they are "safe and efficacious and have the potential to prevent significant annual morbidity and mortality." The NHMRC's Immunisation Handbook (10th edition), recommends annual influenza vaccinations for healthcare professionals and patients. General practices should encourage influenza vaccination for both staff and patients as an effective measure to reduce transmission of influenza.

Seasonal influenza vaccination uptake is low among healthcare workers. After the 2009 H1N1 pandemic, only Mexico experienced a significant increase in uptake of season influenza vaccination. The most common reasons for healthcare staff rejecting vaccination are fear of adverse events, doubt regarding efficacy, not feeling as belonging to a high-risk group and believing that influenza is not a serious illness. The main predictor of vaccine uptake is previous influenza vaccination. Strategies to improve vaccination rates include in-practice vaccination programs for staff, use of practice 'champions', electronic databases to track vaccinations and marketing campaigns.

For further information regarding pandemic vaccinations, refer to 6.6.5 – Pandemic influenza vaccination.

6.3.5 Organisational and environmental measures

Risk assessment and management

Risk identification and management is a fundamental aspect of a high-quality, resilient and sustainable practice. This applies not only to infection prevention and control but right across all aspects of the practice.

Planning for a pandemic needs to take into account the risk factors regarding the disease (eg, transmission, virulence, morbidity and mortality) and the vulnerabilities particular to each practice (eg, size of the practice team, patient cohorts, access to additional resources, patient flow within the practice, financial implications). Together these provide the context of the risk.

The disease-specific factors will not be known until the time of the outbreak (and may change rapidly during the outbreak). Identification of potential areas of risk with practice systems and processes can be done during the preparedness phase and then reviewed in the event of a pandemic threat.

Some sources of risk are common; for example, inadequate hand hygiene, poor respiratory (cough) etiquette, lack of effective triage protocols and high workload with stress and fatigue.

During the preparedness phase, it is recommended that the pandemic coordinator undertake an assessment of all the possible risks to the practice and identify appropriate strategies to manage them. Once risks are identified, they are analysed for their magnitude of impact and their likelihood of occurring. There may be some situations where doctors and other health professionals have different opinions about risk and therefore the appropriate approach to that risk.

Discussions should occur before an event so that a consistent approach can be decided upon. Developing policies based on evidence based guidelines can help address difference of opinion regarding risk.

Risks are then evaluated and prioritised – which risks need to be actively managed, why and how; and which risks will be ‘tolerated’ (ie. what risk a practice believes is minimal).

Having taken account of all the relevant factors, including practical and financial implications, it is important to act on identified priority risks. Start with the potential solutions/safeguards that are easy to do and have high impact (eg, placing alcohol-based hand rubs in all patient care areas to improve hand hygiene and reduce cross-infection). Then give attention to those that are hard to do but have high impact.

All protocols and procedures to manage risk should be documented, monitored and regularly reviewed.

Execution of mini-drills could be conducted (depending on time and manpower availability) to investigate the practicalities and logistical barriers of some of the actions proposed. Consider scenarios of pandemics with various severities and formulate some options and innovative solutions for handling these scenarios.

Triage

Early recognition of patients with suspected influenza will allow for appropriate patient management and reduced risk of transmission. All staff need to be able to recognise the symptoms and signs of potentially infectious disease that fit with the current ‘case definition’ of the pandemic in patients presenting to or calling the practice, and respond appropriately.

Consider developing a checklist for patients and staff to identify potential cases of influenza.

Document questions to be asked at reception and the expected staff responses required. All staff will need training in triage protocols. Display triage questions in an easily accessible algorithm at reception.

Leaflets and notices in the waiting room, posts on the practice website or messages while callers are on hold can provide patients with information that will further support the appropriateness of triage.

During a pandemic, health authorities will provide a more specific case definition. Definitions used by health authorities to identify cases of pandemic influenza may change at different phases of a pandemic, as knowledge of the disease increases. General practices need to maintain good communication pathways with state and territory health authorities to ensure timely notification of any changes to case definition or clinical management.

Separating patients who are well from patients who are ill

Distance barriers are effective in preventing disease transmission.20 The practice will need to explore some patient flow options to reduce contact between patients with influenza-like symptoms and those without. Examples include creating a mini-influenza clinic (eg. a designated waiting area with a designated GP), assigning the ‘worried well’ to a clinic nurse26 and using areas such as the car park for patient triage. Practices may also consider using a dedicated consultation room to treat/manage patients with influenza-like symptoms.

Staff will need to know the roles of isolation and quarantine:

- **Isolation** is used to physically separate symptomatic patients with an infectious disease from those who are healthy during the infectious period. In the practice, isolation includes distancing (eg. seating patients with influenza at least 1 metre from patients without influenza, or ideally in another area or consultation room of the practice). Isolation could be extended to all patients with an influenza-like illness being seen at a separate facility, such as a flu clinic.

- **Quarantine** is used to physically separate and restrict movement of asymptomatic persons who have potentially been exposed to an infectious disease to see if they become ill. Influenza patients may be infectious before they become ill themselves. People in quarantine may be asked to monitor their temperature. They will need to know how to use a thermometer, how often to take their temperature and what to do if they develop a fever (ie. temperature ≥ 38°C). Quarantining of patients is not a mandatory requirement and therefore not enforceable. Practices should advise/recommend influenza patients to stay at home and limit contact with other people.

It may be particularly important to separate age groups. During the H1N1 pandemic, while adults were responsible for seeding the infection in communities, children frequently drove community outbreaks.27 General practices may need to liaise with local schools and childcare facilities.

Infection prevention and control outside the practice

Practices need to ensure that provisions for these precautions are made for patients seen offsite (ie. home visits, visits to residential aged care facilities). Home visit kits must be appropriately stocked to manage patient needs and staff protection (eg. clinical waste disposal equipment).
6.3.6 Personal protective equipment

PPE is a first line of defence against the spread of viral infection and an integral component of quality healthcare.\textsuperscript{14, 28} Lessons learned from past events indicate that during a pandemic there is an increased demand for key supplies, often resulting in a shortage of essential equipment. Where possible, practices should have appropriate stocks of clinical and non-clinical supplies to ensure continued provision of essential patient services and staff safety in the event of a pandemic.

The SARS outbreak illustrated the critical importance of basic infection control precautions in healthcare facilities, with transmission of disease frequently associated with noncompliance with standard precautions.\textsuperscript{28} However, the 2009 H1N1 influenza pandemic highlighted uncertainty in the strength of evidence supporting the type of PPE, particularly face masks and respirators, in different settings. As new information becomes available this kit and related resources will be updated. Notwithstanding this uncertainty, subsequent studies do suggest that masks are likely to play a vital role in mitigating pandemic influenza spread.\textsuperscript{29}

General principles for PPE selection and use are that PPE should be:\textsuperscript{14}

- appropriate to the occupational risk
- acceptable and usable by healthcare personnel in their daily tasks
- practical regarding issues of cost, time and training to use.

From a patient perspective, approaching someone wearing PPE can be very confronting. The use of PPE should aim to minimise negative interaction with or effects on patients and their families.\textsuperscript{14}

**What PPE is required?**

PPE is not a substitute for hand hygiene and cough etiquette and should be used in conjunction with individual and organisational and environmental measures.

The PPE appropriate for a pandemic includes:

- gloves
- disposable plastic aprons
- surgical masks
- P2/N95 masks (respirators)
- goggles/glasses
- face shields
- gowns.

Disposable PPE should be used because the influenza virus can remain infectious on surfaces for long periods of time.
How much PPE should a general practice have in stock?

Practices are responsible for sourcing and providing PPE for staff and patients within the practice. While there is a national medical stockpile of PPE held by the Australian governments (national, state and territory), supplies are limited and access to the stockpiles should not be assumed.

Practices are encouraged to maintain a supply of hand-hygiene products, tissues and PPE for staff for the duration of a pandemic wave (approximately 4 weeks).

Practices need to consider if they have sufficient storage space to house PPE. If necessary, they may consider relying on existing networks (e.g., local pharmacy) to store supplies until required.

Stocks need scheduled checks, as some items are perishable. For example, P2/N95 masks have perishable elastic and an expiry period of 5–7 years.

Who should wear PPE?

Use of PPE depends on the risk of transmission of infection.

During normal practice, PPE is typically only used by staff who are in close contact with patients or potentially infectious/dangerous materials. However, during a pandemic, practices should plan to have PPE available for all practice staff.30

What about PPE for patients?

The primary tools for reducing transmission between patients are:

- distancing (based on effective triage)
- hand hygiene
- respiratory hygiene.

Practices could consider providing surgical masks to patients with an influenza-like illness.12 Patients wearing PPE must also be advised on how to remove and dispose of PPE safely.

For further information regarding the use of PPE, refer to Table3. Infection prevention and control measures (page 34).

6.4 Business continuity

Every business needs a business continuity plan. A pandemic business continuity plan sets out how to prepare for a pandemic and continue to operate during and after the disaster. General practices require the capacity to respond to the health needs of patients while ensuring both the protection of staff and business continuity – which may include periods without any external assistance or supplies. In the event of a pandemic, it may be days before any information, advice, assistance or awareness of an issue occurs and is acted upon by authorities.

As part of pandemic planning, the pandemic coordinator should schedule a meeting to develop the business contingency plan. The plan needs to consider:1

- identifying the critical functions that need to be sustained (including periods without supplies)
- identifying the personnel, supplies and equipment vital to maintain critical functions
- how to deal with staff absenteeism to minimise its impact on critical functions
- clear command structures, delegations of authority and orders of succession
- assessing the need to stockpile strategic reserves of supplies, material and equipment
- identifying services that could be downsized or closed
- assigning and training alternative staff for critical posts
- establishing guidelines for priority of access to essential services
• the training of staff in workplace infection prevention and control, and communication of essential safety messages
• ways of reducing social contact (eg. working from home and reducing the number of physical meetings and travel)
• the need for family and childcare support for essential workers
• the need for psychosocial support services to help workers to remain effective
• a plan for the recovery phase
• strategic planning of financial obligations
• communication of how the practice will run during a pandemic to staff, patients, clients and the community.

General practices need to identify their ‘break point’ – the point where an organisation can no longer maintain available services in a safe manner due to identified risk in workplace health and safety. This could be due to insufficient staffing levels through absenteeism or the disruption of services or resources on which the practice depends.

6.4.1 Human resources management

Practices need to develop practice-specific policies to support human resource management and the provision of safe healthcare to patients. When planning a pandemic roster, practices should factor in changes in situation for employees, and heightened distress during a pandemic, which might not be apparent during planning as circumstances and risk may change (eg. a staff member might become pregnant, the virus may have a high mortality rate), as well as restrictions on travel that may apply.

Additionally, as a significant number of women work in the healthcare sector (and may have dependent school-aged children), their ability to work during a pandemic may be affected if schools are forced to close.37

Other factors, such as availability of PPE, vaccinations and antivirals, also affect the willingness of staff to continue to work through a pandemic.38–40 A high proportion of general practice respondents to an Australian study into attitudes to pandemic influenza indicated that they would need access to vaccines and antiviral medication for themselves and for their families in order to consider treating patients.39

Workplace absenteeism due to staff illness and other factors during a pandemic is inevitable. Estimates suggest that businesses should plan for 30–50% staff absence at the peak of a pandemic.41 Establish contingency plans for continuation of critical business processes at less than full capacity. Identify the functions that are critical for practice survival and which staff members provide these functions.

A key to successfully navigating a business through a disaster is having some flexibility in the sharing of roles and tasks. Practices should consider:

• identifying staff members who can multitask to replace staff lost through absenteeism
• training staff in alternative roles
• making arrangements for staff to work from home (eg. GPs offsite can still write reports or perform telephone triage or patient telephone follow-up).

Rosters will need to be adjusted to cope with absenteeism due to fear, sickness, family needs or choosing to work in other capacities outside the practice.

Establish policies for employee compensation and sick leave absences unique to a pandemic (eg. non-punitive), including policies on when a previously ill practice staff member is no longer infectious and can return to work. Practices also need to discuss paying staff who elect not to work during a pandemic and how to avoid stigmatising those staff.42 In contrast, staff who elect to work during a pandemic can also be stigmatised as people may view them as being potentially infectious.

Practices also need to consider how to manage practice staff who have been exposed to pandemic influenza, are suspected to be ill or become ill in the practice (eg. infection control response, immediate mandatory sick leave). Practices should consider how they would manage employee evacuation.
6.4.2 Strategies to maintain workflow and manage surges

Practices should plan for possible practice modification (physical and procedural) during a pandemic. Strategies include:

- flexible worksite (eg. working from home) and flexible hours (eg. staggered shifts)
- e-health technologies (eg. e-consultation, e-prescribing, e-referrals)
- postponement of non-essential/routine procedures/consultations
- identifying potential additional staff sources such as local hospital casual staff, recently retired GPs and nurses, and volunteers through local/state public health and emergency services.

6.4.3 Relationships and sharing resources

Providing healthcare and managing a business during a pandemic requires coordination and collaboration. Where available, practices could consider identifying and developing arrangements with other local practices and businesses. For example:

- local pharmacists, to ensure continuity of prescriptions for patients during a pandemic, particularly for patients living in residential aged care facilities
- local hospitals
- pathology services
- allied healthcare professionals
- local veterinary hospitals, which could provide additional PPE during shortages.

These arrangements may be formal or informal, depending on local need.

6.4.4 Financial resourcing

The principle of ‘as low as reasonably practicable’ (ALARP) is a risk management concept that may be useful when assessing the optimum level of financial resourcing to allocate to preparedness activities (see Figure 5). This requires that a vigorous risk assessment be performed.

Figure 5. Risk versus expenditure based on the ALARP (as low as reasonably practicable) principle

6.5 Communication

Large-scale emergencies such as pandemics require the cooperation between a number of agencies, groups, staff and individuals. Having pre-established communication channels and positive working relationships allow orderly and organised flow of useful information.

Where staffing numbers permit, practices may consider appointing a communications coordinator in addition to the pandemic coordinator. The communications coordinator would be responsible for developing a pandemic communications policy and reviewing communication plans periodically.

The plan should include:

- identification of key contacts (with back-ups)
- the chain of communication (including suppliers and customers)
- processes for tracking and communicating business and employee status.

6.5.1 Communicating with patients

All practices should prepare a list of vulnerable patient groups. This should be regularly updated and be readily available for use in case of any type of emergency.

Practices should plan and prepare for open, realistic and continuing communication with the public. Patients need to know that their general practice is a reliable source of accurate, balanced and up-to-date information. Methods of communication will vary depending on the practice and patient groups. Practices should consider a range of communications methods during a pandemic to maximise reach to patients and to handle the extra pressure that is placed on communications during a pandemic. Examples include:

- posters and signs at the entrance to the practice and in the waiting room (refer to posters contained within the Pandemic toolkit)
- fact sheets and brochures (health department literature given to patients at reception may help manage expectations)
- attachments to patient receipts
- waiting room videos
- podcasts played over an audio system in the waiting room
- emails
- mail outs
- practice website (upload information to inform patients as to how the practice is working toward being pandemic-prepared and to notify patients of health alerts and health management/self-care)
- credible websites with relevant information
- on-hold telephone call waiting messages
- phone answering machine message
- external building signage
- internal building signage such as a pandemic ‘notice board’ dedicated to pandemic planning and updates.

These communication sources should all be ‘date stamped’ so that patients know how up-to-date the information is. Communication topics include home care, how to prevent infection, when to call for an appointment, when to go to the emergency departments and when not to go, frequently asked questions, community-based resources and practice policies.

Whatever form the communication takes, it must be clear, concise and consistent with factual information released by national and international public health organisations (ie. Department of Health and WHO). One suggested method is to provide regular updates that describe what we know, what we don’t know, what we are doing and when the next update will be released.
Alarmist framing of health threats may be counterproductive.43 When confronted with respected health authorities responding in an alarmist way, people may panic, feel overwhelmed or lose respect for authorities if the threat does not materialise. These responses all prevent effective ongoing communication and action.

Patients should be made aware of how they can obtain information and how they can protect themselves and their families if a pandemic should occur in their locality, what symptoms to look for, when to seek help, how to access home quarantine and isolation support services, and the use of and availability of antiviral medications and PPE (as appropriate).

Ensure all communication methods with your patients take into consideration:

- cultural backgrounds (language differences) and cultural diversity
- vision impairment
- hearing impairment
- lack of literacy and numeracy
- technological capabilities.

Also consider patients who might be outside the usual systems, such as the homeless.

Remember having up-to-date information is crucial; provide staff with regular updates regarding the pandemic, including:

- what is known
- what is unknown
- what is being done
- when the next update will be released.

6.5.2 Communicating with other healthcare providers, agencies and authorities

Engaging with local agencies and services during the pandemic planning phase should help develop positive working relationships during an outbreak of infectious disease. Lists (electronic and hardcopy) should be developed of important local contacts such as:

- state and territory health departments
- Primary Health Networks
- nearby general practices
- community health services
- local hospitals and pharmacies
- laboratories
- social support groups (including mental health support services, Aboriginal and Torres Strait Islander and culturally and linguistically diverse groups).

The contacts list should be available in both electronic form and hardcopy (in case of an IT outage). Some organisations may not have the capacity to operate during a pandemic. This may mean an increase in workload for general practices that do continue to operate. Planning for this enables practices to factor in potential patient surges. Alternatively, some may consider running flu clinics, which may decrease the practice's caseload.
Plan the type of communication strategy you will have with these organisations (eg. regular emails, phone) and list the points of contact in each.

Practices must coordinate planning for pandemics with state and federal governments. The Australian Government has developed a coordinated and consistent communications strategy for the health sector regarding avian and pandemic influenza. The communications strategy is designed to be flexible (to adapt and expand to accommodate new policy measures, or developments in the disease threat) and to ensure communications effectively address changing information needs. In addition, state and territory health authorities will communicate with the public and general practices about local arrangements such as flu clinics and vaccination services.

6.5.3 Social media applications

Social media includes social networking sites, Twitter, blogs, forums and podcasts (live video and audio). Social networking has made significant contributions to emergency response and recovery in global disasters (eg. information alerts and warnings). Australia’s per capita use of social networking is among the world’s highest.44

Practices could investigate how social media could help communicate with patients during a pandemic. Note there are significant considerations regarding the use of social media, including privacy issues; consequently any use of social media should be well planned and assessed for risk before implementation.

6.6 Clinical management and comorbidities

6.6.1 Preparing to manage cases of pandemic influenza

GPs play a major role in influenza epidemics and pandemics. Most people with an influenza-like illness are treated in general practice or by primary care doctors on duty in out-of-hours services.6

All staff need to be able to identify patients with possible influenza and institute the necessary alerts and patient management protocols. General practices may be the first to see a suspected pandemic influenza case. GPs need to know how to investigate and what to do with a suspected case.

Laboratory diagnosis is important in the early phase of a pandemic to determine the strain of influenza. Clinical staff need to know the processes of confirming cases of pandemic influenza, such as swab collection protocol. Discuss with the local pathology laboratory what processes the clinic staff need to know. This will include a review of collection and referral processes (eg. electronic communications).

Point-of-care testing may become more useful as current technology (eg. real-time polymerase chain reaction assays45) become more widely available and cost effective. If point-of-care testing is to be used, staff will need training in collecting samples and running the test.

Clinical staff should demonstrate an understanding of the roles of seasonal, candidate and customised pandemic vaccines during a pandemic, as well as the role of antiviral medication.

During a pandemic, clinical staff may be required to deliver vaccinations from a multidose vial. The pandemic coordinator needs to ensure that the pandemic plan includes policies around safe delivery of vaccines from a multidose vial. Guidelines for the use of multidose vials will be released by the Department of Health and the RACGP during the pandemic. The policies should consider principles of infection control, cold chain, anaphylaxis and cross-contamination.
6.6.2 Preparing to manage vulnerable groups and patients with comorbidities

General practices will need to manage much more than influenza during a pandemic. Patients who might otherwise be managed in hospital or at other specialist facilities may not be able to access other medical attention during a pandemic for reasons of increased caseload, quarantine or travel restrictions.

Certain patient groups are at higher risk – those with underlying chronic disease (e.g. type 2 diabetes, COPD, cardiovascular disease), Aboriginal and Torres Strait Islander patients, patients taking immunosuppressive medication, overweight and morbidly obese patients, pregnant women and young children.

Practices will need to identify at-risk patients and develop strategies to prevent infection and manage concurrent illnesses and conditions should infection occur.

It will be important to ensure patients taking medications for chronic conditions have adequate supplies. This may mean providing prescriptions for more medication or organising alternative methods for repeat prescriptions.

Consider that other healthcare providers (e.g. antenatal and maternal health clinics, Aboriginal Health Services) may not be able to provide patient care during a pandemic.

Practices could consider using telehealth services or phone consultations with other providers (e.g. other specialists and allied healthcare providers such as psychologists) to ensure continuity of care.

6.6.3 Preparing to manage patients at home

The practice also needs a policy for the management of home visits. This should cover:

- how the practice identifies its ability and willingness to provide patients with home visits during a pandemic
- under what circumstances and in what geographical area will the practice perform home visits
- which practice staff will attend to home visits (e.g. doctor or practice nurse)
- what equipment and PPE supplies will be required for a home visit bag
- how to manage disposal of clinical waste
- who will be responsible for checking and restocking the home visit bag
- how details will be recorded in the patient file.

6.6.4 Antivirals

In any given pandemic, the role of antivirals (if any) will be established once a pandemic has emerged and more knowledge is gained as to the particular virus strain.

There are ongoing discussions regarding the efficacy of antivirals in treating pandemic influenza. During a pandemic, practices are advised to refer to the AHMPPI produced by the Department of Health for recommended treatment options.

Antiviral drugs given after patients show influenza symptoms may lessen symptoms and shorten the time of illness by 1–2 days. Antiviral drugs can have side effects and can become ineffective. Hence, the benefits and risks need to be carefully considered. There are also ethical considerations around the use of antivirals; for example, if antivirals are in limited supply, who should receive them.

If antivirals were given for pre-exposure prophylaxis, they would only be provided to healthcare workers who have continuous frontline exposure to infectious cases.

The Australian Government has developed a stockpile of antivirals to be used in the event of a pandemic. The WHO and Australian Government will provide advice regarding recommended treatment options.
Generally, whether or not they are used depends on:

- the likelihood that an individual with pandemic influenza disease will experience a medical benefit if provided antiviral medication
- the effectiveness of antivirals in preventing infection (including any evidence of antiviral resistance), therefore transmission of infection
- the effectiveness of candidate and customised pandemic vaccine
- the protection offered by natural infection
- the availability of resources
- the anticipated length of time until the customised pandemic vaccine will become available.

During a pandemic, practices can obtain up-to-date information regarding new antiviral medications from state and territory health departments, the Department of Health and the RACGP.

6.6.5 Pandemic influenza vaccination

Although pandemic influenza vaccination is unlikely to be available early in an outbreak, have a system of checking with the Department of Health and state and territory health departments about when a vaccine does become available for distribution, as well as immunisation strategies.12

Practices need to know where and how to order supplies and any security issues for storage. Practices should also consider their storage capacity for vaccines. If practices do not have capacity, it is suggested that they explore alternatives for safely storing vaccines and ensure that cold chain management principles are observed.

A vaccine that gives good protection against a pandemic influenza virus can only be developed after the new strain of virus appears. It may take several months to produce a specific vaccination (called a customised pandemic vaccine) and initially it will be in short supply.

Early in a pandemic a candidate pandemic vaccine may be used. Candidate vaccines are based on a viral strain thought to have ‘pandemic potential’. The virus strain from which these types of vaccines are made is unlikely to be an exact match to the strain that eventually causes the pandemic.

However, they may provide enough cross-protection (or ‘priming’ of the immune system) to, in some people, prevent infection, decrease the severity of illness or reduce the number of doses of customised vaccine required.

The use of seasonal influenza vaccine can reduce the incidence of circulating seasonal influenza virus and therefore the risk of diagnostic confusion and demands on the health system during a pandemic. When a pandemic arrives in Australia, the availability of seasonal influenza vaccine may be limited. At this stage it will be necessary to prioritise the remaining stocks of seasonal influenza vaccine to high-risks groups.

6.6.6 Systems for data collection

During the planning stage, the pandemic leader should be responsible for establishing and maintaining systems to collect influenza data within the practice. The pandemic leader is also responsible for educating other clinicians and practice staff about the processes in place to collect this information. The data collected from the established symptoms will help provide an overall picture of affected areas (state and territory) and identify if there are any hot spots. This information may also help the government assess if current supplies are adequate and if additional supports are required.

The proposed system is that all year round, clinicians use the appropriate coding (as per their practice software) to flag patients with influenza-like symptoms. During the standby stage, it is suggested that practices use this data to create weekly reports which are de-identified (only numbers are required) and report to their RACGP state/territory faculty office on a weekly basis. The faculty can then collate this information and report to the relevant state or territory health department, who would report to the Commonwealth.
6.7 Mental health and psychological support

Typically the focus of pandemic preparedness and response is on physical health. However, disease outbreaks do not just affect the physical health of communities; pandemics can cause significant anxiety and stress and affect the mental health of patients and staff.

This can be exacerbated by disruption to people’s lives (e.g. travel restrictions, school closures, having to take time off work to care for others, supply shortages, financial strain) and difficulty accessing medical support at a time when practices may be overwhelmed by large numbers of patients presenting.

Anxiety and stress can lead to changes in behaviour for staff and patients. Anxious and stressed patients may place extra demands on clinical and non-clinical staff in both the practice and home care environments. Patients may become more demanding of reception staff, and training in management of difficult patients may be useful. Staff will also have their own needs and concerns during this time. Providing care to ill patients presents a range of potentially hazardous exposures for general practice staff. Some staff may not want to work during the pandemic and this may place greater loads on those who are working.

Identify groups (including staff) that may need psychosocial support during a pandemic and the support organisations that could assist (e.g. elderly and food support agencies, home nursing service, Red Cross calls, other government or local social assistance organisations). Also plan for referral pathways to culturally appropriate social services as needed.

See the Australian Psychology Society (APS) tip sheets for information about how to psychologically prepare for a disaster, available at www.psychology.org.au/publications/tip_sheets/disasters
7. Response

Response occurs at the onset of an emergency. The level of response is likely to vary during the pandemic. Initially pandemic cases may be sporadic, whereas during a peak, general practices may be inundated with patients with pandemic influenza.

General practices will be required to implement their response strategies just prior to and during a pandemic. The action(s) required will depend on the current pandemic stage as determined by the Commonwealth Government. These stages are aligned with the Commonwealth's AHMPPI.

The four pandemic response stages include the following:

<table>
<thead>
<tr>
<th>Response Stage</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Standby stage</strong></td>
<td>This stage is triggered when a warning of a pandemic has been received</td>
</tr>
<tr>
<td></td>
<td>by an appropriate authority. Practices should have an up-to-date</td>
</tr>
<tr>
<td></td>
<td>plan in place so they are ready to respond appropriately</td>
</tr>
<tr>
<td><strong>Initial action stage</strong></td>
<td>This stage is triggered when a declaration of pandemic influenza has</td>
</tr>
<tr>
<td></td>
<td>been made by an appropriate authority. Practices should put their</td>
</tr>
<tr>
<td></td>
<td>pandemic plan in place and respond to healthcare needs of the local</td>
</tr>
<tr>
<td></td>
<td>community</td>
</tr>
<tr>
<td><strong>Targeted action stage</strong></td>
<td>This stage is triggered when there is sufficient information</td>
</tr>
<tr>
<td></td>
<td>collected during the initial action stage to help refine the</td>
</tr>
<tr>
<td></td>
<td>pandemic response already implemented</td>
</tr>
<tr>
<td><strong>Stand down stage</strong></td>
<td>This stage is triggered when the Communicable Diseases Network</td>
</tr>
<tr>
<td></td>
<td>Australia (CDNA) advises that the pandemic has reached a level</td>
</tr>
<tr>
<td></td>
<td>where it can be managed under seasonal influenza arrangements</td>
</tr>
</tbody>
</table>

(Refer to the RACGP's Pandemic flu kit – Implementation guide.)

While this response section of this guide provides advice regarding the key response activities that practices should undertake during a pandemic, the Implementation guide provides guidance regarding the specific tasks to undertake during the relevant stages of the pandemic.

Responding to a pandemic means activating the plans made in the preparedness phase – in a manner and to a degree appropriate for the severity and intensity of the outbreak.

The quality of planning will affect the ability to respond. Strategies for implementation of pandemic plans are considered effective if they:

- are flexible
- include a range of pandemic preparedness approaches applicable to different situations and include logistics
- include communication aspects and are transparent
- include advance stockpiling (e.g., for drugs and equipment).
During the response stage the practice team will need to:

**Have**
- an appointed pandemic leader and pandemic coordinator
- a unified planned response led by the pandemic leader

**Know**
- the stage of the pandemic
- what the practice’s plan is and how to activate it
- that information can change rapidly during a pandemic

**Do**
- monitor the pandemic stage and determine the level of action required
- activate plans on a scale of a proportionate level
- use the quick reference guide and pandemic plan to guide the overall response

### 7.1 Proportional response

Early in a pandemic, everyone will be information-poor. The best source of up-to-date GP relevant information will be the Department of Health, the RACGP and state and territory health departments. They will provide information about:

- **what is known** about the virus early in the pandemic. This is likely to include mode of transmission, broad incubation period, broad clinical presentation and case definition, and preventative measures to reduce transmission

- **what is unknown** early in the pandemic. This may include age and clinical groups most affected, age groups with most transmission, ‘severity’ and case-fatality rates, precise case definition, complicating conditions, effectiveness of antivirals and other medications, and safety of any pharmaceutical interventions

- **what GPs should do** early in the pandemic. As more information becomes available it will be easier to tailor your response according to the pandemic, your patients and your practice.

To continue to provide locally relevant information, health authorities will need to be informed about frontline pandemic situations, including patient feedback and effectiveness of any interventions.12
7.2 Leadership and coordination

7.2.1 Plan a meeting and review roles

A team meeting for the practice should be scheduled when a pandemic alert is announced (during the standby stage). At this meeting, the practice’s pandemic plan should be reviewed and the pandemic leader should be appointed/verified. Appointment and/or verification of other roles depending on the practice size/plan, such as pandemic coordinator and/or communications coordinator should be clarified. All other staff should have a clear understanding of their roles and responsibilities.

Allocation of these roles will depend on the practice size and model. If it is a smaller practice, one person may be the pandemic leader and fulfil all ‘pandemic’ roles. Where possible, it may be valuable to have back-up staff in case the leader or coordinator is unable to work.

The members of the pandemic team should have remote computer access to the practice if possible.

7.2.2 Pandemic leader

The pandemic leader is responsible for the overall management of the practice’s pandemic response throughout the pandemic. This person needs a high level of skill, the ability to delegate and sound decision-making experience (eg. this person may be a senior GP clinician). The pandemic leader will provide direction regarding any modifications to day-to-day practice operations, staffing issues, and clinical policies and procedures with input from other team members. They will be responsible for making all final decisions.

The pandemic leader will need to identify where to obtain updated information and how this is communicated to relevant staff. They will work with state and territory health departments and other healthcare providers. Additionally the leader will provide local leadership in rational use of multi-sectoral resources.50

Depending on the size of the practice, the pandemic leader may also fulfil the role of the pandemic coordinator and communications coordinator.

Key activities for the pandemic leader include:

- providing support and advice to the pandemic coordinator during the development/revision of the practice’s pandemic plan
- establishing and maintaining systems to collect surveillance data
- overall management of staff safety, staffing and support
- ensuring infection prevention and control measures have been implemented
- activating triaging of patients
- authorising modifications to the practice
- facilitating post-pandemic review of response for staff.
7.3 Infection prevention and control

The goal is for staff to stay well, prevent cross-infection of patients and appropriately manage patients with pandemic influenza. At-risk staff should not be allocated febrile patients. Re-organise the clinic schedule to minimise cross-infection with minimal disruption of usual services. However, consider delaying non-urgent and routine non-essential consultations (eg. Pap smears) during a pandemic.

During a crisis, when staff are stressed and exhausted, infection prevention and control standards can slip. The importance of infection prevention and control procedures is critical during this time. GPs and clinical staff are encouraged to lead by example by taking a proactive approach and reinforcing the critical importance of essential infection prevention and control measures during a pandemic.

Review your current infection prevention and control plans in light of available pandemic information. Update or adapt protocols on:

- hand hygiene (eg. increase the number of alcohol-based hand rub dispensers)
- use of PPE for staff and patients, including providing clear signage on how and why PPE is used
- practice cleaning (including removal of clutter and non-cleanable items such as waiting room toys) and waste disposal (no-touch waste dispensers)
- use of quarantine and social isolation (eg. increasing home visits or practice modification to create separate waiting areas for influenza and non-influenza patients)
- assigning personnel to different tasks and patients (eg. one GP does not see any influenza patients, a practice nurse to see the ‘worried well’, one GP to do influenza home visits)
- throat swabbing
- vaccines (depending on availability, distribution and immunisation strategies).

Ensure that these protocols are clear, simple, easy to implement and are scaled appropriately to the level of risk. Display alert and education materials for staff and patients.

Febrile staff with respiratory symptoms should not come to work until regarded as non-infectious (based on current information about the influenza strain).

7.3.1 Personal protective equipment

General practice staff should use standard, droplet, contact and airborne precautions until the Chief Medical Officer directs otherwise.

All members of the practice team must be informed that PPE is available and where it is stored, as availability of PPE may influence the likelihood of work attendance during a pandemic.

Staff also need to know how to order more supplies and should establish contingency plans where primary sources could become limited. Consult with local state or territory health departments about access to potential stockpiles or communicate with alternative sources (eg. veterinary hospitals).

Schedule a team meeting and get staff to fit and check P2/N95 masks.

Ensure staff and patients understand how to put on, take off and dispose of PPE.
7.3.2 Vaccination

General practices may choose to encourage seasonal influenza vaccination of staff.\textsuperscript{35} Pneumococcal pneumonia is likely to be a significant complication of pandemic influenza. Practices should identify at-risk patients and offer pneumococcal vaccination.\textsuperscript{12}

Check regularly with the state or territory health department about pandemic vaccination availability and distribution and immunisation strategies. It is unlikely that vaccination will be available for the first 3–6 months of a pandemic.\textsuperscript{12}

7.3.3 Antivirals

Practices will need to check antiviral protocols with the state or territory health department.\textsuperscript{12} In some cases there may be targeted antiviral prophylaxis for contacts and frontline health workers.

7.3.4 Contact tracing

During a pandemic, vigilance in detection and immediate reporting of suspected cases of pandemic influenza is critical. A person is ‘classified’ a contact if they have been in close contact with a person who has been diagnosed with pandemic influenza and therefore has the potential of becoming infected. The exact definition of a contact depends on the nature of the illness and the phase of the pandemic.

It is important to be aware of the changes of ‘case definitions’ as a pandemic develops. The case definitions used by state and territory health departments will change at different phases of the pandemic, as knowledge about the disease increases.

Practice staff may be asked to supply to health authorities the name and contact details of patients who have been in close contact with a patient with suspected pandemic influenza. Patient confidentiality and privacy is a core element to the management of patient health information. However, during a pandemic confidentiality and privacy may be overridden by public health concerns and mandatory reporting requirements.
### Table 3. Infection prevention and control measures

<table>
<thead>
<tr>
<th>Goal</th>
<th>Type of infection control measure</th>
<th>Example of infection control measure in pandemic response</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Initial response</td>
</tr>
<tr>
<td>Reduce potential for spread of all infectious agents in a general practice setting</td>
<td>Standard precautions*</td>
<td>Standard precautions*</td>
</tr>
<tr>
<td>Reduce exposure to influenza for non-flu patients attending the practice</td>
<td>Practice measures to change patient movement and mixing</td>
<td>Patients self-identify prior to presentation (by phone) or on presentation (through self-report or assessment by front-of-practice staff)</td>
</tr>
</tbody>
</table>
| Reduce spread from suspected or confirmed influenza patients to other patients or general practice clinic staff | Patient measures | Potential or confirmed influenza patients asked to:  
- adhere to hand hygiene  
- follow respiratory and cough etiquette  
- wear surgical masks | |
| Reduce exposure to influenza in general practice clinic staff | Staff measures | In addition to standard precautions, clinical staff to take:  
- contact and droplet precautions: gown, gloves, surgical mask, eye protection  
- airborne precautions (P2/N95 masks) for aerosol generating procedures** | |
| | Staff management/resourcing | Procedures for managing staff might include:  
- advise staff to stay home if sick, including influenza like symptoms  
- identify staff at high risk of influenza complications and organise practice so these staff do not see influenza patients | |
| | | Cohort staff (dedicated influenza staff and non-influenza staff) if possible or practice preference | Cohort staff if possible or practice preference | Cohort staff |

*Standard precautions consist of:  
- hand hygiene, before and after every episode of patient contact  
- the use of personal protective equipment  
- respiratory hygiene and cough etiquette  
- the safe use and disposal of sharps  
- routine environmental cleaning  
- aseptic non-touch technique  
- appropriate handling of linen  
- reprocessing of reusable medical equipment and instruments

**Aerosol-generating procedures include:  
- nose/throat swabbing, nebulised medicine administration, airway suctioning, CPR diagnostic sputum induction, positive pressure ventilation via facemask, and endotracheal intubation.  
In a general practice setting, staff doing multiple cough-inducing procedures such as nose/throat swabbing on potential influenza patients might consider use of properly fitted P2/N95 mask, or frequent changes of well-fitting surgical masks. Routine throat examination is not an aerosol generating procedure.
7.4 Business continuity

7.4.1 Managing the workload

Workloads may change dramatically during a pandemic. At the start of and throughout the pandemic, practices may need to revise what work will be done in the practice and what work will be re-organised, delayed, shared or referred. Key tasks for all staff should be prioritised and any additional workforce capacity available should be identified. Revise your practice's triggers for shutting down operations. Home visit demands could increase (for patients in quarantine and patients with chronic illness) and practices will need to ensure sufficient resources are allocated to meet demand while protecting staff and patients. Where travel restrictions or fuel shortages are an issue, consider the use of alternative techniques such as phone, video or online consultations.

Where possible, practices may consider sharing the workload with other local practices. One practice could be designated for management of patients with fever and those with an influenza-like illness, and other clinics manage patients with a non-infectious illness. Where they operate, flu clinics may help reduce numbers of emergency department visits, although they may have limited impact on general practice workload.

7.4.2 Human resources

Review your human resource management plan in light of available pandemic information. Depending on the nature of the pandemic (ie. who is at most risk, morbidity and mortality rates), likely demand for services and practice circumstances, practices may need to update their plans.

Practices may consider assigning a dedicated staff member to oversee work rosters and manage risks to staff health and wellbeing. Medical staff may have a higher infection rate than the general population. Infection of staff may lead to further infections of their family members. In a ‘mild’ pandemic (in terms of mortality such as experienced in 2009), there may be little absenteeism. However, when faced with a ‘severe’ pandemic, staff who elected to work during planning may decide not to risk their and their family’s health.

If a surge is expected and additional staff are required (including volunteers), contact your indemnity insurer for temporary coverage of GPs and staff members.

All practice team members must be aware of the practice’s pandemic plan and have received training appropriate to their roles. Lack of knowledge of the pandemic plan has been associated with work avoidance. Let staff know that the plan is flexible; for example, for staff members who agreed to work during planning but now feel the risk is too high, alternative arrangements can be offered such as visiting the ‘well’, only managing injured patients or those with non-communicable disease, or working from home.

If the response to the pandemic requires staff to work more hours than usual, consider reducing exhaustion and burn-out by having shorter, more frequent shifts or having longer shifts with more time off in between.

7.5 Communication

Generally if the practice does not have a designated communication coordinator, the pandemic leader and/ or pandemic coordinator will implement the practice’s pandemic communication plan.

Ensure open, two-way communication channels between the pandemic team and patients, other staff, state and territory health departments, hospitals, local services (eg. pharmacies), local council, laboratory networks, suppliers, and community services.

Throughout the pandemic, the best source of up-to-date information for the practice will be the Department of Health and state and territory health departments. The RACGP, Primary Health Networks, and emergency services will also be valuable sources of information. This information needs to be streamlined to avoid duplication, confusion and overload. The practice can receive information through a variety of channels such as fax, email, web portals, SMS and radio announcements.
The communication or pandemic coordinator should gather information relating to:

- key public health messages and advice
- pandemic case definition and how to identify pandemic influenza
- what services patients should access from the practice
- what other services are available (eg. flu clinics, fever and vaccination centres)
- home quarantine, including how patients should monitor themselves and how they will be supported during this process.

This is an ongoing process. Depending on the nature of the pandemic and the stage of the outbreak, this information may need to be updated daily.

The pandemic/communication coordinator should relay relevant information to:

- the pandemic leader so that protocols can be revised to ensure best practice (eg. modifying PPE protocols based on up-to-date information on transmission)
- the practice team and patients through a variety of pre-arranged channels (eg. meetings, notice boards, practice website, SMS, email campaigns, phone calls)
- the community partners and networks.

Be aware of fear and anxiety, rumours and misinformation in staff and patients. General practices should aim to be a resource for the community – providing essential information about how people can stay well and what they should do if they are unwell. Aim to provide clear and accurate factual information as early as possible. Providing brief advice frequently maximises the value and usability of the information.

7.5.1 Communicating with patients

Inform patients about the practice’s policy for pandemics (eg. delaying or rescheduling non-urgent routine appointments such as Pap smears, repeat prescriptions, home visits and referral to flu clinics).

Display clear and appropriate signage to inform patients about any changes to patient flow at the front entrance.

When communicating with patients about the pandemic itself, there is a balance between providing too much and not enough information. Receiving appropriate amounts of information may improve adherence to infection control recommendations.

Despite adequate communication with patients, they may not act in ways which are expected or desired. People respond more strongly to factors present in their everyday environment than to official messages about what a pandemic is and what they should do.

7.5.2 Communicating with staff

Ensure open, two-way communication with staff. Hold regular practice meetings (face-to-face or via teleconferencing) so that staff can discuss all issues around the pandemic (including challenges, fears and stressors) and provide feedback on the practice plan. Staff may need to talk more privately about their issues as well.

Regularly acknowledging the efforts of staff during the ‘pandemic’ is important but is often neglected when there are other pressing needs. Mutual support is seen as a key aspect of successful emergency management.
7.6 Clinical management and comorbidities

Refer to Section 6.6 Clinical management and comorbidities for key preparedness activities.

General practices may face a surge of potential cases, contacts and worried people (the ‘worried well’) during a pandemic. Practices risk being overwhelmed with additional influenza work, the challenges of sick patients with other chronic and complex disease, as well as staff absenteeism from sickness, fear or family care needs.

Referral pathways are likely to change during a pandemic. Suspected cases may be sent to designated hospitals and patients who might usually be referred may need to be cared for in primary care.

7.6.1 Managing the ‘worried well’

Where staffing allows, consider designating a practice nurse to manage worried people who are not ill. Having clear patient education materials available across a number of platforms may reduce anxiety based on the unknown.

Point-of-care testing may not always be reliable but it may be useful for managing the worried well.

7.6.2 Managing patients in their own home

During a pandemic, it might not be possible or desirable to care for all patients at the practice location. Patients may need to be cared for in their home due to illness, frailty, disability, quarantine or anxiety over attending the practice and potentially becoming exposed to pandemic influenza. Some of these patients may require support from other social services (eg. mobile meal services).

State and territory health authority planning will differ across state borders, but each jurisdiction will nominate a level of service delivery and healthcare to patients within their own home. Practices need to know what assistance will be delivered to their patients.

There are established hospital-in-the-home (HITH) services across many parts of Australia that provide domiciliary acute care as a substitute for traditional inpatient care. These services may have a specific role during a pandemic either by assisting with non-influenza-related conditions or by managing some patients with influenza and its associated complications. Services are commonly linked to public hospitals and community health services with some private services in operation in metropolitan areas. Some general practices already play a role within these services, and familiarity with HITH may provide GPs with additional support during the response and recovery phases.

Patients with pandemic influenza may be avoided by their family and friends and therefore require additional support. This may depend on the clinical severity of the pandemic as well as other factors such as irrational fears. During the H1N1 pandemic, in the United States, H1N1 was the most stigmatised disease, more so than cancer or HIV/AIDS.55

Telephone follow-up could be used to manage patients with mild symptoms at home.

7.6.3 Managing patients with known or suspected pandemic influenza

Management will largely depend on:

- the clinical severity of the virus (eg. a mild virus may mean treating similar to seasonal influenza, whereas a severe virus may mean immediate referral to a designated setting)
- any present comorbidities, such as COPD
- the role of antivirals.
7.7 Mental health and psychosocial support

7.7.1 Patients in home isolation or quarantine

Patients being cared for at home or under home monitoring may feel particularly isolated and anxious. Practices should make regular contact with such identified patients, depending on the level of need. This may be as simple as a weekly phone call. They may also require supplies of regular medications, organisation of routine pathology testing, or instructions on how to access updates on the pandemic.

7.7.2 Needs of staff

In a severe pandemic, enormous pressure may be placed on practice staff as frontline workers. Those who are in close(r) contact with potentially infected patients are at increased risk of contracting influenza. There may be fear of contagion, particularly in relation to infecting their own children or other family members. Practice staff may be dealing with increased numbers of distressed or even angry patients. Extended working hours, insomnia and fatigue require management, particularly in pandemics of a longer duration.

Support for staff is important to enable efficient practice functioning. It is essential to remind all staff that their most important health priority is their own; they cannot help their patients or families if they fail to look after their own mental and physical wellbeing.
8. Recovery

The recovery phase is about getting services back on track. Therefore, what is required in the recovery phase will depend on the impact of the pandemic and on how far your practice deviated from usual operations during the pandemic. Activities to assist a community affected by a pandemic include a return to normal business with the restoration of emotional, social, economic and physical wellbeing.

Even in the case of low impact, there will be some areas in your pandemic plan that worked well and other areas that did not. There may also be individual differences in impact felt by staff members and patients. Evaluations of what worked and what didn’t are critical for capturing key lessons learned and recommendations for improvements; they help to identify what worked and the gaps and weaknesses.

- a process in place to assess the impact of the pandemic
- a designated staff member responsible for coordinating recovery activities and learnings
- how the practice has been affected
- how other stakeholders have been affected
- undertake operational debriefing sessions and incorporate learning for future responses
- provide measures to support practice staff and patients
- prepare the practice for the likelihood of further waves of the pandemic

As described earlier, the planning process is a fluid process. During the development of a revised plan, it is recommended that the pandemic leader and coordinator meet and discuss the staff’s learnings and, where appropriate, ensure they incorporate learnings into the planning process.

Additionally, during a pandemic, the RACGP and relevant government bodies will release additional resources to support practices in managing the outbreak of the virus. The content from these resources should also be incorporated into future planning processes.

While it is recommended that practices update their pandemic plan every February (which is in time for flu season), practices may wish to update their pandemic plan earlier (eg. during the recovery process). This will ensure that the learnings are fresh and can be easily incorporated into the new plan.
9. Glossary

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transmission-based precautions</td>
<td>Precautions in addition to standard precautions to protect against droplet, airborne and contact transmission</td>
</tr>
<tr>
<td>Airborne transmission</td>
<td>Transmission of infectious agents by air</td>
</tr>
<tr>
<td>Alcohol hand-wash</td>
<td>A waterless, alcohol-based hand-cleaning agent</td>
</tr>
<tr>
<td>Antivirals</td>
<td>Drugs given after patients show influenza symptoms that may lessen symptoms and shorten the time of illness by 1–2 days</td>
</tr>
<tr>
<td>Aseptic technique</td>
<td>A set of specific practices and procedures performed to minimise contamination and cross-infection</td>
</tr>
<tr>
<td>Asian flu</td>
<td>The pandemic outbreak that occurred in 1957 caused by the H2N2 subtype</td>
</tr>
<tr>
<td>ASPREN</td>
<td>The national GP disease surveillance network</td>
</tr>
<tr>
<td>Avian flu</td>
<td>Influenza A (H5N1) virus affecting mainly birds, but passable to humans after close contact with sick or dead birds or their secretions. It causes severe influenza-like symptoms and may result in death. Commonly known as ‘bird flu’</td>
</tr>
<tr>
<td>Business continuity plan</td>
<td>A plan on how to prepare for a pandemic and how to continue to operate during and after the disaster</td>
</tr>
<tr>
<td>Case definition</td>
<td>A set of criteria for deciding whether a person has a particular disease or health-related condition. Criteria for a case definition might include a clinical test or other characteristics</td>
</tr>
<tr>
<td>Clinical waste</td>
<td>Hazardous waste capable of causing infections</td>
</tr>
<tr>
<td>Contact</td>
<td>A person who has been associated with an infected person and had opportunity to acquire infection</td>
</tr>
<tr>
<td>Contact transmission</td>
<td>Transmission of an infectious agent by person-to-person contact (direct) or via a contaminated inanimate object (indirect)</td>
</tr>
<tr>
<td>Cough etiquette</td>
<td>Coughing-related behaviour that reduces the risk of respiratory infection transmission</td>
</tr>
<tr>
<td>Droplet transmission</td>
<td>Transmission of infectious agents in droplets</td>
</tr>
<tr>
<td>Epidemiology</td>
<td>The study of factors affecting the health and illness of populations, and the application of this study to the control of health problems</td>
</tr>
<tr>
<td>Distance barriers</td>
<td>Distance between patients and staff to prevent disease transmission</td>
</tr>
<tr>
<td>Haemagglutinin (HA)</td>
<td>A protein on the surface of a virus that assists the virus to enter the host respiratory cells</td>
</tr>
<tr>
<td>Hand hygiene</td>
<td>Hand-related cleaning behaviours aimed at reducing the risk of disease transmission</td>
</tr>
<tr>
<td>Hong Kong flu</td>
<td>The pandemic outbreak that occurred in 1968 and 1969 caused by the H3N2 subtype</td>
</tr>
<tr>
<td>Immunity</td>
<td>The ability of the body to respond to infection; it refers to both cell and antibody-mediated immune response</td>
</tr>
<tr>
<td>Incubation period</td>
<td>The time that elapses between exposure to an organism and the first appearance of symptoms and signs. For influenza, it is 1–3 days</td>
</tr>
<tr>
<td>Infectious</td>
<td>Capable of spreading disease or disease capable of spreading. Also known as ‘communicable’</td>
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<tr>
<td>Influenza</td>
<td>A highly contagious disease of the respiratory tract caused by any one of a number of types of influenza virus. It is typically a seasonal infection and is most common in winter. It is commonly known as ‘flu’</td>
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<tr>
<td>Term</td>
<td>Definition</td>
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<tr>
<td>Isolation</td>
<td>Separation of infected, or potentially infected, individuals from non-infected people for the period that they are infectious</td>
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<tr>
<td>Micro-organisms</td>
<td>Organism too small to be seen by the naked eye; they include bacteria and viruses</td>
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<tr>
<td>Morbidity rate</td>
<td>A measure of the number of people clinically affected by a disease in a defined population</td>
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<tr>
<td>Mortality rate</td>
<td>A measure of the number of deaths in a defined population</td>
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<tr>
<td>Neuraminidase (NA)</td>
<td>A protein found on the surface of a virus that facilitates the release of virus particles from infected cells</td>
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<tr>
<td>Novel virus</td>
<td>A new virus not previously known to cause disease in humans</td>
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<tr>
<td>P2/N95 mask</td>
<td>A mask that provides a facial fit to the wearer that ensures inhaled and exhaled air passes through the filter medium</td>
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<tr>
<td>Pandemic</td>
<td>A large-scale epidemic that spreads through human populations across a large region, or worldwide</td>
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<td>Pandemic coordinator</td>
<td>Person who has experience and knowledge allowing them to coordinate all practice activities related to pandemic planning</td>
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<tr>
<td>Pathogen</td>
<td>An infectious agent capable of causing disease</td>
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<tr>
<td>Personal protective equipment (PPE)</td>
<td>Gloves, gowns, aprons, goggles, face shields, masks that are worn to protect the wearer from infectious hazards</td>
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<tr>
<td>Prophylaxis</td>
<td>In infectious diseases, a therapeutic measure to prevent the development of a disease</td>
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<tr>
<td>Quarantine</td>
<td>The separation of people who have a disease or have been exposed to the disease with the aim of preventing the spread of the disease with subsequent infection of others</td>
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<tr>
<td>Social distancing</td>
<td>Reducing normal physical and social interaction in order to slow the spread of infection throughout society. Social distancing measures include school closures, cancellation of public events and encouraging people to stand or sit back from each other</td>
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<tr>
<td>Spanish flu</td>
<td>The pandemic outbreak that occurred in three waves in 1918 and 1919, caused by the H1N1 subtype; it was also known as ‘swine flu’</td>
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<td>Standard precautions</td>
<td>In infection control, methods and practices to prevent infection from blood and body fluids that are potentially infectious</td>
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<tr>
<td>Surgical mask</td>
<td>A barrier covering the nose and mouth used in infection control to protect mucous membranes from accidental splashes or sprays of secretions</td>
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<tr>
<td>Suspected case</td>
<td>A person who meets the case definition before confirmation of the diagnosis</td>
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<tr>
<td>Triage</td>
<td>The classification and allocation of treatment to patients presenting for treatment according to a system of priorities</td>
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<tr>
<td>Vaccines</td>
<td>A preparation used to provide immunity to a disease. Vaccinating members of a community will limit the impact of the disease in the community</td>
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<tr>
<td>Viral shedding</td>
<td>When a virus begins to multiply making it transmittable</td>
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<tr>
<td>Virulence</td>
<td>The power of a micro-organism to produce disease</td>
</tr>
<tr>
<td>Virus</td>
<td>An infectious agent that is only able to grow or reproduce inside a host cell</td>
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</tbody>
</table>
10. References

47. Paich HA, Sheridan PA, Handy J, et al. Overweight and obese adult humans have a defective cellular immune response to pandemic H1N1 Influenza a virus. Obesity (Silver Spring) 2013;21:2377–86.