The Australian Immunisation Handbook, 10th Edition

What’s new – 2015 Update

This slide set has been developed by the staff of NCIRS for education and teaching purposes

Prepared 1st September 2015
Presentation outline

• Introduction
• What’s new?
  – Part 2 – Vaccination procedures
  – Part 3 – Vaccination for special risk groups
  – Part 4 – Vaccines listed by disease
• Links to additional resources
• Disclaimer and Copyright
Introduction – the *Handbook*

- *The Australian Immunisation Handbook* is a clinical practice guideline for health professionals regarding the safe and effective use of vaccines in Australia

- It contains information and clinical advice on the use of all vaccines available in Australia

- It is published by the Australian Government Department of Health
  - Prepared by ATAGI (supported by NCIRS)
  - Endorsed by the NHMRC
Introduction – 10th Edition

- The 10th Edition Handbook
  - originally published in March 2013
    - available as hardcopy and online
    - included two NIP schedule cards
    - included vaccines registered from June 2012

- From 2014, publication of annual updates of the 10th Edition Handbook
  - ensures up-to-date information on the use of vaccines
Updates to 10th Edition *Handbook*

- Updates published annually (unless additional updates required for specific reason)

- 4 updates published to date:
  - 8 May 2013 (single error rectified)
  - 17 January 2014
    - 2014 update – *no changes* to recommendations
  - 27 March 2015 (pertussis chapter only)
  - 22 June 2015
    - 2015 update – *changes* to recommendations
The most recent update – 2015

- This slide set outlines updates made in the 10th Edition *Handbook* published in 2015. These include:
  - The 2015 annual update – updates to 24 chapters
    - minor factual changes or clarifications *not* described in this slide set
  - Separate update of Chapter 4.12 Pertussis

Updates to the 10th Edition *Handbook* published in 2015 are published **online only**

Where to go for more details

Immunise Australia website:

www.immunise.health.gov.au
On the Immunise Australia website

• You will find the HTML version of all chapters

WELCOME TO THE AUSTRALIAN IMMUNISATION HANDBOOK 10TH EDITION (UPDATED JUNE 2015)

Part 4 Vaccine-Preventable Diseases

• 4.1 Cholera
• 4.2 Diphtheria
• 4.3 Haemophilus influenzae type b
• 4.4 Hepatitis A
• 4.5 Hepatitis B
• 4.6 Human papillomavirus
• 4.7 Influenza
• 4.8 Japanese encephalitis
• 4.9 Measles
• 4.10 Meningococcal disease
• 4.11 Mumps
• 4.12 Pertussis (updated in March 2015, note: new recommendations, updated information and evidence)
• 4.13 Pneumococcal disease
• 4.14 Poliomyelitis
• 4.15 Q fever
• 4.16 Rabies and other lyssaviruses (including Australian bat lyssavirus)
• 4.17 Rotavirus

A downloadable PDF update available from October 2015
On the Immunise Australia website

- You will also find Online summary of all updates, by date

22 June 2015

Key updates made to the 10th edition Handbook in June 2015 are listed below by chapter, including chapter sections and subsections. In addition to the updates listed below, other minor amendments have been made to some chapters to improve clarity, consistency and accuracy; these changes are not specifically noted.

References have been removed, updated or introduced where required.

Note: These updates are available online only in HTML format. A PDF of the Handbook will be available shortly.

2.1 Pre-vaccination

2.1.4 Pre-vaccination screening

Information on vaccination of infants born to mothers receiving immunosuppressive therapy during pregnancy added to Table 2.1.1: Pre-vaccination screening checklist and Table 2.1.2: Responses to relevant conditions or circumstances identified through the pre-vaccination screening checklist.

2.1.5 Catch-up

Link to resource for international immunisation schedules updated.

Information added on the acceptable minimum intervals and age restrictions for primary hepatitis B vaccine doses in infants and appropriate action if these are not met, including in Table 2.1.7: Minimum acceptable dose intervals for children <10 years of age (refer also to 4.5 Hepatitis B).
So, **what’s new** in the 2015 update of the 10th Edition *Australian Immunisation Handbook*
PART 2 – VACCINATION PROCEDURES

2.1 Pre-vaccination
2.2 Administration of vaccines
2.3 Post-vaccination
2.1 Pre-vaccination

- Pre-vaccination checklist (Tables 2.1.1 and 2.1.2) now includes ‘infants born to mothers receiving immunosuppressive therapy during pregnancy’

(Note: further information also in Chapter 3.3 Groups with special vaccination requirements)
2.1 Pre-vaccination: Catch-up

• New information added relating to catch-up, including:
  – New resource for international schedules
  – New general principle added relating to administering two vaccines containing the same antigen
  – Catch-up tables and text update to reflect new recommendations relating to a number of vaccines
    • Hepatitis B
    • Pertussis
    • Meningococcal
    • Zoster

Details in following slides
Catch-up ... cont.

Hepatitis B
- Clarification of minimum intervals and upper age limits in tables and supporting text (including relevant ACIR requirements)

Pertussis
- Updated advice in line with new recommendation for booster dose at 18 months of age (see also slide 25)
  - 5 doses of DTPa-containing vaccine now recommended for children <10 years of age
  - If 18-month booster dose (dose 4) is given after the child is 3.5 years of age, the 2nd booster dose at 4 years (dose 5) is not required
  - Children ≥18 months to ≤3.5 years of age who missed booster dose at 18 months should receive one now
Catch-up ... cont.

Meningococcal (see also slide 38)
- New advice for meningococcal B vaccine (MenBV; Bexsero)
- New advice on minimum age and intervals for meningococcal C conjugate vaccines (including relevant ACIR requirements)
- Clarification on the use of Hib-MenCCV combination vaccine in catch-up circumstances

Zoster
- Revised recommendations for zoster vaccine (see also slide 44)
2.2 Administration of vaccines

• Amendments to advice relating to the administration of vaccines, including:
  – Advice that it is necessary to shake vials, pre-filled syringes or reconstituted vaccines prior to administration
  – Clarification on the need to re-administer a vaccine if given by an alternative route
  – Clarification that prophylactic administration of paracetamol is only required for MenBV (Bexsero)
    (see also [slide 38](#))
2.3 Post-vaccination

- Amendments to advice relating to care and adverse events following immunisation
  - Further advice on when prophylactic administration of paracetamol is required (see also slide 38)
  - Information on complex regional pain syndrome added
PART 3 – VACCINATION FOR SPECIAL RISK GROUPS

3.1 Vaccination for Aboriginal and Torres Strait Islander people
3.2 Vaccination for international travel
3.3 Groups with special vaccination requirements
3.1 Vaccination for Aboriginal and Torres Strait Islander people

• **New recommendation** for use of influenza vaccine
  – Annual influenza vaccine is recommended for all Aboriginal and Torres Strait Islander children

• particularly children 6 months to <5 years and ≥15 years of age who are at greater risk of influenza and its complications than non-Indigenous children of the same age

(See also [slide 32](#))
3.2 Vaccination for international travel

- Amendments made to reflect new advice relating to a number of disease chapters:
  - **Japanese encephalitis** ([see also slide 35](#))
    - New information on disease risk for travellers added throughout chapter
    - Updated information on ages of use, dosing schedules and booster requirements
Vaccination for international travel ... cont.

• **Meningococcal** *(see also slide 39)*
  – Advice on the use of the meningococcal B vaccine (MenVB; Bexsero)
  – Updated information on ages of use, dosing schedules and booster requirements for quadrivalent meningococcal vaccines

• **Influenza**
  – Information on intradermal vaccine formulations removed as no longer available in Australia
3.3 Groups with special vaccination requirements

- Women planning pregnancy, pregnant or breastfeeding, and preterm infants
  - **New recommendations** for dTpa vaccine for pregnant women in the third trimester of EVERY pregnancy (see also slide 26)
  - Advice on the use of meningococcal B vaccine (MenBV; Bexsero) in pregnancy added
  - Information included on vaccination of pregnant women receiving immunosuppressive therapy
Groups with special vaccination requirements ... cont.

- Vaccination of immunocompromised persons
  - Amendments to reflect new advice relating to a number of disease chapters:
    - Influenza (see also slide 34)
    - Japanese encephalitis (see also slide 36)
    - Meningococcal disease (see also slide 38)

- Vaccination of persons at occupational risk
  - Advice on the use of meningococcal B vaccine (MenBV; Bexsero) added
PART 4 – VACCINE-PREVENTABLE DISEASES

1. **Diphtheria**
2. **Hib**
3. **Hepatitis A**
4. **Hepatitis B**
5. **Human papillomavirus**
6. **Influenza**
7. **Japanese encephalitis**
8. **Measles**
9. **Meningococcal disease**
10. **Pertussis**
11. **Pneumococcal disease**
12. **Poliomyelitis**
13. **Rabies and other lyssaviruses**
14. **Tetanus**
15. **Yellow fever**
16. **Zoster**
Diphtheria, Tetanus and Pertussis

- New recommendation on the use of DTPa vaccine formulation:
  - Re-introduction of a booster dose DTPa-containing vaccine at 18 months of age
    - To minimise likelihood of infection before the 4-year booster dose
    - Funded on the NIP from October 2015
    - Catch-up advice for this dose also updated (see also slide 14)
Diphtheria, Tetanus and Pertussis ... cont.

- New recommendation for the use of dTpa vaccine formulation during pregnancy:
  - Single dose in the third trimester of EVERY pregnancy (optimally between 28 and 32 weeks)

What’s the evidence?

- Greatest burden of severe illness and deaths due to pertussis is in too young to receive pertussis vaccine
- Pertussis vaccine at least 7 days before delivery shown to reduce pertussis in infants less than 3 months of age by 90%
- Mechanism via the transfer of maternal antibodies in utero
- No increased risk of adverse pregnancy outcomes reported in countries routinely vaccinating pregnant women against pertussis

Funded by all state and territory health departments as of June 2015
- If dTpa not received during pregnancy give post-partum
  - vaccination in third trimester recommended in subsequent pregnancies (even if closely spaced)

- Single dose for adult household contacts/carers of infants <6 months of age if more than 10 years since last dose
  - at least 2 weeks before close contact to reduce transmission of pertussis to the newborn
**Haemophilus influenzae type b (Hib)**

- Information on use of the Hib-MenCCV combination vaccine added
  - Used on the NIP for 12-month dose since July 2013
  - General catch-up advice also updated *(see also slide 15)*

**Hepatitis A**

- Clarification of lifestyle related behaviours that increase the risk of acquiring hepatitis A
Hepatitis B

• Clarification of age requirements for primary hepatitis B vaccine doses
  – Best practice minimum age for the final dose of the primary course is ≥24 weeks
  – If given at <24 weeks but ≥16 weeks of age, not necessary to repeat the dose provided the minimum intervals between doses are met

• Clarification on the implications if minimum interval between primary doses shorter than recommended
Clarification on the clinical course of action for sexual contacts of persons with hepatitis B

- Susceptible sexual partners of HBsAg-positive persons should be offered post-exposure HBIG and hepatitis B vaccination within 14 days of the last sexual contact.
Human papillomavirus (HPV)

• Information on next-generation HPV vaccines and schedules under development were added, including:
  – vaccines which protect against 9 HPV types (registered by the TGA)
  – early studies assessing the effectiveness of current HPV vaccines given as part of a 2-dose schedule

Note: Current recommendation is a 3-dose primary HPV vaccine schedule
Influenza

• Updated recommendations on the use of seasonal influenza vaccine:
  – All Aboriginal and Torres Strait Islander children
    • greatest burden 6 months to <5 years and ≥15 years
    • vaccination of children 5–14 years will protect them as well as other members of their household
  – Conditions which increase risk of severe influenza expanded (but not NIP funded)
    • BMI ≥40
    • chronic liver disease (replaces alcoholism)
Influenza ... cont.

• New information included on:
  – inactivated quadrivalent influenza vaccine formulations
    • 2 registered formulations available privately (not NIP funded)
  – influenza vaccine recommendation for preterm infants

• Information removed on:
  – Intanza intradermal vaccine formulations which will no longer be available in the Australian market
Influenza ... cont.

• Other general clarifications include:
  
  – Fluvax influenza vaccine formulation now referred to as ‘bioCSL Fluvax’
  
  – Upper limit for age-based influenza vaccine recommendations in children consistently <9 years
  
  – Risk of fever and febrile convulsions when TIV and 13vPCV are co-administered in children
  
  – The immunocompromised patients for whom 2 doses of influenza vaccine are recommended when given the first time (irrespective of age) are haematopoietic stem cell transplant or solid organ transplant recipients
Japanese encephalitis (JE)

- Updated recommendations on the use of JE vaccines including:
  - co-administration with other vaccines
  - age of use and need for booster dose for Japanese encephalitis vaccines

<table>
<thead>
<tr>
<th>Age of vaccine recipient</th>
<th>Vaccine</th>
<th>Number of doses</th>
<th>Booster</th>
</tr>
</thead>
<tbody>
<tr>
<td>≥2 to &lt;9 months</td>
<td>JEspect</td>
<td>2 doses* (28 days apart)</td>
<td>Not required \Refer to Note 2</td>
</tr>
<tr>
<td>≥9 months to &lt;18 years</td>
<td>Imojev</td>
<td>1 dose</td>
<td>1–2 years after primary dose</td>
</tr>
<tr>
<td></td>
<td>JEspect</td>
<td>2 doses* (28 days apart)</td>
<td>Not required \Refer to Note 2</td>
</tr>
<tr>
<td></td>
<td>\Refer to Note 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>≥18 years</td>
<td>Imojev</td>
<td>1 dose</td>
<td>Not required</td>
</tr>
<tr>
<td></td>
<td>JEspect</td>
<td>2 doses (28 days apart†)</td>
<td>1–2 years after primary dose</td>
</tr>
</tbody>
</table>

* Each dose of JEspect in infants and children aged ≥2 months to <3 years is 0.25 mL.
† An accelerated primary course of JEpect (2 doses, each of 0.5 mL, 7 days apart) may be considered for adults who are at imminent risk of exposure to JE virus.

Note 1: JEpect can be administered to children in this age group in circumstances where an alternative is not available or is contraindicated (refer to 4.8.6 Dosage and administration above).

Note 2: Currently there is very limited evidence available to inform recommendations regarding the need and appropriate time interval for a booster of JEpect in children who received JEpect as primary immunisation.
New information added on:
- accelerated schedules for JEspect
- interchangeability of Japanese encephalitis vaccines
- vaccination after immunoglobulin or blood product administration

Clarification on:
- the risk of JE to travellers including updates to epidemiology and reference to CDC Yellow Book
- factors that should be considered when considering vaccination in residents and non-residents in the Torres Strait Islands
Measles

- Updated information on measles elimination status and vaccine coverage in Australia
- Clarification of post-exposure management of measles in Table 4.9.2
Meningococcal disease

The entire chapter has been updated

Major updates noted in the following slides:

- Information on two recently registered vaccines
  - Meningococcal B (MenBV; Bexsero)
  - Quadrivalent conjugate vaccine, 4vMenCV (Nimenrix)

- New recommendations on the use MenBV:
  - new table outlining recommended number of doses of MenBV by age group (Table 4.10.1)
  - prophylactic administration of paracetamol recommended with every dose in children <2 years of age (an exception to general Handbook recommendation)
Meningococcal disease ... cont.

• Update to recommendations on:
  – vaccination of persons with conditions associated with increased risk of IMD
    • including age of use and booster doses (new table 4.10.2)
  – vaccination of travellers
    • including age of use and booster doses (new table 4.10.3)
  – preference of conjugate over polysaccharide quadrivalent vaccines described in more detail
Meningococcal disease ... cont.

• Clarification on risk of IMD among specific groups, including:
  • men who have sex with men
  • college students
  • new military recruits
  • people with HIV

• Clarification of advice provided on public health use of vaccines
Pneumococcal disease

• Updated recommendation:
  – 23vPPV and Zostavax can be concurrently administered using separate syringes and injection sites

• Updates to reflect that from May 2014, 13vPCV has been registered for use in all ages (previously children <18 years)
Poliomyelitis

• New information on temporary WHO International Health Regulations relating to documentation of polio vaccination requirements

Yellow fever

• Comment on changes to booster dose requirements under International Health Regulations to clarify a booster every 10 years still required in Australia
Rabies and other lyssaviruses (incl. Australian bat lyssavirus, ABLV)

• Clarification on the risk and management of a potential lyssavirus exposure from a terrestrial animal in an area where rabies is not enzootic (e.g. Australia)

• New information on where to seek advice in circumstances where there are shortages of registered rabies immunoglobulin product
Zoster (herpes zoster)

• Zoster vaccine recommendations outlined by age group:
  – single dose NIP funded from November 2016 for previously unvaccinated adults aged 70 years (5-year catch-up program for adults 71–79 years)
  – expansion of ACIR to capture zoster vaccination

• Updated advice on the co-administration of Zostavax and 23vPPV
  – acceptable based on data from large observational study in the USA
Remember

• The information and recommendations in the *Handbook* are now updated annually
  – not all chapters updated but those where there is a need
• The annual updates are available electronically on the Immunise Australia website
• The electronic version of the *Handbook* is the most up-to-date and supersedes advice in the printed 10th Edition *Handbook*

Online updates are found at [www.immunise.health.gov.au](http://www.immunise.health.gov.au)
Additional resources

- **NCIRS**: [www.ncirs.edu.au](http://www.ncirs.edu.au)
  - Stand-alone printable *Handbook* tables
  - Disease and safety fact sheets
  - Childhood and adult vaccine schedule tables
  - Vaccine history tables

  - Electronic version of the 10th Edition *Handbook* ← Most up-to-date
  - NIP schedule cards
  - ATAGI
  - *National vaccine storage guidelines – Strive for 5 (2nd edition)*:


- **TGA**: [www.tga.gov.au](http://www.tga.gov.au)

- **ASCIA**: [www.allergy.org.au](http://www.allergy.org.au)

- **National HPV Vaccination Program Register (NHVPR)**: [www.hpvregister.org.au](http://www.hpvregister.org.au)

- **WHO, yellow fever vaccination requirements**: [www.who.int/csr/disease/yellowfev/en](http://www.who.int/csr/disease/yellowfev/en)
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- **New recommendations and updates** are routinely published online, and health professionals are encouraged to review the full Handbook and the Department of Health website before implementing any practices.

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Special thanks to:

• All those involved in the development of the *Handbook*
• Staff of NCIRS who developed this slide set
• All health professionals involved in immunisation programs who utilise the *Handbook* and enable the effective and safe use of vaccines in Australia