

# Communicable Diseases Surveillance

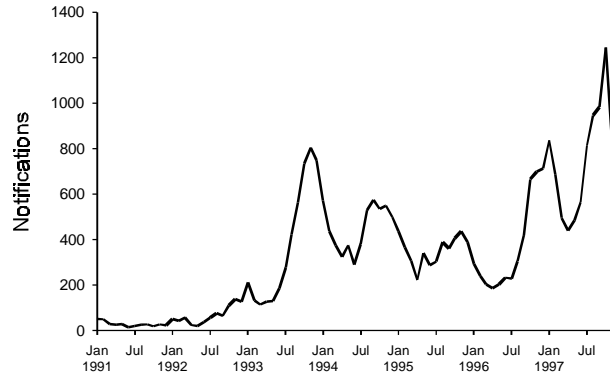
## *Pertussis epidemic continues*

In the 20 years from 1976 to 1995 there were 21 deaths from pertussis (whooping cough) in Australia. In contrast, from October 1996 to November 1997, there have been nine deaths; six in New South Wales, and one each in Queensland, Victoria and Western Australia. All were children aged between two weeks and four months of age (too young to have completed the primary course of vaccination against pertussis), and none had received more than one dose of a pertussis vaccine (personal communication, Communicable Disease Network Australia New Zealand).

Notifications of pertussis for 1997 are the highest recorded since the National Notifiable Diseases Surveillance System (NNDSS) was established in 1991. Up until 25 November, there were 8,368 notifications of pertussis with onset in 1997 (annual rate of 45.7 notifications per 100,000 population); the previous highest was 5,443 for the whole of 1994 (30.5 per 100,000 population) (Figure 1). The epidemic is widespread (Figure 2) and, in comparison to 1996, has increased markedly in all States and Territories except Victoria and the Northern Territory (Figure 3). Further notifications are expected, so it is likely that the notification rate for those cases with onset in 1997 will continue to increase.

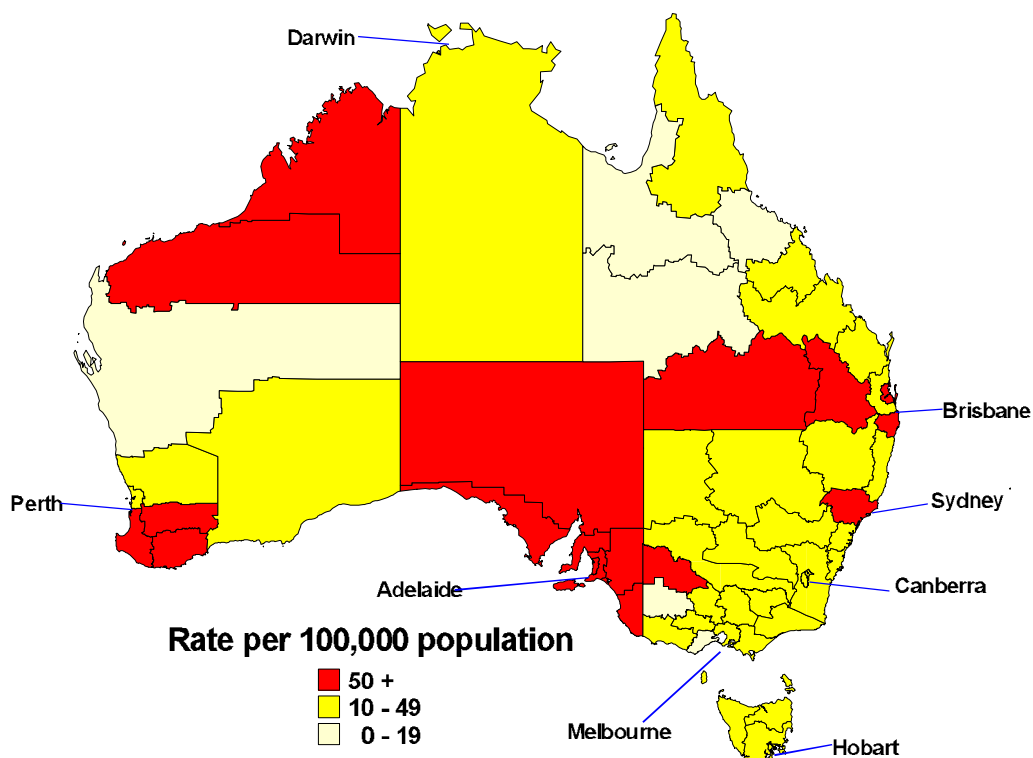
Since 1993, annual age-specific notification rates have been highest for infants (< 1 year of age) and school aged children (5-14 years of age), however, there has been a dramatic increase for both age groups in 1997 (Figure 4).

**Figure 1.** Notifications of pertussis, 1991 to 1997, by month of onset

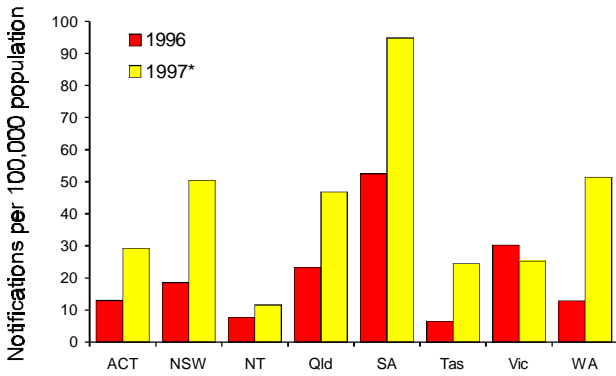


The high notification rates are very concerning because infants, particularly those under six months of age, are at the greatest risk of death from pertussis while the older age groups may be a source of infection.<sup>1</sup> Poor vaccination coverage, waning immunity among those who have been vaccinated, and/or increased testing/reporting have been suggested as possible reasons for the high rates among school aged children.<sup>2</sup> The NNDSS does not currently collect information on vaccination status, however, the lower rate for pre-school aged children is consistent with

**Figure 2.** Notification rate of pertussis by date of onset, 1 January to 30 November 1997, and Statistical Division of residence

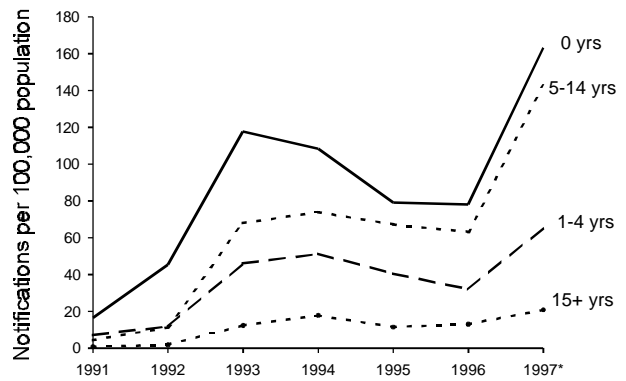


**Figure 3. Notification rate of pertussis, 1996 and 1997, by State or Territory**



\* Data for 1997 is incomplete and may be subject to revision

**Figure 4. Notification rate of pertussis, 1991 to 1997, by age and year of onset**

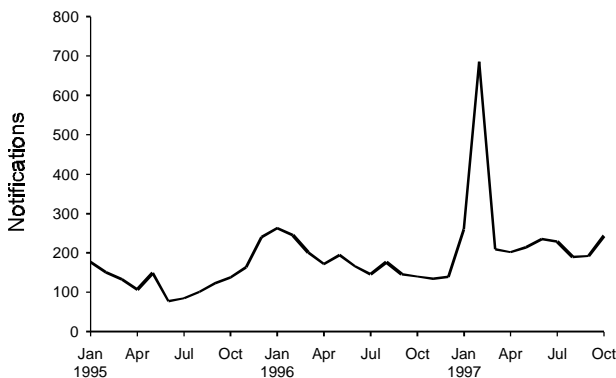


\* Data for 1997 is incomplete and may be subject to revision

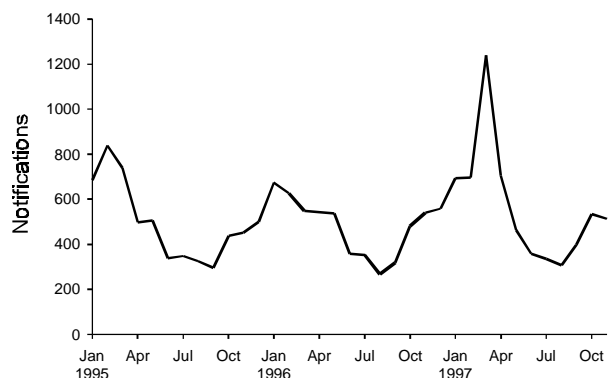
protection provided through the primary vaccination program.<sup>3</sup> The data also show much lower rates for five and six year old children compared to their school aged counterparts, which suggests that the diphtheria-tetanus-pertussis (DTP) booster, recently introduced for four to five year old children,<sup>4</sup> may be having an effect. So far in 1997, the notification rates for five and six year old children have been 81.4 and 105.8 per 100,000 population respectively, while the rates for those aged seven, eight and nine years are 144.1, 218.3 and 205.0 per 100,000 population respectively.

Complete vaccination of children remains the most important measure for the control of pertussis. Vaccination is currently recommended at 2, 4, 6 and 18 months of age with a booster prior to school entry (4-5 years of age).<sup>5</sup> Children who have not been vaccinated against pertussis and those not up to date with the recommended schedule should be vaccinated.

**Figure 5. Notifications of hepatitis A, 1995 to October 1997, by month of onset**



**Figure 6. Notifications of salmonellosis, 1995 to October 1997, by month of onset**



### References

1. Mandell GL, Bennett JE, Dolin R eds. Mandell, Douglas and Bennett's principles and practice of infectious diseases. Fourth edition. Churchill Livingstone, 1995.
2. Andrews R, Herceg A and Roberts C. Pertussis notifications in Australia 1991 to 1997. *Comm Dis Intell* 1997;21:145-148.
3. Black S. Epidemiology of pertussis. *Pediatr Infect Dis J* 1997;16:S85-898.
4. National Health and Medical Research Council. *The Australian immunisation procedures handbook*. Fifth edition. Canberra: NHMRC, 1995.
5. National Health and Medical Research Council. *The Australian immunisation handbook*. Sixth edition. Canberra: Australian Government Publishing Service, 1997.

### National Notifiable Diseases Surveillance System

The NNDSS is conducted under the auspices of the Communicable Diseases Network Australia New Zealand.

# NSW Health warns of whooping cough outbreak

*Posted Sun Oct 26, 2008 12:00pm AEDT*

**New South Wales Health is warning of an outbreak of whooping cough in the state.**

The Health Department says infection rates have increased from 2,000 cases last year, to 3,800 cases this year, and babies are the most vulnerable.

Dr Mitchell Smith from the department says the increase is worse in some areas.

"We think that also we're seeing a reflection of low immunisation rates in parts of New South Wales, particularly in the north coast and parts of western Sydney," he said.

"And secondly, people's immunisation does tend to wane with time."

**Tags:** [government-and-politics](#), [states-and-territories](#), [health](#), [diseases-and-disorders](#), [coughs-and-colds](#), [australia](#), [nsw](#)

<http://www.abc.net.au/news/stories/2008/10/26/2401442.htm>

27/10/2008



**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 2005;\* assessment date 31 March 2008**

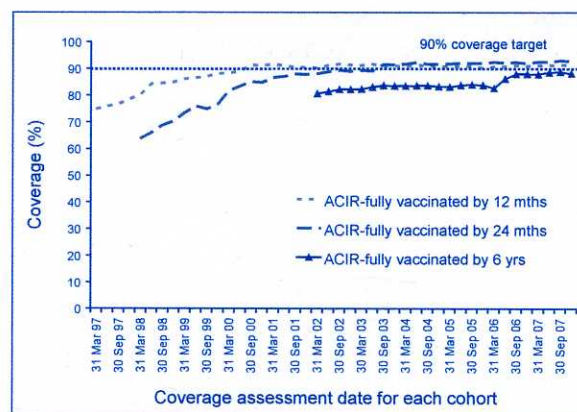
Vaccine	State or territory								Australia
	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	
Total number of children	1,156	22,580	868	13,916	4,357	1,576	16,715	6,697	67,865
Diphtheria, tetanus, pertussis (%)	95.6	94.8	95.9	94.6	95.0	95.8	95.7	94.4	95.0
Poliomyelitis (%)	95.6	94.8	95.9	94.6	95.0	95.8	95.7	94.4	95.0
<i>Haemophilus influenzae</i> type b (%)	95.6	95.1	94.2	93.7	93.6	95.7	94.5	94.1	94.5
Measles, mumps, rubella (%)	95.1	93.9	95.7	94.1	93.9	94.7	94.8	93.4	94.2
Hepatitis B (%)	96.8	95.5	96.9	95.4	95.5	96.4	96.3	95.3	95.7
Fully immunised (%)	93.9	92.6	93.9	92.5	92.7	94.1	93.6	91.6	92.8
Change in fully immunised since last quarter (%)	+0.1	-0.3	-0.2	+0.4	-0.2	-1.6	-0.5	+0.2	-0.1

\* The 12 months age data for this cohort was published in *Commun Dis Intell* 2007;31:252.

Immunisation coverage for children 'fully immunised' at 6 years of age for Australia decreased by 0.6 percentage points from the previous quarter to 88.2% (Table 3). For 'fully immunised' and all individual vaccines, there were important decreases of greater than 1 percentage point in South Australia, Tasmania, Victoria and Western Australia.

Figure 5 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 few years for all age groups. 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 5. Trends in vaccination coverage, Australia, 1997 to 31 December 2007, by age cohorts**



**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 2001;\* assessment date 31 March 2008**

Vaccine	State or territory								Australia
	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	
Total number of children	1,061	22,048	872	13,095	4,352	1,483	16,088	6,552	65,551
Diphtheria, tetanus, pertussis (%)	91.5	89.2	88.8	89.2	86.6	87.4	91.0	84.9	89.0
Poliomyelitis (%)	91.3	88.9	88.8	89.0	86.3	87.1	90.9	84.6	88.8
Measles, mumps, rubella (%)	91.0	88.9	89.3	89.0	86.2	87.0	90.8	84.7	88.8
Fully immunised (%)	90.6	88.3	88.3	88.4	85.7	86.4	90.3	83.9	88.2
Change in fully immunised since last quarter (%)	+1.8	-0.8	-0.1	+0.8	-1.9	-1.8	-1.0	-1.3	-0.6

\* The 12 months age data for this cohort was published in *Commun Dis Intell* 2003;27:302.





# National Notifiable Diseases Surveillance System

March 2008

DPT Vaxrate = 95.6 94.8 95.9 94.6 95.0 95.8 95.7 94.4 95.0

Number of notifications of Pertussis, received from State and Territory health authorities in the period of 1991 to 2007 and year-to-date notifications for 2008

	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	Aust
1991	0	36	0	131	38	2	66	45	318
1992	9	217	1	222	70	29	157	92	797
1993	45	1533	7	687	1326	56	496	260	4410
1994	3	1408	186	1922	761	34	449	663	5426
1995	33	1370	132	1347	456	110	402	339	4189
1996	29	1157	14	775	923	31	1376	227	4532
1997	2	4252	24	1900	1639	112	1515	1204	10648
1998	98	2306	24	1392	549	55	962	284	5670
1999	78	1414	2	963	228	635	941	96	4357
2000	208	3688	9	536	593	143	717	93	5987
2001	86	4437	150	1630	2010	104	864	227	9508
2002	55	2012	37	1853	473	37	868	231	5566
2003	357	2772	5	716	232	133	626	255	5096
2004	124	3569	27	1035	994	37	871	2097	8754
2005	315	5804	92	1776	1510	33	1155	516	11201
2006	258	4915	96	2172	2179	41	1066	264	10991
2007	95	2089	27	1535	376	25	1050	132	5329
2008	81	3521	351	1365	710	64	1076	216	7384

No of children in each birth cohort → 1,156 22,580 868 13,916 4,357 1,516 10,715 6,697

Links to other report types  
[\[All diseases by week or month\]](#) [\[All diseases by State/Territory\]](#)  
[\[Selected disease by month and year\]](#) [\[Selected disease by age group and sex\]](#)

[\[Top of the Page\]](#)

27 October, 2008

Navigation  
[Department of Health and Ageing](#) || [Office of Health Protection](#)  
[Home](#) - [About us](#) || [What's new](#) || [Surveillance](#) || [Publications](#) || [Communicable Diseases](#)  
[Network Australia](#) || [Quarantine](#) || [Contact us](#)

Copyright | [Disclaimer](#) | [Privacy](#)  
 ©Commonwealth of Australia



# National Notifiable Diseases Surveillance System

## Number of notifications of Pertussis\*, Australia, 2008 by age group and sex

	Male	Female	Unknown	Total
0-4	345	346	1	692
5-9	261	287	1	549
10-14	313	299	1	613
15-19	194	211	0	405
20-24	139	171	0	310
25-29	121	181	0	302
30-34	140	252	0	392
35-39	204	311	0	515
40-44	229	322	1	552
45-49	212	330	0	542
50-54	192	332	0	524
55-59	215	313	1	529
60-64	200	281	0	481
65-69	159	193	0	352
70-74	131	135	0	266
75-79	76	104	0	180
80-84	54	60	0	114
85+	26	34	1	61
Unknown	0	5	0	5
<b>Total</b>	<b>3211</b>	<b>4167</b>	<b>6</b>	<b>7384</b>

### Links to other report types

[\[All diseases by week or month\]](#)
[\[All diseases by State/Territory\]](#)  
[\[Selected disease by month and year\]](#)
[\[Selected disease by State/Territory and year\]](#)

[\[Top of the Page\]](#)

28 October, 2008

#### Navigation

[Department of Health and Ageing](#) || [Office of Health Protection](#)  
[Home - About us](#) || [What's new](#) || [Surveillance](#) || [Publications](#) || [Communicable Diseases](#)  
[Network Australia](#) || [Quarantine](#) || [Contact us](#)

[Copyright](#) | [Disclaimer](#) | [Privacy](#)  
 ©Commonwealth of Australia