

Communicable Diseases Report, NSW, July and August 2010

Communicable Diseases Branch
NSW Department of Health

For updated information, including data and facts on specific diseases, visit www.health.nsw.gov.au and click on **Public Health** and then **Infectious Diseases**. The communicable diseases site is available at: <http://www.health.nsw.gov.au/publichealth/infectious/index.asp>.

Figure 2 and Tables 1 and 2 show reports of communicable diseases received through to the end of July and August 2010 in New South Wales (NSW).

Enteric infections

Outbreaks of foodborne disease

Ten outbreaks of suspected foodborne disease were investigated in July and August 2010. In three of these outbreaks (one of which occurred in an aged-care facility) stool specimens tested positive for *Salmonella* Typhimurium. In one, samples of the fried ice-cream that the affected people had consumed in a restaurant also tested positive for *S. Typhimurium*. In the other two, environmental samples and food samples tested negative for any pathogens. In the remaining seven outbreaks none of the cases submitted a stool specimen for testing so the causative pathogen could not be identified. Several of these outbreak investigations are ongoing.

Outbreaks of gastroenteritis in institutional settings

One hundred and sixty-seven outbreaks of gastroenteritis in institutions were reported in July and August 2010, affecting 2795 people. Eighty-six outbreaks occurred in aged-care facilities, 45 in child-care centres, 33 in hospitals, one in a military institution and two in other institutions (a physical disability facility and a mental health facility). All outbreaks appeared to have been caused by person-to-person spread of a viral illness. In 60 outbreaks (36%) stool specimens tested positive for norovirus, and in 5 outbreaks (3%) stool specimens tested positive for

rotavirus. Test results for several outbreaks may still be pending.

Viral gastroenteritis tends to peak in winter months, when around 15 outbreaks per week are reported.

Gastroenteritis in the community

The number of patients presenting with gastrointestinal illness to 56 of the largest emergency departments in NSW increased slightly but remained within the usual range for the time of year (Figure 1).

Respiratory and other infections

Legionnaires' disease

Nine cases of Legionnaires' disease were reported in NSW in July and August 2010, including two cases due to *Legionella longbeachae* and seven cases due to *L. pneumophila*. For the same period in 2009, 15 cases of *L. longbeachae* and two of *L. pneumophila* infection were reported.

Two of the individuals with *L. pneumophila* reported spending time in the Sydney Olympic Park area during the incubation periods for their illness. Following an environmental investigation of the Sydney Olympic Park area on 28 August, water specimens collected from a cooling tower system in one of the stadiums tested positive for *L. pneumophila*. The contaminated cooling tower system was closed down until it could be cleaned and disinfected. While this cooling tower system could not be definitively linked to the two cases, NSW Health alerted general practitioners and respiratory doctors by fax, encouraging them to consider the issue when diagnosing people who had visited the Sydney Olympic Park area during August. The public were also alerted via the media.

Influenza

In July and August 2010, influenza activity in NSW (as measured by the number of people who presented to 56 of the state's largest emergency departments with influenza-like illness and the number of patients who tested positive for influenza at diagnostic laboratories) was low.

- There were 220 presentations (1.3 per 1000 presentations) for July and 236 presentations (1.7 per 1000 presentations) for August to 56 of the largest emergency departments in NSW of people with influenza-like illness.

- There were 33 cases of laboratory-confirmed influenza (including 19 of pandemic (H1N1) 2009) reported in July and 110 (including 83 of pandemic (H1N1) 2009) in August.
- Ten people with influenza were admitted to hospital intensive care units in July and 11 in August.

For a more detailed report on respiratory activity in NSW see: http://www.health.nsw.gov.au/PublicHealth/Infectious/influenza_reports.asp

Vaccine-preventable diseases

Measles

Eight cases of measles associated with an outbreak on the NSW North Coast were reported in July and August. The index case was an unimmunised student who had acquired the infection overseas. Six of the cases had close contact with this child at school; one further case occurred in a student attending different classes at the school.

The proportion of children who are reported to be fully vaccinated at 5 years of age in some North Coast communities is lower (61–93%) than in other parts of NSW (89–93%).

Three cases of measles were reported on the NSW Central Coast in August. The first case occurred in an unimmunised child who had acquired the infection overseas. Two subsequent cases occurred: one in an unimmunised sibling of the child and the other in a community contact of the child.

As previously reported, many people who were born after 1965 may not be immune to measles because they have neither acquired the measles infection nor received two doses of a measles vaccine. Measles vaccine is now routinely given to infants at 12 months and at 4 years, and this confers long-lasting immunity in 99% of recipients. These recent outbreaks highlight the importance of complete measles immunisation, particularly prior to overseas travel.

Meningococcal disease

Sixteen cases of meningococcal disease were reported in NSW in July and August. The ages of the affected people ranged from 0 to 67 years (six were aged less than 5 years). Six cases were caused by serogroup B, while serogroups C and Y caused one case each. For the remaining eight cases the serogroup was unknown.

Twenty-three confirmed cases and three clinically diagnosed cases were reported in the same period in 2009.

A free vaccine for serogroup C meningococcal disease is available for infants at 12 months of age. Consequently, serogroup C meningococcal disease is now mainly seen in adults and in unimmunised children. In NSW in 2009, 80% of cases of meningococcal disease (where the serogroup was known) were caused by serogroup B, for which there is no vaccine.

Pertussis (whooping cough)

During July and August, 862 cases of pertussis were reported in NSW. This is significantly lower than the number of cases reported for the same period in 2009 (1250 cases), however this total represents an increase in notifications over May and June 2010 when 684 cases were notified in NSW.

A free vaccine is available for infants at 2, 4 and 6 months (the first dose can be given as early as 6 weeks of age) with a booster dose at 4 years (which can be given from 3 years and 6 months of age). Immunisation reduces the risk of infection, however the vaccine does not provide lifelong protection, and re-infection can occur. Because pertussis immunity wanes over time, many older children and adults are susceptible to infection and can be the source of new infections in infants. For a limited time, free pertussis (dTpa) vaccine is available for all new parents, grandparents and any other adults who will regularly care for

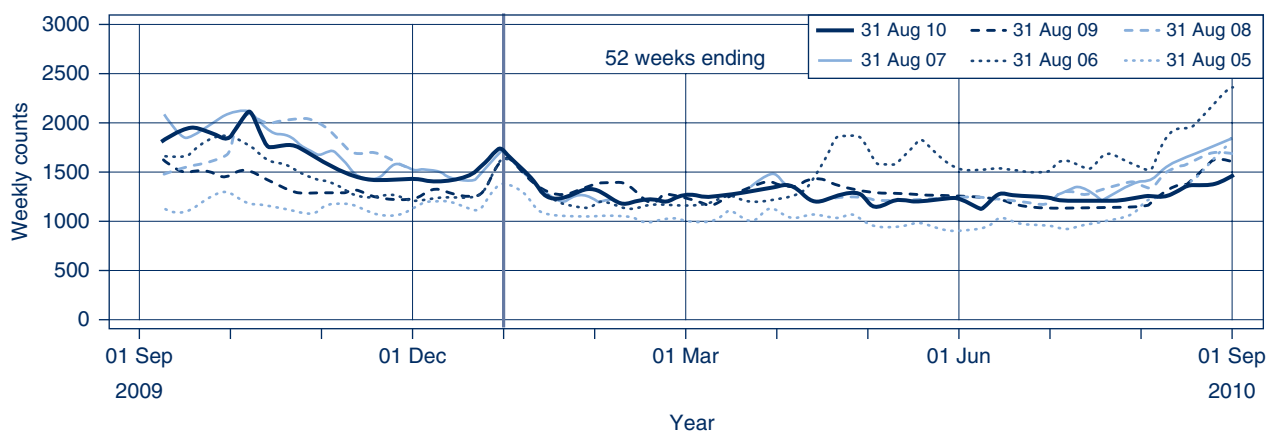


Figure 1. Total weekly counts of emergency department visits for gastrointestinal illness, for the 12 months to 31 August 2010 (thick line), compared with each of the 5 previous years (thin lines) (includes data from 56 of the largest NSW emergency departments).

infants less than 12 months of age. Free vaccine is also provided to Year 7 and Year 10 students as part of the NSW School-based Vaccination Program from 2010.

Haemophilus influenzae type b invasive infection

Three cases of *Haemophilus influenzae* type b invasive infection (Hib) were reported in NSW in July and August. One case occurred in an infant too young to be fully immunised, while the other cases occurred in adults. For the same period in 2009, there were no cases of Hib reported in NSW in any age group.

Sexually transmissible infections

Lymphogranuloma venereum

So far this year, 29 cases of lymphogranuloma venereum (LGV) have been reported in NSW, including five cases with onset in July and seven cases with onset in August. Gay men living in inner metropolitan Sydney have been most affected and the majority of cases have been acquired locally. Most patients have presented with moderate to severe proctitis. LGV in this outbreak is being caused by *Chlamydia trachomatis* serogroup L2b.

LGV is a rare sexually transmitted chlamydial infection that spreads through unprotected vaginal, anal or oral

sexual contact, especially if there is trauma to the skin or mucous membranes. Men who have sex with men, especially those that have unprotected anal sex, are at greatest risk. The bacteria that cause LGV are rare types of chlamydia, however LGV infection is a more aggressive disease than common chlamydial infections. The infection is treated with an extended course of antibiotics.

In response to an increased number of cases reported in May, NSW Health issued an alert to general practitioners in inner Sydney. This alert included information on clinical presentation, diagnosis, treatment and public health management (including contact tracing). Since this time, laboratories have reported increased testing requests for LGV. Information about LGV was also included in the gay press.

Co-infection with other sexually transmissible infections occurs frequently in gay men with LGV and a large proportion of cases overseas have been reported to have HIV. The outbreak in NSW is likely to also include a large proportion of HIV positive men. Active case finding is an important part of a comprehensive management plan and this should include notification and assessment of all sexual partners of the index patient from 1 month prior to their first symptoms.

Figure 2. Reports of selected communicable diseases, NSW, January 2004 to August 2010, by month of onset.

Preliminary data: case counts in recent months may increase because of reporting delays.

Laboratory-confirmed cases only, except for measles, meningococcal disease and pertussis.

BFV, Barmah Forest virus infection; RRV, Ross River virus infections; lab conf, laboratory confirmed;

Men Gp C and Gp B, meningococcal disease due to serogroup C and serogroup B infection; other/unk, other or unknown serogroups.

NB: Multiple series in graphs are stacked, except gastroenteritis outbreaks.

NB: Outbreaks are more likely to be reported by nursing homes & hospitals than by other institutions.

NSW Population	
Male	50%
<5 y	7%
5–24 y	27%
25–64 y	53%
65+ y	13%
Rural	46%

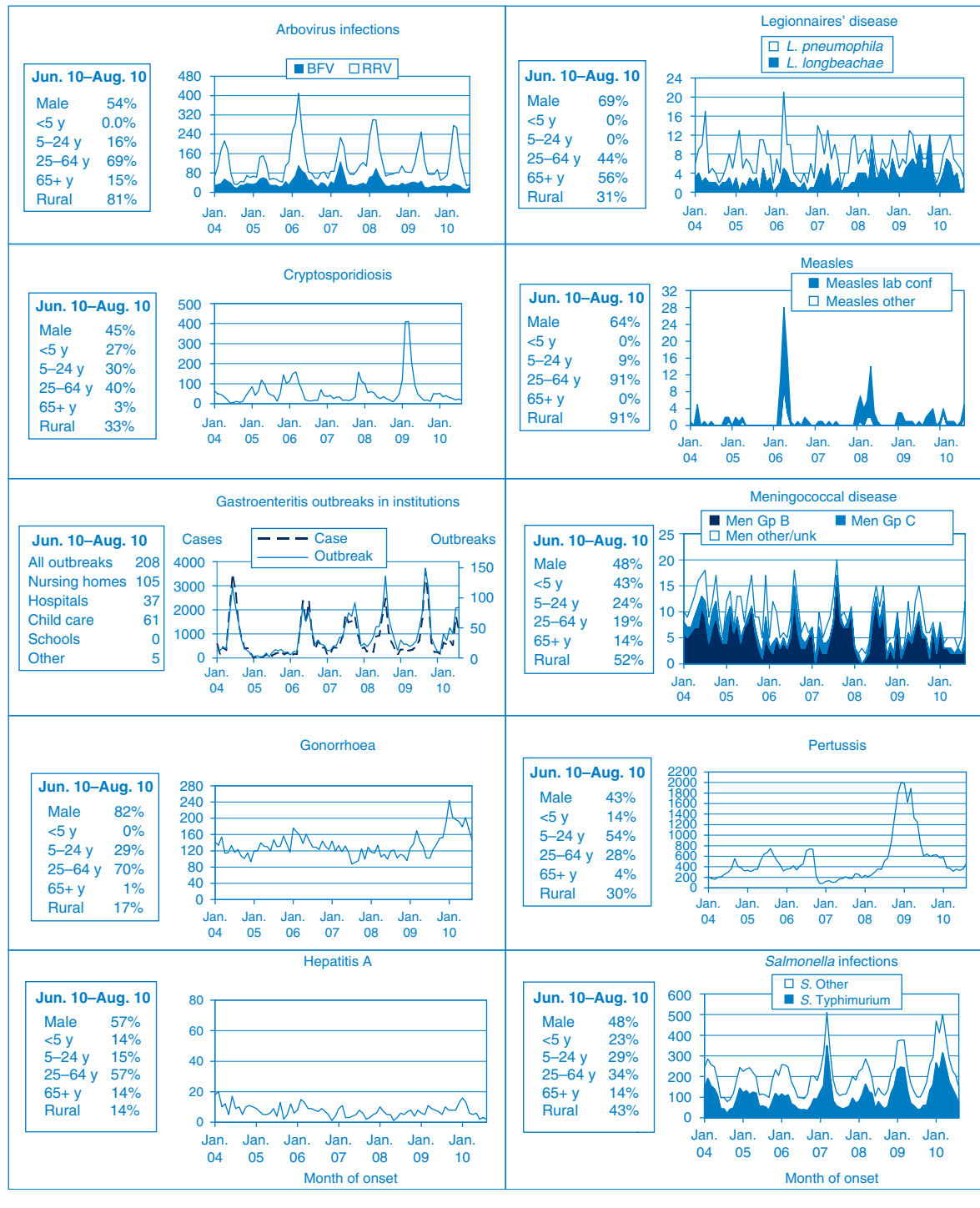


Table 1. Reports of notifiable conditions received in July 2010 by area health services

Condition	Area Health Service (2010)												Total For July ^b to date ^b							
	Greater Southern			Greater Western			Hunter New England		North Coast			Northern Sydney Central Coast			South Eastern Sydney Illawarra		Sydney South West		Sydney West	
	GMA	SA	FWA	MAC	MWA	HUN	NEA	MNC	NRA	CCA	NSA	ILL	SES	CSA	SWS	WEN	WSA	JHS		
Bloodborne and sexually transmitted																				
Chancroid ^a	-	43	30	14	40	233	41	48	75	58	102	87	-	112	86	55	130	12	1518	-
Chlamydia (genital) ^a	73	5	1	1	4	17	7	4	2	5	16	9	32	-	-	11	18	-	138	10737
Gonorrhoea ^a	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1429
Hepatitis B – acute viral ^a	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	22
Hepatitis B – other ^a	7	-	6	2	3	10	5	3	2	1	24	10	46	49	60	6	56	9	304	1842
Hepatitis C – acute viral ^a	-	-	-	2	-	-	-	1	-	-	-	-	-	-	-	-	-	-	3	26
Hepatitis C – other ^a	8	11	9	4	9	30	5	18	23	11	15	17	52	32	47	19	25	40	379	2853
Hepatitis D – unspecified ^a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	3
Lymphogranuloma venereum	-	1	2	-	-	-	-	1	1	-	1	-	4	-	2	-	-	-	7	22
Syphilis	-	-	-	-	-	-	-	-	-	-	6	-	18	8	3	-	-	-	44	437
Vectorborne																				
Barmah Forest virus ^a	-	2	-	1	-	2	1	2	3	-	-	1	-	-	-	-	-	-	12	166
Ross River virus ^a	7	-	1	2	2	3	-	3	2	-	-	1	-	1	-	1	1	-	25	874
Arboviral infection (other) ^a	-	-	-	-	-	5	-	1	3	-	1	1	5	2	-	2	2	-	77	21
Malaria ^a	1	-	-	-	-	-	-	-	-	2	-	1	-	-	-	-	3	-	8	53
Zoonoses																				
Anthrax ^a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Brucellosis ^a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
Leptospirosis ^a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10
Lyssavirus ^a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Psittacosis ^a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
Q fever ^a	1	1	-	-	-	2	2	-	2	-	-	1	-	-	2	1	1	-	14	75
Respiratory and other																				
Blood lead level ^a	3	-	-	4	-	-	-	-	-	-	-	-	-	1	1	1	1	-	-	10
Invasive pneumococcal infection ^a	2	2	-	1	1	8	2	1	-	2	13	2	13	2	5	7	5	-	65	272
<i>Legionella longbeachae</i> infection ^a	-	-	-	1	-	1	-	-	-	-	2	1	-	-	-	-	1	-	4	30
<i>Legionella pneumophila</i> infection ^a	-	-	-	-	-	1	-	-	-	2	-	-	1	-	-	-	-	-	4	26
Legionnaires' disease (other) ^a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
Leprosy	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Meningococcal infection (invasive) ^a	-	-	-	-	-	1	-	-	-	1	-	-	-	-	1	1	1	-	5	33
Tuberculosis	1	1	-	-	-	-	-	-	-	-	-	-	4	5	-	1	3	-	15	166
Vaccine-preventable																				
Adverse event after immunisation	3	-	-	4	-	-	-	-	-	-	-	-	-	1	1	1	-	-	-	10
<i>H. influenzae b</i> infection (invasive) ^a	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	1	-	-	2	4
Measles	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8
Mumps ^a	-	-	-	-	-	-	-	-	-	1	-	-	-	1	2	-	-	-	4	21
Pertussis	16	19	9	1	14	28	3	4	-	11	62	13	46	21	35	23	49	-	356	2748
Rubella ^a	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	1	8
Tetanus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Enteric																				
Botulism	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cholera ^a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cryptosporidiosis ^a	5	-	1	1	4	2	4	-	1	1	2	1	3	2	-	1	1	-	25	231
Giardiasis ^a	6	5	1	1	4	17	7	4	2	5	16	9	32	-	-	11	18	-	138	1456
Haemolytic uraemic syndrome	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
Hepatitis A ^a	-	-	-	-	-	-	-	-	-	-	2	-	1	-	1	-	-	-	5	59
Hepatitis E ^a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	9
Listeriosis ^a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	19
Rotavirus ^a	3	1	-	-	-	15	-	1	3	4	14	3	12	2	5	5	1	-	69	388
Salmellosis ^a	6	5	3	6	3	24	9	5	9	14	34	11	28	11	22	9	22	-	227	2545
Shigellosis ^a	-	-	-	-	-	2	-	-	-	-	-	-	4	1	1	1	-	-	9	55
Typhoid ^a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	26
Verotoxin producing <i>E. coli</i> ^a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9
Miscellaneous																				
Creutzfeldt-Jakob disease	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7
Meningococcal conjunctivitis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1

^aLaboratory-confirmed cases only. ^bIncludes cases with unknown postcode. NB: Data are current and accurate as at the preparation date. The number of cases reported is, however, subject to change, as cases may be entered at a later date or retracted upon further investigation. Historical area health service configurations are included for continuity/ comparison purposes and to highlight regional differences. NB: Influenza data are reported separately. See www.health.nsw.gov.au/publichealth/infectious/index.asp for up-to-date information. NB: From 1 January 2005, Hunter New England AHS also comprises Great Lakes, Gloucester and Greater Taree LGAs (LGA, Local Government Area), Sydney West also comprises Greater Lithgow LGA. NB: HIV and AIDS data are reported separately in the Public Health Bulletin quarterly. GMA, Greater Murray Area; MAC, Macquarie Area; NEA, New England Area; NSA, Northern Sydney Area; CSA, Central Sydney Area; FWA, Far West Area; WSA, Western Sydney Area; CCA, Central Coast Area; SES, South Eastern Sydney Area; WEN, Wentworth Area; SA, Southern Area; MWA, Mid Western Area; ILL, Illawarra Area; SWS, South Western Sydney Area; HUN, Hunter Area; MNC, Mid North Coast Area; JHS, Justice Health Service.

Table 2. Reports of notifiable conditions received in August 2010 by area health services

Condition	Area Health Service (2010)										Total Year For August ^b to date ^b										
	Greater Southern GMA	SA	FWA	MAC	MWA	HUN	NEA	MNC	NRA	CCA		NRA	NSA	ILL	SES	Sydney East Sydney West	CSA	SWS	WEN	WSA	JHS
Bloodborne and sexually transmitted																					
Chancroid ^d	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chlamydia (genital) ^a	56	30	19	15	26	187	53	32	29	92	72	69	131	-	131	116	53	115	10	-	-
Gonorrhoea ^a	1	3	-	-	-	15	2	3	2	5	8	4	75	-	31	16	3	14	1	-	-
Hepatitis B – acute viral ^a	1	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
Hepatitis B – other ^a	2	1	2	1	-	5	1	3	-	-	17	5	40	-	29	43	3	50	7	-	-
Hepatitis C – acute viral ^a	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-
Hepatitis C – other ^a	9	11	1	2	9	20	6	13	12	13	15	13	20	-	33	55	14	26	28	-	-
Hepatitis D – unspecified ^a	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
Lymphogranuloma venereum	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-
Syphilis	-	-	-	-	-	-	1	1	-	-	1	-	-	-	2	-	1	-	-	-	-
Vectorborne																					
Barmah Forest virus ^a	-	-	-	-	-	2	-	5	4	-	-	-	-	-	-	-	-	-	-	-	-
Ross River virus ^a	2	-	-	1	-	5	2	4	5	2	-	-	1	-	1	-	-	-	-	-	-
Arboviral infection (other) ^a	-	-	-	-	-	4	1	-	2	-	3	-	3	-	1	2	1	1	4	-	-
Malaria ^a	-	-	-	-	-	-	-	-	-	-	2	-	-	-	2	1	1	1	4	-	-
Zoonoses																					
Anthrax ^a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Brucellosis ^a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Leptospirosis ^a	1	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1	-	-	-	-	-
Lyssavirus ^a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Psittacosis ^a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Q fever ^a	-	1	1	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Respiratory and other																					
Blood lead level ^a	-	-	-	-	-	1	-	2	1	-	-	-	-	-	2	1	-	-	-	-	-
Invasive pneumococcal infection ^a	1	3	-	2	3	4	3	2	1	2	4	4	8	-	5	7	3	5	-	-	-
<i>Legionella longbeachae</i> infection ^a	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1	-	-	-	-	-	-
<i>Legionella pneumophila</i> infection ^a	-	-	-	-	-	-	-	-	-	1	-	-	-	-	1	1	1	-	-	-	-
Legionnaires' disease (other) ^a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Leprosy	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Meningococcal infection (invasive) ^a	-	-	-	-	-	1	2	1	-	-	-	2	-	-	1	1	1	1	4	-	-
Tuberculosis	-	-	-	-	-	1	-	-	-	2	-	-	5	-	-	-	-	-	-	-	-
Vaccine-preventable																					
Adverse event after immunisation ^a	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	1	-	-	-	-	-
<i>H. influenzae b</i> infection (invasive) ^a	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
Measles	-	-	-	-	-	1	-	-	7	1	-	-	-	-	-	-	-	-	-	-	-
Mumps ^a	-	-	-	-	-	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
Perussis	16	17	14	4	23	25	6	7	5	8	128	19	73	-	36	56	14	69	-	-	-
Rubella ^a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tetanus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Enteric																					
Botulism	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cholera ^a	-	-	-	-	1	1	-	-	1	-	5	1	5	-	2	4	-	5	-	-	-
Cryptosporidiosis ^a	5	3	1	-	3	17	3	4	1	6	12	8	35	-	-	-	8	13	-	-	-
Giardiasis ^a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Haemolytic uraemic syndrome	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-
Hepatitis A ^a	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hepatitis E ^a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-
Listeriosis ^a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Rotavirus ^a	10	4	-	-	1	29	1	1	3	9	11	2	17	-	11	3	4	10	-	-	-
Salmonellosis ^a	7	4	-	1	2	21	4	3	7	5	29	9	41	-	22	13	5	25	-	-	-
Shigellosis ^a	-	-	-	-	-	-	-	-	1	-	-	-	6	-	-	3	-	2	-	-	-
Typhoid ^d	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-
Verotoxin producing <i>E. coli</i> ^a	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Miscellaneous																					
Creutzfeldt-Jakob disease	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Meningococcal conjunctivitis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

^aLaboratory-confirmed cases only. ^bIncludes cases with unknown postcode. NB: Data are current and accurate as at the preparation date. The number of cases reported is, however, subject to change, as cases may be entered at a later date or retracted upon further investigation. Historical Area Health Service configurations are included for continuity/comparison purposes, and to highlight regional differences. NB: Influenza data is not provided here since May 2009 and refer to web link. NB: From 1 January 2005, Hunter New England AHS also comprises Great Lakes, Gloucester and Greater Taree LGAs (LGA, Local Government Area). Sydney West also comprises Greater Lithgow LGA. NB: HIV and AIDS data are reported separately in the Public Health Bulletin quarterly. GMA, Greater Murray Area; MWA, Macquarie Area; NEA, New England Area; CCA, Central Coast Area; SES, South Eastern Sydney Area; WEN, Wentworth Area; NRA, Northern Rivers Area; ILL, Illawarra Area; SA, Southern Area; MNC, Mid North Coast Area; NSA, Northern Sydney Area; CSA, Central Sydney Area; FWA, Far West Area; HUN, Hunter Area; WSA, Western Sydney Area; SWS, South Western Sydney Area; JHS, Justice Health Service.