

Additional reports

Childhood immunisation coverage

Tables 1, 2 and 3 provide the latest quarterly report on childhood immunisation coverage from the Australian Childhood Immunisation Register (ACIR).

The data show the percentage of children fully immunised at 12 months of age for the cohort born between 1 October and 31 December 2005, at 24 months of age for the cohort born between 1 October and 31 December 2004, and at 6 years of age for the cohort born between 1 October and 31 December 2000 according to the National Immunisation Program.

For information about the Australian Childhood Immunisation Register see *Surveillance systems reported in CDI, published in Commun Dis Intell 2007;31:163–164* and for a full description of the methodology used by the Register see *Commun Dis Intell 1998;22:36–37*.

Commentary on the trends in ACIR data is provided by the National Centre for Immunisation Research and Surveillance of Vaccine Preventable Diseases (NCIRS). For further information please contact the NCIRS at telephone: +61 2 9845 1435, Email: brynleyh@chw.edu.au.

Immunisation coverage for children 'fully immunised' at 12 months of age for Australia decreased marginally by 0.2 percentage points to 91.0% (Table 1), whilst there were no important changes in coverage for all individual vaccines due at 12 months of age. There were also no noteworthy movements in coverage for individual vaccines by jurisdiction.

Immunisation coverage for children 'fully immunised' at 24 months of age for Australia decreased marginally from the last quarter by 0.4 percentage points to 92.0% (Table 2). There were no significant changes in coverage in any jurisdiction for 'fully immunised' coverage or for coverage for individual vaccines. It is notable that the estimate for 'fully immunised' at 24 months of age has been higher than the 12 months coverage estimate since the 18 month DTPa booster was no longer required from September 2003.

It is also notable that, for the 2 vaccines where no further doses are due between 6 months and 24 months of age (DTP and polio), coverage at the national level was 94.8% and 94.8% respectively at 24 months versus 91.9% and 91.8% at 12 months. This suggests that delayed notification or delayed vaccination is making an important contribution to the coverage estimates at 12 months of age and that the 'fully immunised' estimate in particular is likely to be a minimum estimate.

Table 3 shows immunisation coverage estimates for children 'fully immunised' and for individual vaccines at 6 years of age for Australia and by state or territory. For the second consecutive quarter, 'fully immunised' coverage for Australia, at 88%, remained at the highest level ever recorded since it was first reported in early 2003. There were no important changes in coverage for all individual vaccines due at 12 months of age and no noteworthy movements in coverage for individual vaccines by jurisdiction.

Table 1. Percentage of children immunised at 1 year of age, preliminary results by disease and state or territory for the birth cohort 1 October to 31 December 2005; assessment date 31 March 2007

Vaccine	State or territory								Australia
	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	
Total number of children	1,145	22,544	827	13,626	4,320	1,551	16,486	6,573	67,072
Diphtheria, tetanus, pertussis (%)	92.2	91.7	91.7	91.9	91.6	92.7	92.6	90.5	91.9
Poliomyelitis (%)	92.1	91.5	91.5	91.9	91.6	92.8	92.5	90.5	91.8
<i>Haemophilus influenzae</i> type b (%)	94.9	94.6	94.9	93.9	94.1	95.9	94.8	94.2	94.5
Hepatitis B (%)	95.0	94.6	95.5	93.7	93.9	95.9	94.6	94.0	94.4
Fully immunised (%)	91.9	91.2	90.8	90.8	90.4	92.5	91.3	89.9	91.0
Change in fully immunised since last quarter (%)	0.0	-0.3	-1.5	+0.7	-0.7	-1.5	-0.4	-0.3	-0.2

Table 2. Percentage of children immunised at 2 years of age, preliminary results by disease and state or territory for the birth cohort 1 October to 31 December 2004; assessment date 31 March 2007

Vaccine	State or territory								Australia
	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	
Total number of children	1,038	21,285	756	12,536	4,312	1,417	15,691	6,172	63,207
Diphtheria, tetanus, pertussis (%)	95.9	94.6	96.4	94.1	95.0	96.3	95.5	94.4	94.8
Poliomyelitis (%)	95.8	94.5	96.2	94.1	95.0	96.3	95.4	94.3	94.8
<i>Haemophilus influenzae</i> type b (%)	94.2	93.4	93.9	93.1	93.9	94.8	94.5	92.7	93.6
Measles, mumps, rubella (%)	94.1	93.1	95.1	93.1	94.3	94.9	94.8	92.7	93.7
Hepatitis B(%)	96.1	95.4	97.9	95.1	95.6	96.8	96.2	95.2	95.6
Fully immunised (%)	93.0	91.5	93.3	91.3	92.8	93.9	93.4	90.6	92.0
Change in fully immunised since last quarter (%)	-0.5	-0.6	-1.2	-0.5	+4	-0.6	-0.3	-0.2	-0.4

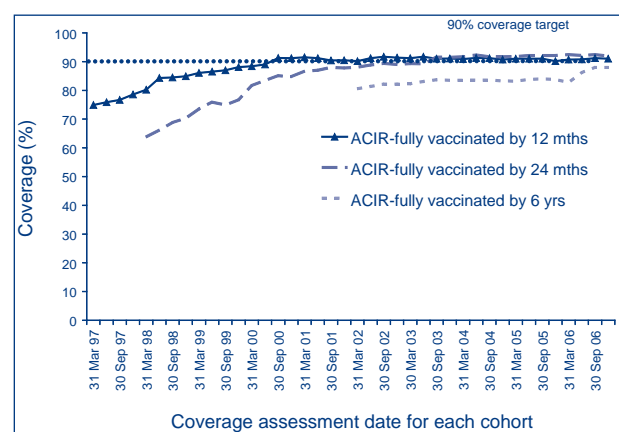
* The 12 months age data for this cohort was published in *Commun Dis Intell* 2006;31:266.

Table 3. Percentage of children immunised at 6 years of age, preliminary results by disease and state or territory for the birth cohort 1 October to 31 December 2000; assessment date 31 March 2007

Vaccine	State or territory								Australia
	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	
Total number of children	1,073	22,321	839	13,504	4,444	1,597	16,157	6,573	66,508
Diphtheria, tetanus, pertussis (%)	90.0	89.0	87.4	88.0	86.8	91.5	91.5	84.2	88.8
Poliomyelitis (%)	89.9	88.9	88.0	88.1	86.7	91.6	91.6	84.4	88.9
Measles, mumps, rubella (%)	89.8	89.0	88.1	88.2	86.8	91.6	91.7	84.3	88.9
Fully immunised (%) ¹	88.6	88.1	86.3	87.2	85.9	90.7	91.0	83.2	88.0
Change in fully immunised since last quarter (%)	-0.8	+0.3	-1.8	-0.4	-0.7	+1.4	+0.9	-1.5	+0.1

Figure 3 shows the trends in vaccination coverage from the first ACIR-derived published coverage estimates in 1997 to the current estimates. There is a clear trend of increasing vaccination coverage over time for children aged 12 months, 24 months and 6 years, although the rate of increase has slowed over the past 2 years for all age groups. The recent increase in coverage at 6 years of age, described in the previous paragraph, is apparent in the Figure. It should be noted that currently, coverage for the vaccines added to the National Immunisation Program since 2003 (varicella at 18 months, meningococcal C conjugate at 12 months and pneumococcal conjugate at 2, 4, and 6 months) are not included in the 12 or 24 months coverage data.

Figure 3. Trends in vaccination coverage, Australia, 1997 to 31 December 2006, by age cohorts



HIV and AIDS surveillance

National surveillance for HIV disease is coordinated by the National Centre in HIV Epidemiology and Clinical Research (NCHECR), in collaboration with State and Territory health authorities and the Commonwealth of Australia. Cases of HIV infection are notified to the National HIV Database on the first occasion of diagnosis in Australia, by either the diagnosing laboratory (Australian Capital Territory, New South Wales, Tasmania, Victoria) or by a combination of laboratory and doctor sources (Northern Territory, Queensland, South Australia, Western Australia). Cases of AIDS are notified through the State and Territory health authorities to the National AIDS Registry. Diagnoses of both HIV infection and AIDS are notified with the person's date of birth and name code, to minimise duplicate notifications while maintaining confidentiality.

Tabulations of diagnoses of HIV infection and AIDS are based on data available three months after the end of the reporting interval indicated, to allow for reporting delay and to incorporate newly available information. More detailed information on diagnoses of HIV infection and AIDS is published in the quarterly Australian HIV Surveillance Report, and annually in 'HIV/AIDS, viral hepatitis and sexually transmissible infections in Australia, annual surveillance report'. The reports are available from the National Centre in HIV Epidemiology and Clinical Research, 376 Victoria Street, Darlinghurst NSW 2010. Internet: <http://www.med.unsw.edu.au/nchechr>. Telephone: +61 2 9332 4648. Facsimile: +61 2 9332 1837. For more information see Commun Dis Intell 2005;29:91–92.

HIV and AIDS diagnoses and deaths following AIDS reported for 1 October to 31 December 2006, as reported to 31 March 2007, are included in this issue of Communicable Diseases Intelligence (Tables 4 and 5).

Table 4. New diagnoses of HIV infection, new diagnoses of AIDS and deaths following AIDS occurring in the period 1 October to 31 December 2006, by sex and state or territory of diagnosis

	Sex	State or territory								Totals for Australia			
		ACT	NSW	NT	Qld	SA	Tas	Vic	WA	This period 2006	This period 2005	YTD 2006	YTD 2005
HIV diagnoses	Female	0	18	2	8	4	0	11	0	43	19	141	92
	Male	0	95	1	47	15	1	61	11	231	216	850	868
	Not reported	0	0	0	0	0	0	0	0	0	0	0	0
	Total*	0	114	3	55	19	1	72	11	275	235	994	961
AIDS diagnoses	Female	0	1	0	1	0	0	2	0	4	1	22	27
	Male	0	20	0	3	4	0	11	1	39	53	172	197
	Total*	0	21	0	4	4	0	13	1	43	54	196	224
AIDS deaths	Female	0	0	0	0	0	0	1	1	2	2	6	5
	Male	0	8	1	1	1	0	4	2	17	18	71	64
	Total*	0	8	1	1	1	0	5	3	19	20	79	69

* Totals include people whose sex was reported as transgender.

Table 5. Cumulative diagnoses of HIV infection, AIDS, and deaths following AIDS since the introduction of HIV antibody testing to 31 December 2006, and reported by 31 March 2007, by sex and state or territory

	Sex	State or territory								Australia
		ACT	NSW	NT	Qld	SA	Tas	Vic	WA	
HIV diagnoses	Female	32	873	22	267	100	8	367	203	1,872
	Male	259	13,447	131	2,729	935	100	5,248	1,212	24,061
	Not reported	0	230	0	0	0	0	22	0	252
	Total*	291	14,579	153	3,005	1,036	108	5,659	1,422	26,253
AIDS diagnoses	Female	10	253	4	71	32	4	112	41	527
	Male	93	5,414	43	1,030	410	52	1,998	426	9,466
	Total*	103	5,684	47	1,103	443	56	2,122	469	10,027
AIDS deaths	Female	7	136	1	42	20	2	61	26	295
	Male	74	3,582	27	663	279	33	1,414	295	6,367
	Total*	81	3,729	28	707	299	35	1,484	322	6,685

* Totals include people whose sex was reported as transgender.

Meningococcal surveillance

John Tapsall, The Prince of Wales Hospital, Randwick, NSW, 2031 for the Australian Meningococcal Surveillance Programme.

The reference laboratories of the Australian Meningococcal Surveillance Programme report data on the number of laboratory confirmed cases confirmed either by culture or by non-culture based techniques. Culture positive cases, where a *Neisseria meningitidis* is grown from a normally sterile site or skin, and non-culture based diagnoses, derived from results of nucleic acid amplification assays and serological techniques, are defined as invasive meningococcal disease (IMD) according to Public Health Laboratory Network definitions. Data contained in the quarterly reports are restricted to a description of the number of cases per jurisdiction, and serogroup, where known. A full analysis of laboratory confirmed cases of IMD is contained in the annual reports of the Programme, published in Communicable Diseases Intelligence. For more information see Commun Dis Intell 2007;31:162.

Laboratory confirmed cases of invasive meningococcal disease for the period 1 January to 31 March 2007, are included in this issue of Communicable Diseases Intelligence (Table 6).

National Enteric Pathogens Surveillance System

The National Enteric Pathogens Surveillance System (NEPSS) collects, analyses and disseminates data on human enteric bacterial infections diagnosed in Australia. Communicable Diseases Intelligence NEPSS quarterly reports include only Salmonella. NEPSS receives reports of Salmonella isolates that have been serotyped and phage typed by the six Salmonella laboratories in Australia. Salmonella isolates are submitted to these laboratories for typing by primary diagnostic laboratories throughout Australia.

A case is defined as the isolation of a Salmonella from an Australian resident, either acquired locally or as a result of overseas travel, including isolates detected during immigrant and refugee screening. Second and subsequent identical isolates from an individual within six months are excluded, as are isolates from overseas visitors to Australia. The date of the case is the date the primary diagnostic laboratory isolated Salmonella from the clinical sample.

Quarterly reports include historical quarterly mean counts. These should be interpreted cautiously as they

Table 6. Number of laboratory confirmed cases of invasive meningococcal disease, Australia, 1 January to 31 March 2007, by serogroup and state or territory

State or territory	Year	Serogroup													
		A		B		C		Y		W135		ND		All	
		Q1	YTD	Q1	YTD	Q1	YTD	Q1	YTD	Q1	YTD	Q1	YTD	Q1	YTD
Australian Capital Territory	07			1	1					1	1			2	2
	06													0	0
New South Wales	07			12	12	3	3					2	2	17	17
	06			9	9	1	1			1	1	4	4	14	14
Northern Territory	07			1	1									1	1
	06			1	1									1	1
Queensland	07			11	11									11	11
	06			15	15	1	1								16
South Australia	07			1	1									1	1
	06			3	3									3	3
Tasmania	07														0
	06			1	1	1	1							2	2
Victoria	07			6	6									6	6
	06			10	10	2	2	1	1	2	2			15	15
Western Australia	07			3	3									3	3
	06			5	5									5	5
Total	07			35	35	3	3			1	1	2	2	41	41
	06			44	44	5	5	1	1	3	3	4	4	57	57

may be affected by outbreaks and by surveillance artefacts such as newly recognised and incompletely typed *Salmonella*.

NEPSS may be contacted at the Microbiological Diagnostic Unit, Public Health Laboratory, Department of Microbiology and Immunology, The University of Melbourne; by telephone: +61 3 8344 5701, facsimile: +61 3 8344 7833 or email joanp@unimelb.edu.au

Scientists, diagnostic and reference laboratories contribute data to NEPSS, which is supported by state and territory health departments and the Australian Government Department of Health and Ageing.

Reports to the National Enteric Pathogens Surveillance System of *Salmonella* infection for the period 1 January to 31 March 2007 are included in Tables 7 and 8. Data include cases reported and entered by 27 April 2007. Counts are preliminary, and subject to adjustment after completion of typing and reporting of further cases to NEPSS. For more information see *Commun Dis Intell* 2007;31:163–164.

1 January to 31 March 2007

There were 2,527 reports to NEPSS of human *Salmonella* infection in the first quarter of 2007, 35% more than in fourth quarter of 2006. Data to date for this quarter are somewhat incomplete. Completion of phage typing and data-entry for the many recent *S. Typhimurium* isolates will result in at least 10% more cases, and a final count for the quarter somewhat above the historical average for this annual peak in human salmonellosis in Australia.

During the first quarter of 2007, the 25 most common *Salmonella* types in Australia accounted for 1,657 cases, 66% of all reported human *Salmonella* infections. Nineteen of the 25 most common *Salmonella* infections in the first quarter of 2006 were also among those most commonly reported in the preceding quarter.

The most notable feature of the current data is the large outbreak of *S. Typhimurium* phage type 44 in the south-eastern states and *S. Typhimurium* phage type 9 in South Australia and New South Wales.. Other increases and outbreaks include *S. Mississippi* and *S. Typhimurium* phage type 135 (in Tasmania), *S. Typhimurium* phage type 29 (in South Australia), *S. Montevideo* and *S. Wangata* (in New South Wales), *S. Stanley*, *S. Newport*, *S. Cerro* and *S. London* (in Victoria), *S. Oslo* in the Northern Territory, *S. Typhimurium* phage type 197 (in Queensland), *S. Typhimurium* phage type U302 (in New South Wales and Queensland), and *S. Typhimurium* phage type U307 (in Western Australia and Queensland).

Acknowledgement: We thank scientists, contributing laboratories, state and territory health departments, and the Australian Government Department of Health and Ageing for their contributions to NEPSS.

Table 7. Reports to the National Enteric Pathogens Surveillance System of *Salmonella* isolated from humans during the period 1 January to 31 March 2007, as reported to 27 April 2007

	State or territory								Australia
	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	
Total all <i>Salmonella</i> for quarter	32	644	95	713	173	110	534	226	2,527
Total contributing <i>Salmonella</i> types	23	107	35	109	59	18	113	78	228

Table 8. Top 25 *Salmonella* types identified in Australia, 1 January to 31 March 2007, by state or territory

National rank	Salmonella type	State or territory								Total 1st quarter 2007	Last 10 years mean 1st quarter	Year to date 2007	Year to date 2006
		ACT	NSW	NT	Qld	SA	Tas	Vic	WA				
1	S. Typhimurium PT 135	2	102	0	46	2	25	34	14	225	247	225	262
2	S. Typhimurium PT 44	5	25	0	12	18	1	103	2	166	25	166	77
3	S. Typhimurium PT 9	1	78	0	19	19	2	40	4	163	182	163	158
4	S. Saintpaul	1	12	5	64	1	1	8	19	111	134	111	167
5	S. Typhimurium PT 170	4	60	0	7	0	1	33	0	105	96	105	167
6	S. Typhimurium PT 197	1	12	1	63	4	1	7	0	89	60	89	41
7	S. Virchow PT 8	0	6	5	67	1	0	2	0	81	104	81	114
8	S. Birkenhead	0	37	0	36	0	0	5	0	78	101	78	112
9	S. Mississippi	0	2	0	3	0	64	4	0	73	41	73	55
10	S. Chester	0	10	4	18	2	2	3	12	51	68	51	65
11	S. Muenchen	1	7	3	20	4	0	2	12	49	59	49	55
12	S. Infantis	0	10	2	5	10	0	16	3	46	49	46	70
13	S. Aberdeen	0	3	0	42	0	0	0	0	45	46	45	67
14	S. Typhimurium PT 12	0	21	0	1	2	2	11	3	40	35	40	40
15	S. Typhimurium PT 29	0	3	3	1	26	0	5	0	38	7	38	9
16	S. Typhimurium (PT pending)	1	1	0	0	1	2	31	1	37	0	37	0
17	S. Hvittingfoss	0	2	1	30	0	0	2	1	36	40	36	65
18	S. Typhimurium RDNC	2	15	0	15	1	0	3	0	36	30	36	37
19	S. Stanley	0	11	1	4	3	0	11	3	33	14	33	25
20	S. Typhimurium untypable	0	4	0	4	0	1	6	15	30	20	30	29
21	S. Montevideo	1	20	0	5	1	0	3	0	30	12	30	14
22	S. Waycross	0	14	0	13	0	0	0	0	27	46	27	60
23	S. Typhimurium PT U302	0	9	0	14	0	0	2	1	26	4	26	12
24	S. Oslo	0	1	21	1	0	0	1	0	24	4	24	1
25	S. Typhimurium PT U307	0	3	0	8	0	0	3	4	18	6	18	22