From the manager

The advent of the flu season is the busiest time of the year for the Immunisation Program. This year there is a renewed focus on improving the uptake of influenza vaccination for groups at higher risk of developing serious and life-threatening complications from influenza.

In 2017, Queensland experienced one of the worst influenza seasons on record for the state with more than 56,000 lab-confirmed cases reported and over 6,000 public hospital admissions. Approximately 750 people admitted to public hospitals with flu required intensive care. The highest notification rates were in the elderly and children one to four years of age.

In response to last year’s severe season, the Queensland Government is making available funded vaccine for all young children aged 6 months to less than 5 years. The vaccine is being provided to this age group because influenza causes substantial illness in children and children’s social interactions and poor hygiene make them potential ‘super spreaders’ of influenza.

Free influenza vaccine continues to be available under the National Immunisation Program for:
- pregnant women at any stage of pregnancy
- Aboriginal and Torres Strait Islander people six months to less than five years of age and 15 years of age or older
- all people aged 65 years or older
- people aged six months or older with a medical condition that places them at increased risk of complications from influenza.

Queensland Health media and marketing campaigns will be encouraging everyone in the community to have their influenza vaccination this year. We will be emphasising the importance of influenza vaccination for people to protect themselves as well as others in the community who are not, or cannot be immunised.

Join us in promoting the importance of influenza vaccination across the community and make sure you get your influenza vaccination this year to protect yourself, your patients and other members of your community.

With best wishes!
Karen Peterson
Manager, Immunisation Program
Overview of the 2018 influenza program


Six different influenza vaccines

The Australian Government Department of Health is responsible for the procurement of all influenza vaccines for use in Australia's funded National Immunisation Program. This year, six different influenza vaccines have been procured by the Commonwealth for use in the funded influenza vaccination program targeting groups most at risk of developing serious and life-threatening complications from influenza.

The composition of the Australian vaccine is decided by the Australian Influenza Vaccine Committee in consultation with the World Health Organization. The following four strains will be contained within this year’s southern hemisphere quadrivalent influenza vaccines:

✓ A(H1N1): an A/Michigan/45/2015(H1N1) pdm09 like virus
✓ A(H3N2): an A/Singapore/INFIMH-16-0019/2016(H3N2) like virus
✓ B: a B/Phuket/3073/2013 like virus
✓ B: a B/Brisbane/60/2008 like virus

The trivalent influenza vaccines (for use in people 65 years and older) contain:

✓ A(H1N1): an A/Michigan/45/2015(H1N1) pdm09 like virus
✓ A(H3N2): an A/Singapore/INFIMH-16-0019/2016(H3N2) like virus
✓ B: a B/Phuket/3073/2013 like virus

The Queensland Health Immunisation Program is responsible each year for distributing Commonwealth funded vaccines to immunisation providers in Queensland who meet the eligibility criteria for identified risk groups.

Who in Queensland is eligible to receive funded influenza vaccine?

**Quadrivalent influenza vaccines:**

✓ All children from six months to less than five years of age
✓ Pregnant women at any stage of pregnancy
✓ All Aboriginal and Torres Strait Islander people six months to less than five years of age and 15 years of age or older
✓ All people aged six months or older with a medical condition that places them at increased risk of complications from influenza.

**High-dose or adjuvanted trivalent influenza vaccine:**

✓ All people aged 65 years or older
Different vaccines for different age groups

The six nationally funded influenza vaccines are registered for use in Australia for clearly defined age groups. Immunisation providers must take care to ensure the appropriate vaccine is offered to people according to age. Age restrictions apply to ALL registered vaccine brands. See the Influenza Immunisation Schedule 2018 below for details:

### Influenza Immunisation Schedule 2018

<table>
<thead>
<tr>
<th>Age group</th>
<th>Dose</th>
<th>Number of doses required</th>
<th>Which vaccine to choose?</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 months to &lt;3 years</td>
<td>0.25mL</td>
<td>(at least 4 weeks apart)</td>
<td>1 FluQuadri Junior™</td>
</tr>
<tr>
<td>≥3 years to &lt;9 years</td>
<td>0.5mL</td>
<td>(at least 4 weeks apart)</td>
<td>1 FluQuadri™ OR Fluartix Tetra™</td>
</tr>
<tr>
<td>≥9 years to &lt;16 years</td>
<td>0.5mL</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>≥18 years to &lt;65 years</td>
<td>0.5mL</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>≥65 years</td>
<td>0.5mL</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

**Note:** Two doses, at least 4 weeks apart, are recommended for people with certain immunocompromising conditions (e.g., haematopoietic stem cell transplant or solid organ transplant) receiving influenza vaccine for the first time post transplant (irrespective of their age).

For more information on the Australian Immunisation handbooks for healthcare professionals and the Australian Technical Advisory Group on Immunisation (ATAGI) advice for immunisation providers regarding the administration of seasonal influenza vaccines in 2018, visit www.immunise.health.gov.au/clinicians/immunisation-handbook.
Influenza vaccines for people 65 years and older

Each year, the Australian Government through the National Immunisation Program (NIP) offers the best available influenza vaccines to protect the Australian community, and will this year provide two new vaccines for people aged 65 years and older. The following information about these two vaccines has been provided by the Australian Government Chief Medical Officer, Professor Brendan Murphy:

Vaccines for people 65 years and older:

Two new age-specific trivalent influenza vaccines (TIVs) will be available free to those aged 65 years and older through the NIP.

The two vaccines are:
- Fluzone® High-Dose (Sanofi Pasteur) – which contains four times the antigen dose of the standard dose; and
- Fluad® (Seqirus) – which contains an adjuvant (MF59) which boosts the immune system’s response to the vaccine.

These TIVs will cover two influenza A viruses (the same A viruses covered by the QIVs) and one influenza B virus (a Yamagata-lineage virus). As in the QIVs, the influenza A(H3N2)-like virus has been updated from the composition of the 2017 vaccines. The TIVs will provide better protection for those aged 65 years and older, who are disproportionally affected by influenza A(H3N2). These vaccines have been specifically designed to create a greater immune response than the current QIVs to better protect this vulnerable age group.

The improved protection of these vaccines against influenza A(H3N2) is likely to outweigh any loss of protection against the alternative B strain not included in these vaccines. These two vaccines are seen to provide equivalent protection to each other, with either vaccine being suitable for use in a person aged 65 years and older. These vaccines are not licensed for administration to people aged less than 65 years.

The QIVs are still available for people 65 years and over through the NIP, however, vaccine experts recommend the specially-formulated TIVs over the QIVs for this age group.

Professor Brendan Murphy
Chief Medical Officer

2 March 2018

For further information about the 2018 influenza vaccines for people 65 years and over, read the article ‘Here’s what you need to know about the new flu vaccines for over 65s’ by Dr Allen Cheng, Professor in Infectious Diseases Epidemiology at Monash University, published in February 2018 on the independent news website, The Conversation.
In 2017, more than 91% of deaths in notified cases of influenza in Australia were people aged 65 years or older (National Notifiable Diseases Surveillance Systems).

**INCORRECT** in the risk of **heart attack** and **stroke** - even weeks after recovery.

**DECLINE** in general health and abilities may be permanent.

**ANNUAL VACCINATION** is essential to protect adults 65 and older against the flu.
Government funded influenza vaccine for children 6 months to less than 5 years

Young children can experience serious complications from influenza because their immune system is still developing and they lack previous exposure to influenza. Complications can include pneumonia, inflammation of the heart muscle and neurological manifestations including seizures and encephalopathy resulting in hospitalisation and in rare cases, death. Children at highest risk of complications from flu include those with pre-existing medical conditions. However, previously healthy children can also have severe complications.

Flu is one of the most common vaccine preventable causes of hospitalisation for children. In 2017, 595 children aged less than five years admitted to public hospitals in Queensland tested positive for influenza, 62 of these were admitted to an Intensive Care Unit.

We also know that children contribute greatly to the spread of the flu in the community because they’re often in close contact with people and surfaces.

Following the 2017 influenza season which delivered the highest number of influenza notifications in a year, the Queensland Government announced an investment of $1 million to introduce a new vaccination program in 2018 for children aged six months to less than five years of age. Countries such as the UK, Canada, the USA and Finland also have routine influenza vaccination programs for children less than five years of age.

Queensland’s program will provide free influenza vaccine for up to 300,000 children and will significantly improve protection for young children against influenza.

Influenza vaccines currently registered for use in persons aged ≥3 years of age and the ‘junior’ quadrivalent influenza vaccine registered for use in children from 6 months to <3 years of age will be available.

The Immunisation Program is providing a number of resources to assist immunisation providers with the promotion of the influenza vaccine for children this year. Resources include:

- Infographic ‘Why recommending influenza vaccination for young children is essential’ (see reproduction on the next page)
- Template letter for parents of children eligible for the free influenza vaccine.
- Template SMS messages for parents of eligible children.


Click on the button to the left to watch a video with Dr Stephen Lambert, Senior Medical Officer CDB, and Dr Sophie Wen, Paediatric Infectious Diseases Specialist, Lady Cilento Children’s Hospital recommending influenza vaccination for young children.
**Figure 1: Infographic for immunisation service providers (front)**

**Recommending influenza vaccination for young children is essential because...**

Children from six months to less than five years can now get the influenza vaccine for free through general practices and other childhood immunisation providers in Queensland.

**Flu can cause serious complications**

*At high risk are:*

**CHILDREN UNDER 5 YEARS**

- **Up to 13% of children under 5 hospitalised with flu are admitted to intensive care every year.**

- **More than half of children admitted to public hospital with flu are younger than 5 years.**

- **Most children being hospitalised or dying because of the flu were previously healthy kids.**

**Flu shots can reduce the number of kids having to go to emergency departments or hospitals by up to 70% each flu season.**

- **Children, including healthy kids, are more likely to catch the flu than adults and are 'super-spreaders' in the community.**

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1 Queensland public hospital influenza admission data 2013–2017
2 West Australian Influenza Vaccine Effectiveness Study 2009–2015
Five reasons why children should get the flu shot every year

- Protects children against the flu and serious complications, such as bronchitis and pneumonia, in some cases hospitalisation or even death.
- Protects children, their family and friends by helping contain the spread of flu.
- Is better than catching the flu. Even though it doesn’t provide 100% protection against the flu, if a child still catches the disease it can lessen its duration and severity.
- Is safe and has been given to millions of children worldwide.
- Avoids costs (for alternative work/childcare arrangements and medicine)

Flu is not worse than the common cold

Flu symptoms can include:
- Cough
- Headaches
- Body aches
- Sore throat
- Runny or stuffy nose
- Fatigue
- Chills
- Fever

Five easy steps to help fight the flu

1. Get a flu shot every year
2. Wash your hands thoroughly for at least 20 seconds or use an alcohol based hand rub
3. Cover your coughs and sneezes
4. Dispose of used tissues immediately, then wash your hands
5. Stay at home if you have flu symptoms
Vaccinations for pregnant women

It is recommended that pregnant women are vaccinated against influenza and whooping cough with every pregnancy. Pregnant women can access free influenza and whooping cough (dTpa) vaccine and should talk to their doctor about having the vaccine.

As the flu season approaches it’s timely to remind pregnant women to schedule their flu vaccination. Pregnant women are at risk of severe illness from flu at any stage of pregnancy. There is also evidence that pregnant women have a higher chance of developing complications if they get the flu.

Women can have the flu vaccine at the same time as the whooping cough vaccine which is strongly recommended in the third trimester of each pregnancy, but shouldn’t delay the flu vaccination so they can have both at the same time.

The Queensland Government has been providing free dTpa vaccine for pregnant women since mid-2014. By the end of 2017 over 100,000 doses had been administered to pregnant women in Queensland.

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**Influenza and pregnancy**

Vaccinating pregnant women against influenza gives a 3 for 1 benefit:

- protects the women during pregnancy and in the early months of motherhood
- protects the young infant by trans-placental antibodies
- protects the young infant by antibodies in breast milk.

Elizabeth McCarthy, Senior Lecturer, Department of Obstetrics and Gynaecology, University of Melbourne, Perinatal Centre, Mercy Hospital for Women
Ordering influenza vaccines

All influenza vaccine orders will contain the Influenza Immunisation Program Vaccine Order Form 2018 below and an information sheet to assist when ordering vaccines funded for the program.

Please remember:

✓ There are six different influenza vaccines for this year’s program (as per the Influenza Immunisation Schedule 2018 on page 3).

✓ Each vaccine has age restrictions. Always check the age of the individual before vaccination and refer to the Influenza Immunisation Schedule 2018.

✓ Use the Influenza Immunisation Program Vaccine Order Form 2018 to order your influenza vaccine.

✓ Count stock on hand for all brands of influenza vaccine supplied to you by the Immunisation Program.

✓ Influenza vaccine can be ordered weekly until the end of May 2018.

✓ Email your order to QHIP-ADMIN@health.qld.gov.au.

Figure 3: Influenza 2018 information about ordering influenza vaccine
### Influenza immunisation: Your questions answered

<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Will this year’s vaccine be more effective than last year’s?</td>
<td>Two higher immunogenicity trivalent vaccine (TIVs) formulations have been formulated to provide increased protection against influenza for people 65 years of age and over. Compared to the standard flu vaccine, the TIVs have been shown to better reduce rates of flu infection and seem to protect against pneumonia for people over 65 years of age. The quadrivalent vaccines (QIVs) designed for people under 65 years of age, provide protection against the four virus strains included in the 2018 southern hemisphere seasonal influenza vaccines. Because the vaccine has to be planned and manufactured many months ahead of the start of the flu season, the strains on which the vaccine are based may end up not being a good match with the strains of flu virus circulating. The influenza virus can mutate rapidly.</td>
</tr>
<tr>
<td>2. Why should people aged ≥65 years get the trivalent vaccines?</td>
<td>Studies have shown that standard flu vaccines don’t appear to be as effective in the elderly at protecting against flu and its complications. Infections among the elderly are more likely to require hospitalisation or cause serious complications such as pneumonia and heart attacks. Last year, of the 1,100 Australians who died from flu related causes, 90% were aged 65 year or over. In the 2018 program, for adults aged 65 years and older, two higher immunogenicity trivalent influenza vaccine (TIV) formulations (one a ‘high-dose’ vaccine and another containing an adjuvant) are available and funded under the NIP. These vaccines are Fluzone® (High Dose) &amp; Fluad®. These trivalent vaccines offer potential increased protection, especially against influenza A/H3N2 which is more common and severe in the elderly. The benefit is likely to offset a loss of protection against the alternative B lineage not in the vaccine. If either of these trivalent vaccines are not available, then a QIV should be used. The use of multiple types of vaccines (e.g. an adjuvanted TIV with a standard QIV has not been studied).</td>
</tr>
<tr>
<td>3. Is one of the trivalent vaccines recommended for people aged ≥65 better than the other?</td>
<td>The two vaccines have not been compared and both are effective. There is no preference for use between either of the two trivalent vaccines. Results from a clinical trial suggest Fluzone High Dose is 24% more effective in preventing influenza infection compared to standard TIVs. Fluad is estimated to be 25% more effective in preventing hospitalisation for influenza or pneumonia compared to standard TIVs.</td>
</tr>
<tr>
<td>Question</td>
<td>Answer</td>
</tr>
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<td>-------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>4. Can people aged 65 years and older get one of each of the funded trivalent vaccines?</td>
<td>People should only be given one of the trivalent vaccines. One dose of either trivalent vaccine will be funded for this age group.</td>
</tr>
</tbody>
</table>
| 5. Can people aged 65 years and older have both trivalent and quadrivalent vaccines? | Experts recommend the TIVs for this age group through the NIP. Only one dose of vaccine is funded under the NIP.  
There is no recommendation to give a QIV to people who have received an "enhanced" influenza vaccine, and the use of multiple types of vaccines in one season has not yet been studied. While not recommended, administration of both vaccine types to an individual is not contraindicated and there are no serious safety concerns.  
If a person receives a TIV first and then requests a QIV, they will need to purchase the second vaccine themselves. |
<p>| 6. When will the NIP influenza vaccines be available? | The National Immunisation Program funded influenza vaccines will be available from mid-April.                                                                                                               |
| 7. Should a second dose be administered later in the flu season?       | Protection is generally expected to last for the whole influenza season. One dose is funded under the NIP.                                                                                              |
| 8. Can the two new trivalent influenza vaccines (available for people aged 65 years and older through the NIP) be given to people under 65 years of age? | No. The trivalent vaccines, Fluzone® and Fluar® are not registered for use in Australia with people under 65 years of age.                        |
| 9. What strain of influenza is not included in the trivalent vaccines for people aged 65 years and older? | An Influenza B strain: a B/Brisbane/60/2008 like virus is not included in the trivalent vaccine for the southern hemisphere.                   |
| 10. Do the trivalent vaccines cause more AEFIs?                        | Swelling, redness and pain at the injection site are more common after vaccination with Fluzone High-Dose and Fluad compared with standard TIV. The majority of the reactions are mild or moderate in severity. Despite a higher rate of injection site reactions, severe or serious adverse events are not expected at a higher frequency following administration of Fluzone High-Dose and Fluad. |
| 11. If a person aged 65 years and older has already paid for and received a quadrivalent (at a chemist or for travel prior to the funded trivalent being available), can they receive a funded trivalent vaccine as well? | The National Immunisation Program will fund one dose of influenza vaccine for people aged ≥65 years.                                                                                                    |</p>
<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>12. Will the flu vaccines released in the southern hemisphere cover the strains in the northern hemisphere?</td>
<td>Depending on the time of year and destination, travellers may be exposed to the influenza virus at any time throughout the year. The influenza season in the southern hemisphere is mostly during the months of April to September; in the northern hemisphere, influenza activity occurs during October to April. Influenza activity has been reported throughout the year in the tropics. Travellers may be exposed to the influenza virus while travelling regardless of their destination. Travellers in large tourist groups or involving travel in confined circumstances for days to weeks, such as on a cruise ship, are at particular risk of influenza. Infection can be acquired either before departure or from travel to areas of the world where influenza is currently circulating. Influenza vaccination is recommended if travelling during the influenza season, especially if it is known before travel that influenza is circulating in the destination region. Current southern hemisphere influenza vaccine is available for about 10 months of the year, from March through to January–February the following year (when the vaccine expires). This vaccine can be used at any time to protect travellers, if they have not already received an influenza vaccine.</td>
</tr>
<tr>
<td>13. Which influenza vaccines are on the NIP?</td>
<td>There are six nationally funded influenza vaccines available for use in Australia. These are: FluQuadri Junior™; FluQuadri™; Fluarix Tetra™; Alfuria Quad™; Fluzone™; Fluad™. See the <em>Influenza Immunisation Schedule 2018</em> for a summary of the vaccines available through the NIP for specific age groups.</td>
</tr>
<tr>
<td>14. Can pregnant women receive the QIV?</td>
<td>Yes. It is recommended pregnant women receive an influenza vaccine in every pregnancy, preferably prior to the start of the influenza season. The 2018 influenza vaccine can be given to a pregnant woman even if a 2017 influenza vaccine has been given earlier in the current pregnancy.</td>
</tr>
<tr>
<td>15. Why are we providing free vaccine to children aged 6 months to less than 5 years of age?</td>
<td>After 2017 being the worst flu season in recent years, Queensland Health is implementing a new vaccination program which provides free flu vaccines to all Queensland children aged six months to less than five years. The free vaccine will be made available through general practices and community immunisation providers.</td>
</tr>
</tbody>
</table>
For more information, see the National Centre for Immunisation Research and Surveillance fact sheets:

Influenza FAQs

Influenza information for immunisation providers