
What’s new?

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

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## Presentation outline

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Introduction

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

• The 10th edition *Handbook* was:
  – Commissioned and published by the Australian Government Department of Health and Ageing
  – Produced by ATAGI
  – Prepared by NCIRS staff (with ATAGI)
  – Endorsed by the NHMRC
Introduction ... cont.

- The 10th edition contains information on all vaccines available in Australia as of June 2012, including:
  - NIP funded
  - Non-NIP funded
- Two versions of the NIP schedule card are included
  - Current to 30 June 2013
  - New NIP schedule from July 2013
Introduction ... cont.

- The 10th edition *Handbook* is available in multiple formats:
  - Printed / hard copy

- A new layout – now includes five Parts
PART 1 – INTRODUCTION TO
THE AUSTRALIAN IMMUNISATION HANDBOOK

1.1 Background

1.2 Development of the 10th edition of the *Handbook*

1.3 How to use the 10th edition *Handbook*

1.4 What’s new

1.5 Fundamentals of immunisation
  - Overview of active and passive immunisation
  - Vaccine efficacy, vaccine effectiveness and vaccine failures
  - Vaccine safety and adverse events following immunisation
PART 2 – VACCINATION PROCEDURES

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

• Optimal storage of vaccines checklist deleted
  – refer to ‘Strive for 5’ guideline

• Minimum acceptable age table for 1st doses
  – now includes advice on action required in case of inadvertent early vaccine administration
Pre-vaccination: Catch-up

• Revised screening tool and catch-up worksheet
• Revisions to catch-up tables:
  – Now refer to children aged <10 years and persons aged ≥10 years
  – Additional vaccines
  – Pneumococcal recommendations clearer and provided for children up to 5 years of age

Planning catch-up vaccines for adults?
Consider ...
Health
Age
Lifestyle
Occupation
Administration of vaccines

• Advice is now provided on:
  – Action to take if vaccine incorrectly administered
  – Vaccination of patients with limited vaccine sites
    • e.g. limb malformations, spica casts, lymphoedema
  – Order of administration of multiple sequential vaccines
  – Simultaneous administration of vaccines
  – Use of multi-dose vials in exceptional circumstances
Post-vaccination

• Advice on adverse events following immunisation (AEFI)
  – enhanced and expanded
  – more information on management
  – new advice on adrenaline autoinjectors
  – notification

• Details for notifying and obtaining vaccine history from the HPV register

• Description of other state-based registers
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
Vaccination for Aboriginal and Torres Strait Islander people

- New information and recommendations on:
  - Rationale for influenza vaccination
    - especially ≥6 months – <5 years of age
  - Assessing hepatitis B risk and vaccination status, and vaccination if non-immune
  - Need to assess rubella immunity, especially in women of child-bearing age
  - Booster dose of 13vPCV at 12–18 months of age
  - New table summarising additional vaccines
Vaccination for international travel

• Updated and expanded
• Divided into:
  – Routinely recommended vaccines
  – Selected vaccines based on travel itinerary, activities and risk of exposure
    • e.g. tetanus-containing vaccine boosters:
      • 5-yearly for high-risk travel
      • 10-yearly for others
Groups with special vaccination requirements

• Updated and expanded section on persons with a prior AEFI or allergies
• Advice on vaccination of those with egg allergy
  – Influenza vaccines (containing <1 μg of ovalbumin per dose) can be given to most people with egg allergy, including anaphylaxis
  – Those with severe allergy should be vaccinated in settings where anaphylaxis can be recognised/treated
  – MMR vaccines can be given to any egg allergic person
Groups with special vaccination requirements ... cont.

- Section on women planning pregnancy, pregnant or breastfeeding, and preterm infants updated and expanded
  - Influenza vaccination on NIP schedule for pregnant women
  - Option of giving dTpa vaccine during the 3rd trimester of pregnancy as an alternative to post-partum vaccination
  - Tables updated to include new vaccines
Groups with special vaccination requirements ... cont.

- New recommendations for immunocompromised persons
  - 2 doses of influenza vaccine, irrespective of age, during first year of vaccination
  - New vaccines for solid organ (SOT) and haematopoietic stem cell (HSCT) transplant recipients
  - More info on vaccines for children and adults with HIV
Groups with special vaccination requirements ... cont.

- Expanded and updated sections on vaccinations for:
  - Persons with autoimmune diseases
    - e.g. those treated with immunosuppressive agents, those with Guillain-Barré syndrome or other chronic conditions
  - Migrants to Australia
  - Occupational groups
    - New groups and vaccines
# PART 4 – VACCINE-PREVENTABLE DISEASES

1. **Cholera**
2. **Diphtheria**
3. **Hib**
4. **Hepatitis A**
5. **Hepatitis B**
6. **Human papillomavirus**
7. **Influenza**
8. **JE**
9. **Measles**
10. **Meningococcal disease**
11. **Mumps**
12. **Pertussis**
13. **Pneumococcal disease**
14. **Poliomyelitis**
15. **Q fever**
16. **Rabies and other lyssaviruses**
17. **Rotavirus**
18. **Rubella**
19. **Tetanus**
20. **Tuberculosis**
21. **Typhoid**
22. **Varicella**
23. **Yellow fever**
24. **Zoster**
What’s new in Part 4?

• ‘Pregnancy and breastfeeding’ section has been added to each disease chapter

• ‘Public health management’ of each disease is only detailed where there are specific additional vaccine recommendations – refer to CDNA’s Series of National Guidelines (SoNGs)

• ‘Transport, storage and handling’ section provides info on reconstitution and stability of reconstituted vaccines

• ‘Dosage and administration’ section includes info on co-administration with other vaccines and the interchangeability of vaccines
Diphtheria, Tetanus and Pertussis

- DTPa-containing vaccines (child formulations)
  - 1st dose can be given from 6 weeks of age
  - Additional dose can be given at 18 months of age to minimise likelihood of infection
  - Booster dose at 4 years of age can be given as early as 3.5 years
  - Can be used for primary / booster dose in children aged <10 years
Diphtheria, Tetanus and Pertussis ... cont.

- dTpa vaccines (adolescent / adult formulation)
  - From ≥10 years (previously 8 years)
  - Adolescent booster preferable at age 11–13 years
  - Adults aged ≥65 years: single booster if no booster in previous 10 years
  - Adults at risk for acquiring or transmitting pertussis
    - revaccinate every 10 years
    - every 5 years in the context of pregnancy
Expanded advice regarding strategies to prevent pertussis in newborns

• Vaccinate all close contacts to ‘cocoon’

• Options for maternal vaccination
  – post-partum or pre-conception
  – third trimester vaccination as alternative
  – give booster dose of dTpa if ≥5 years between previous dose and expected date of delivery
**Haemophilus influenzae type b (Hib)**

- Inclusion of a new combination Hib-MenCCV
- Hib vaccination recommendations apply to all children, including Aboriginal and Torres Strait Islander children, as only PRP-T Hib vaccines used in recent years

**Hepatitis A**

- Expanded information on screening prior to vaccination
- For post-exposure prophylaxis (PEP)
  - Vaccination recommended in preference to normal human immunoglobulin (NHIG) in immunocompetent persons aged ≥12 months
Hepatitis B

• More information on:
  – Serological testing prior to vaccination
  – Rationale for testing/vaccination of certain groups
  – Checking for infection/immunity in infants born to mothers with chronic infection
• New recommendations specific for Aboriginal and Torres Strait Islander people and migrants from endemic countries
  – review risks, offer testing for hepatitis B and vaccination (if appropriate)
Hepatitis B ... cont.

• Infant hepatitis B course
  – Newly recommended that final dose *not* be given before the age of 24 weeks

• Persons aged ≥1 year
  – New table with standard and accelerated schedules
  – Minimum time interval between doses clarified for 3-dose course:
    • 1 month between 1st and 2nd doses
    • 2 months between 2nd and 3rd doses
    • 4 months between 1st and 3rd doses
Human papillomavirus (HPV)

• Vaccination recommended for:
  – Females aged 9–18 years (optimally at 11–13 years)
  – Males aged 9–18 years (optimally at 11–13 years)
• Not routine for women aged 19–26 years → conduct risk-benefit assessment (same for males)
• Specific recommendations for:
  – Immunocompromised persons
  – Men who have sex with men
Rollout of HPV School Vaccination Program

Year levels to be immunised

Influenza

• Information added on:
  – Intradermal vaccines
  – Age specifications for each vaccine brand
    • e.g. Fluvax (CSL) *not* recommended for children aged <10 years*
  – Benefits of vaccination in
    • Pregnancy
    • Children (especially aged ≥6 months and <5 years)

• New for immunocompromised
  – In first year give 2 doses of vaccine ≥4 weeks apart
  – Then 1 dose annually

* See speaker’s notes for details
Influenza ... cont.

- Vaccination now recommended for additional groups:
  - Staff in early childhood education/care
  - Pork industry workers
  - Persons at increased risk of complications from influenza infection expanded to include:
    - Obesity (BMI ≥30)
    - Down syndrome (all persons)
    - Alcoholism (as a chronic illness)
Measles, Mumps, Rubella & Varicella

- From 1 July 2013 new measles-mumps-rubella-varicella (MMRV) vaccines available
  - Give MMRV as 2nd dose of measles-containing vaccine at 18 months of age
  - Brings forward 2nd dose of MMR (from 4 years)
  - MMRV not recommended as 1st dose of measles-containing vaccine in children <4 years
    - due to small increased risk of fever and febrile seizures (when given as 1st dose)
  - MMRV not recommended in adolescents ≥14 years
Measles ... *cont.*

- Children with egg allergy, including anaphylaxis, can be safely given MMR or MMRV vaccine

- Measles post-exposure prophylaxis (PEP) table
  - includes more specific age ranges, MMR vaccination history, and advice regarding immunocompromise
Meningococcal disease

- New vaccines available
- Routine immunisation (NIP)
  - MenCCV at 12 months
- For persons with high-risk medical conditions and travel to endemic areas:
  - New 4vMenCVs
  - Use in preference to 4vMenPV if aged ≥9 months
  - New recommendations and intervals for those with medical conditions

New table for vaccination of persons with asplenia in Part 3
Pneumococcal disease

- 10vPCV and 13vPCV included
- Aboriginal and Torres Strait Islander children living in the NT, Qld, SA or WA
  - booster dose of 13vPCV at 12–18 months of age replaces 23vPPV
- Revised tables and lists
  - Include both adults and children
  - Disease risk conditions divided into:
    - ‘Highest increased risk’ (category A)
    - ‘Increased risk’ (category B)
Pneumococcal disease ... cont.

- 13vPCV
  - Recommended in adults and children aged >5 years with ‘highest increased risk’ for IPD

- 23vPPV doses and intervals for those at risk
  - More detail provided
  - 2nd dose (revaccination) for non-Indigenous adults aged ≥65 years without risk conditions *no longer* recommended
Rabies and other lyssaviruses (incl. Australian bat lyssavirus, ABLV)

- Now discusses all potential lyssavirus exposures
- New tables on exposure categories, guidance on PEP and completion of PEP commenced overseas
- 4-dose PEP for immunocompetent persons
- 5-dose PEP only for immunocompromised
- New management algorithms on:
  - exposure to terrestrial animals in rabies-enzootic areas
  - exposure to bats in Australia or overseas
  - boosters for rabies and bat lyssavirus
Rotavirus

• Age limits more clearly defined
• New contraindications
  – history of intussusception (IS)
  – severe combined immunodeficiency (SCID)
• Updated information on risk of IS post vaccination
  – low, but increased, risk of IS occurring following 1st and 2nd doses of both vaccines
Zoster (herpes zoster)

• Updated from 9th edition online version
• Single dose of zoster vaccine recommended for adults ≥60 years of age
• Information on the efficacy of vaccination in persons aged 50–59 years added
  – population-based vaccination in this age group is not recommended
• Note: limited vaccine availability
Cholera
• Repeat primary vaccination if interval between primary and booster dose is:
  – >6 months in children aged 2–6 years
  OR
  – >2 years in persons aged over 6 years

Japanese encephalitis (JE)
• Previous inactivated JE vaccine replaced with 2 new JE vaccines:
  – one live attenuated
  – one inactivated vaccine
• Updated advice on booster doses and AEFI
Poliomyelitis

- 1st dose IPV-containing vaccine, due at 2 months, can be given as early as 6 weeks of age
- Booster dose, recommended at 4 years of age, can be given as early as 3.5 years

Q fever

- Online training for skin testing and vaccination available via vaccine manufacturer
- In addition to existing risk groups, vaccine now recommended for:
  - professional dog and cat breeders
  - wildlife and zoo workers in contact with at-risk animals
Tuberculosis
• BCG now not recommended for all neonates <2.5 kg
• Generalised septic skin disease, skin conditions (e.g. eczema, dermatitis, psoriasis) and febrile illness
  – no longer contraindications to BCG vaccine but, if present, vaccination should be deferred

Yellow fever
• Not recommended in women who are breastfeeding infants aged <9 months
• Details on how to access the WHO information on areas of high yellow fever activity and on requirements for travel
PART 5 – PASSIVE IMMUNISATION

5.1 Passive immunisation using immunoglobulin preparations
What’s new in Part 5?

- Separated out of disease section
- Info *removed* from this section
  - use of intravenous immunoglobulins as treatment for disease conditions (e.g. Kawasaki disease) – refer to relevant treatment guidelines
  - use of immunoglobulins as replacement therapy for immunodeficient individuals – refer to the National Blood Authority guidelines
APPENDICES

1. Contact details for Australian, state and territory government health authorities and communicable disease control
2. Literature search strategy for the 10th edition of the *Handbook*
3. Components of vaccines used in the NIP
4. Commonly asked questions about vaccination
5. Glossary of technical terms
6. Abbreviations
7. Overview of vaccine availability in Australia
Additional resources

- NCIRS: [www.ncirs.edu.au](http://www.ncirs.edu.au)
  - Electronic version of the 10th edition of the *Handbook*
  - NIP schedule cards
  - ATAGI
  - *National vaccine storage guidelines – Strive for 5:*
  - Links to state and territory websites
- ASCIA: [www.allergy.org.au](http://www.allergy.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 and Ageing website before implementing any practices.

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Special thanks to:

- All those involved in the development of the Handbook
- Staff of the 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