University of New South Wales Vaccine & Infection Research Lab (UNSW VIRL)
Launch Key Messages - To aid launch spokespeople to respond to external inquiries

Last updated: March 02, 2017

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Mission statement: to reduce the immunisation gap between adults and children through research, teaching and advocacy, with a special focus on the elderly, high risk and vulnerable populations.

OVERARCHING KEY MESSAGES

1. The University of New South Wales Vaccine and Infection Research Lab (UNSW VIRL) is a new, national research centre of excellence being launched today (March 28, 2017) that coincides with the publication of a new report, detailing the latest adult vaccination data in the Medical Journal of Australia.

2. UNSW VIRL is designed to tackle the serious issue of vaccination in high-risk groups, low adult vaccination rates, and reducing the immunisation gap between adults and infants in Australia, through research, teaching and advocacy.

3. An estimated 3.8 million Australian adults are missing out on free, life-saving vaccinations, including 51 per cent of adults aged 65 years and above eligible for NIP funded vaccines for influenza and pneumococcal disease.1

4. Experts are urging Australians aged 65+ and those eligible for vaccination to speak to their GP or pharmacist about protecting themselves against vaccine-preventable diseases.

MJA Research Paper

- A report is set to be published in the Medical Journal of Australia (MJA) today (March 28, 2017) entitled ‘Vaccine myopia: adult vaccination needs attention too.’1
- Dr Rob Menzies’ paper, ‘Vaccine myopia’, calls for greater recognition of the importance of vaccination for all Australians, not just children.1
- 3.8 million Australian adults are missing out on free, life-saving vaccinations.1
  - More than 90 per cent of Australian children are fully vaccinated, with all recommended vaccines at 12, 24, and 60 months of age.2
  - Only one-in-two Australian adults (51 per cent) are receiving their Government-funded vaccinations each year, compared to 93 per cent of Australian children, and 73 per cent of Australian adolescents.3
- Each year, an estimated 4.1 million Australians remain under-vaccinated4, including:
  - 1.8 million Australians aged between 6-to-64 years of age with medical conditions;4
  - 1.7 million Australian adults aged 65 years and above;1
  - 240,000 Indigenous adults;1
  - 160,000 adolescents.1
- Recommendations for vaccination by a health professional are the biggest motivating factor for vaccine uptake among the elderly.3
- Key concerns regarding vaccination include concern surrounding vaccine effectiveness and side-effects, and the perceived severity of the diseases that the vaccines prevent.1
• Effective measures for increasing vaccination coverage rates among the elderly include educational interventions, reminders for both patients and vaccine providers, and incentives.\(^4\)

**UNSW VIRL**

• The University of New South Wales Vaccine and Infection Research Lab (UNSW VIRL) is a new, national research centre of excellence designed to tackle the serious issue of vaccination in high-risk groups and low adult vaccination rates, and to reduce the immunisation gap between adults and infants in Australia, through research, teaching and advocacy.

• UNSW VIRL comprises internationally-recognised, academic leaders in immunisation and vaccinology research from The School of Public Health and Community Medicine, The University of NSW (SPHCM UNSW).

• The organisation primarily focuses on adult immunisation, particularly high risk and vulnerable populations, including the elderly, migrants, refugees, Aboriginal and Torres Strait Islander people, those with immunosuppression, travellers, armed forces and health workers.

• UNSW VIRL’s research constitutes clinical trials, epidemiology, mathematical modelling, health economics, big data and data linkage, social and behavioural research, and policy and evaluation.

**Adult Vaccination**

• Vaccines are the best way to prevent the spread of potentially life-threatening infectious diseases.\(^5\)
  
  o Immunisation is not only critical to protect individuals, but also those with whom they come into contact.\(^5\)
  
  o Before vaccines were introduced to Australia, thousands died each year from the spread of infectious diseases we now consider rare.\(^5\)

• Fifteen diseases have vaccinations currently recommended (but not all funded) for Australian adults.\(^6\)

• The Australian National Immunisation Program (NIP) provides recommended vaccines, free-of-charge, to children, adolescents, adults and the elderly.\(^7\)
  
  o The Immunise Australia Program (IAP) funds adult vaccines for influenza (flu), pneumococcal pneumonia and shingles, to protect millions of Australian adults from vaccine-preventable diseases.\(^7\)

• The 2015 Federal Budget announced the expansion of the Australian Childhood Immunisation Register (ACIR) to cover all ages.
  
  o This is a step in the right direction, which will help to gather population-based data, deliver reminders, and administer incentives.\(^1\)
  
  o Moving forward this year, adult vaccination rates call for better support and resources through policy and practice.\(^20\)

• Vaccinations are provided based on disease burden analysis, vaccine effectiveness, safety, cost, and overall health benefit to the community.\(^8\)

**NIP-funded adult-vaccine-preventable diseases**

**Influenza**

• Each year, influenza is responsible for an estimated 3,000 deaths and 13,500 hospitalisations among those aged over 50 years.\(^8\)

• Symptoms of influenza often include fever, headache, muscle aches, coughing, sneezing and a runny nose.\(^8,9\)

• Influenza is often spread by infected individuals through coughing or sneezing.\(^8,9\)

• Those infected are able to spread the infection most easily to others within the first three-to-five days of their infection, but can be infectious from the day prior to their visible symptoms.\(^9\)

• The influenza vaccine is an annual vaccine recommended for all Australian adults.\(^10\)

• The National Immunisation Program (NIP) funds influenza vaccination for the elderly (65 years and above), Aboriginal and Torres Strait Islander people over 15 years of age, pregnant women, and adults with medical conditions that increase their likelihood of contracting a severe influenza infection.\(^11\)
Pneumococcal disease

- Pneumococcal disease is an infection caused by the *Streptococcus pneumoniae* bacterium.\(^\text{12}\)
- Infection with these bacteria can result in different diseases, including sinusitis (sinus infection), otitis media (middle ear infection), and other, more severe, potentially life-threatening diseases (known as invasive pneumococcal disease), including meningitis (infection of the membranes surrounding the spinal cord and brain), pneumonia (infection of the lungs), and bacteraemia (blood stream infection).\(^\text{12,13}\)
- Pneumonia is the most common, severe disease caused in adults.\(^\text{14}\)
- Pneumococcal disease is customarily spread when an infected person coughs or sneezes.\(^\text{12,13}\) The bacteria are also known to live in the throats of some healthy people without causing disease – bacteria which can however, be spread to others who may subsequently develop the disease.\(^\text{15}\)
- In 2012, Australia had 621 notified cases of invasive pneumococcal disease (IPD) among those aged 65 years and above, including 88 deaths.\(^\text{16}\)
- Pneumococcal pneumonia vaccination is funded under the NIP for non-Indigenous Australians at 65 years of age, and for Aboriginal and Torres Strait Islander adults from 50 years of age.\(^\text{11}\) Vaccination is also recommended for adults with medical conditions that increase their likelihood of contracting a severe infection; this is, however, not funded on the NIP.\(^\text{15}\)

Shingles (herpes zoster)

- Shingles, or herpes zoster, is a painful, blistering rash of the skin, that usually lasts between 10 and 15 days.\(^\text{17,18}\)
- Other symptoms may include fever, headache, and flu-like symptoms.\(^\text{17,18}\)
- The virus responsible for shingles is the varicella-zoster virus, the same virus that causes chickenpox.\(^\text{17,18}\)
- After a chickenpox infection, the virus may live dormant in an infected person’s nervous system, and be reactivated at a later date, resulting in shingles.\(^\text{17,18}\)
- The most common complication of shingles is chronic neuropathic pain (nerve pain), known as post-herpetic neuralgia (PHN).\(^\text{17,18}\) This pain can be severe, and persists for more than three months after the rash begins.\(^\text{17,18}\) The likelihood of PHN developing as a complication of shingles increases with a person’s age.\(^\text{17,19}\)
- Other possible complications include scarring, eye involvement, and secondary infections at the sight of the rash.\(^\text{18}\)
- The shingles vaccine can be administered to those aged 50 years and over if they are not immunocompromised.\(^\text{17}\)
- Vaccination for shingles is funded under the NIP for Australians at 70 years of age.\(^\text{11}\)
### Other adult vaccinations recommended in the National Immunisation Handbook *

<table>
<thead>
<tr>
<th>Disease</th>
<th>Abbrev.</th>
<th>All Adults</th>
<th>Elderly</th>
<th>Indigenous</th>
<th>At-risk</th>
<th>Pregnancy</th>
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<td></td>
<td></td>
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<td>Diphtheria, tetanus, pertussis</td>
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References