
The Australian Immunisation Handbook 9th Edition 2008

What's New?

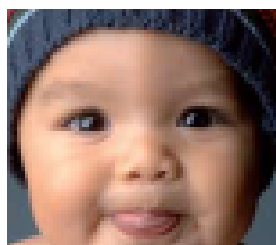
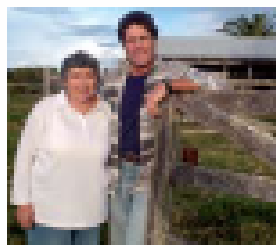
This slide set has been developed by the staff of the National Centre for Immunisation Research and Surveillance (NCIRS) for education and teaching purposes.

The information in this presentation was correct as at 28 February 2008



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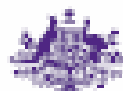
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The Australian Immunisation Handbook

9th Edition

2008



Australian Government
Department of
Health and Ageing
National Health and
Medical Research Council

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Outline

- Introduction (slides 4-6)
- What's New? – Front and Back Covers (slides 8-9)
- What's New? – Part 1 (slides 11-21)
- What's New? – Part 2 (slides 23-27)
- What's New? – Part 3 (slides 29-43)
- What's New? – Appendices (slides 45-46)
- Further information (slides 48-49)



Introduction

- *The Australian Immunisation Handbook* is a clinical practice guideline for health professionals regarding the safe and effective use of vaccines in Australia.
- The 9th edition *Handbook* was
 - produced by ATAGI
 - endorsed by the NHMRC
 - prepared by NCIRS



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Introduction

- The 9th edition *Handbook* contains information on the use of all vaccines available in Australia, as at June 2007.
- This includes vaccines funded by
 - the National Immunisation Program (NIP)
 - the PBS
 - private purchase



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Introduction

- Australian Vaccine Policy Advisory Structures
 - ATAGI
 - Provides advice on the best clinical use of vaccines in Australia
 - NHMRC
 - Endorses the *Handbook* as a clinical guideline
 - PBAC (Pharmaceutical Benefits Advisory Committee)
 - Advises Government on the cost-effectiveness of vaccines
 - Commonwealth Government
 - Considers advice from ATAGI
 - Makes decisions on vaccine funding under NIP and PBS
 - Implements programs at the national level
 - State and Territory Governments
 - Implements programs at the jurisdictional level



What's new in the Front and Back Covers?



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Front and Back Covers

- National Immunisation Program (NIP) schedule card
 - supplied with *Handbook*
 - can be inserted into front cover flap
 - last updated 1 July 2007

Australian Government
Department of Health and Ageing

National Immunisation Program Schedule

(VALID FROM 1 JULY 2007)

Age	Vaccine					
Birth	• Hepatitis B (hepB) *					
2 months	• Hepatitis B (hepB) *	• Diphtheria, tetanus and acellular pertussis (DTPa)	• Adenovirus influenzae type B (Hib) **	• Inactivated poliovirus (IPV)	• Pneumococcal conjugate (7vPCV)	• Rotavirus
4 months	• Hepatitis B (hepB) *	• Diphtheria, tetanus and acellular pertussis (DTPa)	• Adenovirus influenzae type B (Hib) **	• Inactivated poliovirus (IPV)	• Pneumococcal conjugate (7vPCV)	• Rotavirus
6 months	• Hepatitis B (hepB) *	• Diphtheria, tetanus and acellular pertussis (DTPa)	• Adenovirus influenzae type B (Hib) **	• Inactivated poliovirus (IPV)	• Pneumococcal conjugate (7vPCV) *	• Rotavirus †
13 months	• Hepatitis B (hepB) *	• Adenovirus influenzae type B (Hib) **	• Measles, mumps and rubella (MMR)	• Meningococcal C (MenCCV)		
12-24 months *	• Hepatitis A (Aboriginal and Torres Strait Islander children in high risk areas) *					
18 months	• Varicella (ZV)					
18-24 months *	• Pneumococcal polysaccharide (23vPPV) (Aboriginal and Torres Strait Islander children in high risk areas) *	• Hepatitis A (Aboriginal and Torres Strait Islander children in high risk areas)				
4 years	• Diphtheria, tetanus and acellular pertussis (DTPa)	• Measles, mumps and rubella (MMR)	• Inactivated poliovirus (IPV)			
10-13 years *	• Hepatitis B	• Varicella (ZV)				
12-13 years *	• Human Papillomavirus (HPV)					
15-17 years *	• Diphtheria, tetanus and acellular pertussis (DTPa)					
15-49 years *	• Influenza (Aboriginal and Torres Strait Islander people medically at risk)	• Pneumococcal polysaccharide (23vPPV) (Aboriginal and Torres Strait Islander people medically at risk)				
50 years and over	• Influenza (Aboriginal and Torres Strait Islander people)	• Pneumococcal polysaccharide (23vPPV) (Aboriginal and Torres Strait Islander people)				
65 years and over	• Influenza	• Pneumococcal polysaccharide (23vPPV)				

* Please refer to reverse for footnotes.

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Footnotes to National Immunisation Program Schedule

- Hepatitis B vaccine should be given to all infants as soon as practicable after birth. The greatest benefit is if given within 24 hours, and must be given within 7 days.
- Total of three doses of hepB required following the birth dose, at either 2m, 4m and 6m or at 2m, 4m and 12m.
- Give a total of 4 doses of Hib vaccine (2m, 4m, 6m and 12m) if using PIP-T Hib containing vaccines.
- Use PIP-T Hib containing vaccines in Aboriginal and Torres Strait Islander children in areas of higher risk (Queensland, Northern Territory, Western Australia and South Australia) with a dose at 2m, 4m and 12m.
- Medical at-risk children require a fourth dose of 7vPCV at 12 months of age, and a booster dose of 23vPPV at 4 years of age.
- Two doses of hepatitis A vaccine are required for Aboriginal and Torres Strait Islander children living in areas of higher risk (Queensland, Northern Territory, Western Australia and South Australia). Contact your State or Territory Health Department for details.
- Contact your State or Territory Health Department for details.
- These vaccines are for one cohort only within this age range, and should only be given if there is no prior history of disease or vaccination. Dose schedules may vary between jurisdictions. Contact your State or Territory Health Department for details.
- This vaccine is for one cohort only within this age range. Contact your State or Territory Health Department for details.
- Third dose of vaccine is dependent on vaccine brand used. Contact your State or Territory Health Department for details.

Further information

Further information and immunisation resources are available from the Immunise Australia Program website at www.immunise.health.gov.au or by contacting the helpline on 1800 621 738.

You should contact your State or Territory health department for further information on the program specific to your State or Territory:

State/Territory	Contact Number
Australian Capital Territory	02 8505 2300
New South Wales	Public Health Unit (look under 'Health' in the White Pages)
Northern Territory	08 8922 8044
Queensland	07 2734 1500
South Australia	08 8226 7177
Tasmania	1800 621 738 (Tasmania only)
Victoria	1300 885 000
Western Australia	08 9321 1332

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A joint Australian, State and Territory Government initiative



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Front and Back Covers

- Tables relocated
 - Recognition and Treatment of Anaphylaxis
 - on back cover
 - Adverse Events Following Immunisation
 - replaces the “Parent Advice Sheet”
 - now on the back cover inside flap
 - Comparison of the Effects of Diseases and the Side Effects of Vaccines
 - now on the front cover inside flap



What's new in Part 1?



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Part 1

- 3 main chapters
 - 1.3 Pre-vaccination procedures
 - 1.4 Administration of vaccines
 - 1.5 Post-vaccination procedures



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Part 1

1.3 Pre-vaccination procedures

- Preparing an anaphylaxis response kit
 - Use of 1:1000 adrenaline is recommended

- Consent
 - Discussed in more detail



Part 1

1.3 Pre-vaccination procedures

■ Vaccine storage

- Cold chain guidelines updated
- Refer to

National Vaccine Storage Guidelines: Strive for 5

- Table removed
 - “Information on vaccines exposed to different temperatures”
- Contact State and Territory authorities if a cold chain breach occurs



Part 1

1.3 Pre-vaccination procedures

- New pre-vaccination screening checklist added
- Tables added
 - Minimum age for the first dose of vaccine in exceptional circumstances
 - Live attenuated parenteral and oral vaccines
- Catch-up
 - Worksheet for children <8 years of age added
 - Tables for children <8 years of age expanded
 - Table for older children and adults added
 - Link to online “Catch-up Calculator” added



Part 1

1.4 Administration of vaccines

- Injection equipment and technique
 - IM injections
 - Needle gauge – 23 or 25 gauge (new)
 - Needle length – 25 mm (unchanged)
 - Needle angle (new)
 - pierce the skin at an angle of 90°
 - previously an angle of 60°
 - More photos and diagrams



Part 1

1.4 Administration of vaccines

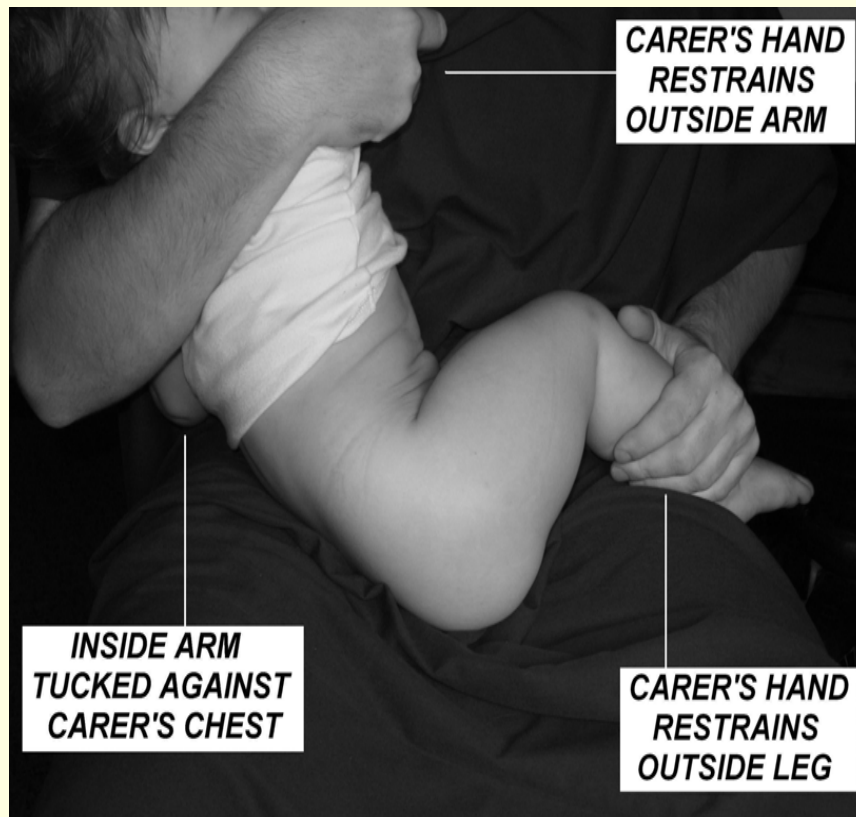
- Recommended injection sites unchanged
 - <12 months of age → anterolateral thigh
 - ≥12 months of age → deltoid

- Alternative injection site
 - ventrogluteal area
 - alternative site for vaccines at any age
 - caution
 - only use if familiar with landmarks
 - do not give vaccines in the dorsogluteal site or upper outer quadrant of the buttock



Anterolateral thigh

Preferred injection site for IM vaccine administration under 12 months of age



Photos courtesy of *The Australian Immunisation Handbook*, 9th edition



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Deltoid

Preferred injection site for IM vaccine administration from 12 months of age



Photo courtesy of *The Australian Immunisation Handbook*, 9th edition



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Part 1

1.5 Post-vaccination

- Adverse events following immunisation (AEFI)
 - Management of anaphylaxis
 - Use of 1:1000 adrenaline is recommended
 - 1:10,000 adrenaline no longer recommended
 - Reporting AEFI
 - Appendix 6 “Definitions of adverse events following immunisation” updated



Part 1

Tools to photocopy

- Pre-vaccination screening checklist (Table 1.3.1)
- Catch-up worksheet (Figure 1.3.1)
- Appendix 10
 - Summary table – procedures for a vaccination encounter
 - Can be used as an audit tool



Table 1.3.1: Pre-vaccination screening checklist

Pre-vaccination screening checklist

This checklist helps your doctor/nurse decide about vaccinating you or your child. Please tell your doctor/nurse if the person about to be vaccinated:

- is unwell today
- has a disease which lowers immunity (eg. leukaemia, cancer, HIV/AIDS) or is having treatment which lowers immunity (eg. oral steroid medicines such as cortisone and prednisone, radiotherapy, chemotherapy)
- has had a severe reaction following any vaccine
- has *any* severe allergies (to anything)
- has had any vaccine in the past month
- has had an injection of immunoglobulin, or received any blood products or a whole blood transfusion within the past year
- is pregnant
- has a past history of Guillain-Barré syndrome
- was a preterm infant
- has a chronic illness
- has a bleeding disorder

A different vaccine schedule may be recommended if the person to be vaccinated:

- identifies as an Aboriginal or Torres Strait Islander
- does not have a functioning spleen
- is planning a pregnancy or anticipating parenthood
- is a parent, grandparent or carer of a newborn
- lives with someone who has a disease which lowers immunity (eg. leukaemia, cancer, HIV/AIDS), or lives with someone who is having treatment which lowers immunity (eg. oral steroid medicines such as cortisone and prednisone, radiotherapy, chemotherapy)

Note: Please ask your doctor/nurse questions about this information or any other matter relating to vaccination before the vaccines are given.

Before any vaccination takes place, the immunisation service provider will ask you:

- Did you understand the information provided to you about immunisation?
- Do you need more information to decide whether to proceed?
- Did you bring your/your child's vaccination record card with you?

It is important for you to receive a personal record of your or your child's injections. If you do not have a record, ask your immunisation service provider to give you one. Bring this record with you every time you or your child visit for vaccination. Make sure your doctor/nurse records all vaccinations on it. Your child may need this record to enter childcare, preschool or school.

What's new in Part 2?



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Part 2

- Vaccines for special risk groups
- 3 chapters
 - 2.1 Vaccination for Aboriginal and Torres Strait Islander people
 - 2.2 Vaccination for international travel
 - 2.3 Groups with special vaccination requirements



Part 2

2.3 Groups with special vaccination requirements

■ Categories

- Children who had previous serious AEFI
- Women planning pregnancy, pregnant or breastfeeding
- Preterm infants
- Impaired immunity
- Recent recipients of
 - normal human immunoglobulin
 - other blood products including blood transfusions
- Bleeding disorders
- Vaccination before or after anaesthesia/surgery
- Occupational risk



Part 2

2.3 Groups with special vaccination requirements

- New tables
 - Vaccinations in pregnancy (Table 2.3.1)
 - Recommendations for solid organ transplant recipients (Table 2.3.2)
 - Post-transplantation vaccination schedules for haematopoietic stem cell transplant recipients (Table 2.3.3)
 - Recommended intervals between either immunoglobulins or blood products and MMR, MMRV or varicella vaccination (Table 2.3.5)



Table 2.3.5: Recommended intervals between either immunoglobulins or blood products and MMR, MMRV or varicella vaccination⁶⁵

	Route	Dose		
		IU or mL	Estimated mg IgG/kg	Interval (months)
Blood transfusion: Washed RBCs	IV	10 mL/kg	Negligible	0
RBCs, adenine-saline added	IV	10 mL/kg	10	3
Packed RBCs	IV	10 mL/kg	20–60	5
Whole blood	IV	10 mL/kg	80–100	6
Cytomegalovirus immunoglobulin	IV	3 mL/kg	150	6
Hepatitis A prophylaxis (as NHIG)	IM	0.5 mL (<25 kg) 1.0 mL (25–50 kg) 2.0 mL (>50 kg)		3
Hepatitis B prophylaxis (as HBIG)	IM	100 IU 400 IU	10	3
ITP (as NHIG [Intravenous])	IV		400	8
ITP (as NHIG [Intravenous])	IV		1000	10
ITP or Kawasaki disease (as NHIG [Intravenous])	IV		1600–2000	11
Measles prophylaxis (as NHIG):		(max. dose 15 mL)		
Standard	IM	0.2 mL/kg		5
Immunocompromised	IM	0.5 mL/kg		6
Plasma or platelet products	IV	10 mL/kg	160	7
Rabies prophylaxis (as RIG)	IM	20 IU/kg	22	4
Replacement (or therapy) of immune deficiencies (as NHIG [Intravenous], various doses)	IV		300–400	9
Rh (D) IG (anti-D)	IM			0
Tetanus (as TIG for IM use)	IM	250 IU (given within 24 hrs of injury) 500 IU (>24 hrs after injury)	10 20	3
Varicella prophylaxis (as ZIG)	IM	200 IU (0–10 kg) 400 IU (11–30 kg) 600 IU (>30 kg)		5

Part 2

2.3 Groups with special vaccination requirements

■ Occupational groups

- Recommended vaccines now presented by occupational category in Table 2.3.6
- Includes
 - healthcare workers
 - those who work with children
 - carers
 - emergency and essential service workers
 - laboratory personnel
 - those working in specific community settings
 - those working with animals
 - those exposed to human tissue, blood, body fluids or sewage



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What's new in Part 3?



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Part 3 Overview

- 26 chapters now
 - each on a separate disease
 - 1 chapter on use of immunoglobulins
- 2 chapters removed
 - Anthrax and Plague
- 3 chapters incorporated into Immunoglobulin Preparations chapter (3.8)
 - botulism
 - cytomegalovirus
 - respiratory syncytial virus



Part 3 Overview

- 3 new chapters
- Newly vaccine preventable diseases
 - Chapter 3.7 Human papillomavirus
 - Chapter 3.18 Rotavirus
 - Chapter 3.26 Zoster (Herpes zoster)
- New standard format to make it easier to find information



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Part 3

Major changes by chapter

- **Diphtheria, Tetanus and Pertussis**
 - 3 separate chapters as in previous edition
 - Recommendations are cross-referenced
 - New for adults requiring a primary course of dT
 - dTpa is recommended for the first dose
 - follow by two doses of dT
 - use dTpa for subsequent doses *only* if dT is unavailable
 - New table
 - Recommended antimicrobial therapy and chemoprophylaxis regimens for pertussis in infants, children and adults (Table 3.14.1)



Part 3

Major changes by chapter

■ Hepatitis B

- New recommendations for preterm babies
- Babies born at <32 weeks' gestation or <2000 g birth weight
 - give vaccine at 0, 2, 4 and 6 months of age and either
 - measure anti-HBs at 7 months of age and give a booster at 12 months of age if antibody titre is <10 mIU/mL or
 - give a booster at 12 months of age without measuring the antibody titre



Part 3

Major changes by chapter

- **Hib (*Haemophilus influenzae* type b)**
 - Recommendations unchanged
 - Please note current shortage of Hib vaccines containing PRP-OMP (COMVAX, PedvaxHIB)
 - State and Territory Health departments have advised the course of action for those jurisdictions which use or have used these vaccines



Part 3

Major changes by chapter

- **Human papillomavirus (HPV)**
 - New chapter
 - Recommendations for two HPV vaccines
 - 4-valent (Gardasil)
 - 2-valent (Cervarix)
 - Both vaccines protect against oncogenic HPV type 16 and/or type 18 cervical disease
 - Recommendations cover
 - females
 - males
 - different age groups



Part 3

Major changes by chapter

■ Influenza

- Children aged 6 months to <3 years
 - new dose – 0.25 mL
- Children aged 3 to 9 years
 - new dose – 0.5 mL
- Aboriginal and Torres Strait Islander people aged ≥15 years
 - annual influenza vaccination recommended
- High risk groups
 - chronic neurological conditions added

The influenza chapter was pre-released in August 2007



Part 3

Major changes by chapter

■ Japanese encephalitis (JE)

- Recommendations unchanged
- There is currently a shortage of JE vaccine
- Please refer to the Australian Government Department of Health and Ageing fact sheet:

<http://www.health.gov.au/internet/immunise/publishing.nsf/Content/japanese-encephalitis>



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Part 3

Major changes by chapter

■ Measles, Mumps and Rubella

■ MMR vaccine

- Recommendation for 2nd dose MMR to be given at 18 months of age instead of 4 years of age
- Rationale for giving 2nd dose MMR at 18 months
 - provides earlier 2-dose protection
 - likely to increase vaccine coverage

■ If using NIP-funded vaccine

- continue to give 2nd dose MMR at 4 years of age in accordance with the 1 July 2007 NIP schedule distributed with the 9th edition *Handbook*

■ MMRV vaccines - see the next slide



Part 3

Major changes by chapter

■ **Varicella**

- Recent evidence indicates
 - that varicella vaccine from 12 months of age is effective and provides earlier protection against chickenpox
- MMRV
 - New combination measles, mumps, rubella and varicella vaccine
 - When MMRV is available
 - give MMRV at 12 months of age to replace MMR
 - this moves varicella dose to 12 months of age
 - If using the NIP-funded MMR and varicella vaccines
 - continue to give doses as scheduled on the 1 July 2007 NIPS
 - change when advised by your State or Territory

- Administration of a second dose of varicella-containing vaccine to children aged <14 years is discussed as an option



Part 3

Major changes by chapter

■ Meningococcal Disease

- Men C conjugate vaccine (MenCCV)
 - Give a single dose at 12 months of age
 - Infants given dose(s) at <12 months need another dose at 12 months (spaced at least 4 weeks after the previous dose)
- Public health management
 - Non-vaccinated close contacts of meningococcal case
 - Vaccinate in addition to providing antibiotic prophylaxis
 - Seek information from
 - *“Guidelines for the early clinical and public health management of meningococcal disease in Australia”*
 - Online at <http://www.health.gov.au/>



Part 3

Major changes by chapter

■ Pneumococcal Disease

- Children ≤ 9 years of age with specified underlying medical conditions and no history of previous pneumococcal vaccination
 - 2 doses of 7-valent pneumococcal conjugate vaccine
 - followed by 1 dose of 23-valent pneumococcal polysaccharide vaccine
- Adult vaccination
 - 23-valent pneumococcal polysaccharide vaccine recommendations revised
 - New table: Revaccination with 23vPPV for people ≥ 10 years of age (Table 3.15.3)



Part 3

Major changes by chapter

■ Rotavirus

- New chapter
- 2 oral rotavirus vaccines
 - human monovalent rotavirus vaccine (Rotarix)
 - pentavalent human-bovine reassortant rotavirus vaccine (RotaTeq)
- Upper age limits for dosing
 - first dose and final doses

Table 3.18.1: Age limits for dosing of oral rotavirus vaccines

	Doses	Age of routine oral administration	Age limits for dosing			Minimum interval between doses
			1st dose	2nd dose	3rd dose	
Rotarix (GlaxoSmithKline)	2 oral doses (1 mL/ dose)	2 and 4 months	6–14 ⁺ weeks	10–24 ⁺ weeks	None	4 weeks
RotaTeq (CSL Biotherapies/ Merck & Co Inc)	3 oral doses (2 mL/ dose)	2, 4 and 6 months	6–12 ⁺ weeks	10–32 ⁺ weeks	14–32 ⁺ weeks	4 weeks



Part 3

Major changes by chapter

■ Yellow Fever

- Travellers to urban and/or rural areas of endemic countries
 - vaccinate if no contraindications exist



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Part 3

Major changes by chapter

- **Zoster (Herpes zoster)**
 - New chapter
 - background information only
 - disease
 - epidemiology
 - A zoster vaccine will be available in Australia soon
 - A full *Handbook* chapter is being developed
 - development process includes
 - public consultation
 - NHMRC endorsement
 - full chapter will be published electronically
 - Immunise Australia website
 - expected availability – late 2008
 - NCIRS fact sheet coming soon



What's new in the Appendices?



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Appendices

- 4 new appendices
 - Appendix 2: *Handbook* development
 - Appendix 3: Vaccine products registered in Australia but not currently available
 - Appendix 4: Major components of vaccines in NIP schedule
 - Appendix 10: Vaccination encounter procedures



Appendices

- Appendices removed
 - Standards for childhood vaccination
 - Now discussed in Part 1
 - Golden rules of immunisation and the cold chain
 - Now discussed in Part 1
 - NHMRC levels of evidence
 - Now discussed in Appendix 2





Myths and Realities

Responding to arguments
against immunisation

A GUIDE FOR PROVIDERS

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i M M U N I S A T I O N

Further Information

- Immunise Australia website
www.immunise.health.gov.au/
- NCIRS website
www.ncirs.usyd.edu.au
- NCIRS fact sheets available at
www.ncirs.usyd.edu.au/facts/f-fact_sheets.html



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Further Information

- Immunisation calculator
www.health.sa.gov.au/immunisationcalculator/
- National Vaccine Storage Guidelines: Strive for 5
<http://www.health.gov.au/internet/immunise/publishing.nsf/Content/provider-store>
- Please also refer to the relevant website of your State or Territory



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