NSW GOVERNMENT | Health

Vol. 22(7–8) • July–August 2011
ISSN 1034 7674

NSW PUBLIC HEALTH BULLETIN

Year in review

Year in review: health protection in NSW, 2010

Centre for Health Protection, NSW Department of Health

The prevention and control of communicable and environmental threats to health is the work of health protection services around the world. This year we expand the usual year in review of communicable disease surveillance in NSW to highlight some of the work of NSW health protection services in 2010. The annual review of notifications of communicable diseases in NSW is embedded within this report; for detail on surveillance data, refer to Tables 1–5, which show disease-specific data on notifiable conditions* reported by: year of onset of illness; month of onset of illness; local health district; and age group and sex.

The **Centre for Health Protection** aims to reduce the threats to health and the burden of illness posed by communicable diseases and the environment in New South Wales (NSW). It achieves this through the development and application of legislation, regulations, policies and guidelines, through allocation of resources, monitoring of program performance (in non-government, community, education, ambulatory and inpatient settings) and collaboration with public health units, local health districts and other agencies. The Centre has three branches which are responsible for these activities:

- The **Environmental Health Branch** facilitates the prevention, assessment and management of environmental factors which can adversely affect human health.
- The **AIDS and Infectious Diseases Branch** is responsible for policy and program management activities that seek to prevent and reduce morbidity associated with bloodborne, sexually transmissible and vaccine-preventable diseases.
- The **Communicable Diseases Branch** conducts surveillance for notifiable communicable diseases and develops control measures to help prevent their spread.

Vaccine-preventable diseases

Notification data

There were 9900 notifications of vaccine-preventable disease reported in NSW in 2010. This represents a 45% increase compared with the previous 5-year average annual disease count. Highlights in 2010 included:

- A continued high level of **pertussis** activity with 9255 notifications, compared with 12 408 in 2009. The number of notifications was highest in children aged 5–9 years (2719 notifications) and 10–14 years (1606 notifications).
- A continued long-term decline in the number of notifications of **meningococcal disease** over the past 10 years (73 notifications compared with 91 in 2009). The greatest decline was in notifications of meningococcal disease due to serogroup C disease, with six cases notified in 2010. Free immunisation against meningococcal disease due to serogroup C meningococcal disease commenced in 2003.
- A small rise in **measles** notifications with 26 cases notified compared with 19 in 2009. Of the notifications in 2010, 15 were associated with an outbreak on the NSW North Coast (three from correctional facilities) linked to an unimmunised person who acquired the infection overseas.

Prevention activities

Immunisation rates for children and adolescents have improved in some age groups in recent years in NSW, however further work is required to improve coverage rates for 12-month old Aboriginal children.

According to the Australian Childhood Immunisation Register, in 2010 full immunisation was recorded for:

- 91.4% of 12-month old children, a decrease of 0.7% from 2009[a]

*Please note that from the May–June 2011 issue of the *Bulletin*, 'notifiable conditions' are now referred to in both text and tables as 'scheduled medical conditions', reflecting the terminology of the NSW *Public Health Act 2010*.

[a]A child is assessed as fully vaccinated at 12 months of age if he/she has received age-appropriate vaccinations against diphtheria, tetanus, pertussis, polio, *Haemophilus influenzae* type B and hepatitis B.

10.1071/NB11020

Table 1. Disease notifications by year of onset of illness, NSW, 1993–2010

Condition	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Adverse event after immunisation	23	40	28	56	70	95	16	42	111	177	219	187	107	72	239	257	126	168
Anthrax	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
Arboviral infection	628	372	525	1221	1804	770	1215	971	1178	652	1015	1138	1077	1918	1495	1835	1408	1510
Barmah Forest virus infection[a]	25	39	271	172	185	134	249	197	395	395	451	400	449	643	574	529	358	252
Ross River virus infection[a]	598	331	236	1031	1600	575	951	748	717	182	492	697	575	1221	839	1152	908	1052
Other[a]	5	2	18	18	19	61	15	26	66	75	72	41	53	54	82	154	142	206
Blood lead level ≥ 15 µg/dl[a]	Not notifiable until December 1996				710	877	699	994	513	499	335	302	234	295	286	263	203	212
Botulism	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0
Brucellosis[a]	4	4	2	1	3	3	2	1	1	2	3	7	3	9	4	1	4	2
Chancroid[a]	Not notifiable until December 1998						1	0	0	0	0	0	0	0	0	0	0	0
Chlamydia trachomatis infection						566	2440	3481	4465	5764	7721	9956	11 216	12 027	12 404	13 967	14 923	18 139
Congenital chlamydia[a]	Not notifiable until August 1998					5	14	18	16	15	22	28	46	39	31	44	51	36
Chlamydia – other[a]	Not notifiable until August 1998					561	2426	3463	4449	5749	7699	9928	11 170	11 988	12 373	13 923	14 872	18 103
Cholera[a]	1	0	1	3	1	1	2	0	1	1	0	1	0	3	2	2	3	2
Creutzfeldt-Jakob disease[a]	Not notifiable until April 2004											6	8	11	9	8	10	6
Cryptosporidiosis[a]	Not notifiable until December 1996				156	1127	121	134	194	306	203	351	847	777	542	485	1462	345
Diphtheria[a]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Foodborne illness (NOS)[b]	106	213	270	211	255	201	151	147	56	41	1071	550	309	507	763	667	903	728
Gastroenteritis (institutional)	443	296	1359	554	939	738	673	697	775	1752	3583	12 784	1395	10 641	10 488	10 135	11 769	9386
Giardiasis[a]	Not notifiable until August 1998					401	1091	978	966	858	1027	1228	1448	1721	1943	1779	2097	2289
Gonorrhoea[a]	382	357	428	522	636	1051	1276	1047	1351	1500	1312	1415	1558	1724	1368	1313	1638	2284
Haemolytic uraemic syndrome	Not notifiable until December 1996				3	6	10	9	2	7	5	9	11	11	12	17	4	3
H. influenzae serotype b[a]	124	61	29	13	17	11	13	8	7	10	6	4	7	11	7	8	6	6
Hepatitis A[a]	579	583	612	956	1422	923	412	191	196	146	123	137	79	94	65	69	96	84
Hepatitis B	3567	3944	3947	3439	3097	3155	3441	3675	3749	3370	2721	2668	2710	2481	2596	2524	2620	2466
Hepatitis B – acute viral[a]	95	73	61	43	53	56	72	97	89	87	74	51	56	52	56	44	37	34
Hepatitis B – other[a]	3472	3871	3886	3396	3044	3099	3369	3578	3660	3283	2647	2617	2654	2429	2540	2480	2583	2432
Hepatitis C	5846	7716	6677	6710	6608	6913	7945	7630	7263	6227	4894	4595	4310	4321	4164	3734	3824	3553
Hepatitis C – acute viral[a]	21	14	31	18	19	110	103	214	272	144	122	58	43	56	64	26	40	36
Hepatitis C – other[a]	5825	7702	6646	6692	6589	6803	7842	7416	6991	6083	4772	4537	4267	4265	4100	3708	3784	3517
Hepatitis D[a]	12	19	19	9	11	3	13	12	11	9	12	14	15	15	11	14	9	7
Hepatitis E[a]	1	2	0	3	6	4	7	9	6	6	5	8	7	10	8	14	17	15
HIV infection[a]	589	503	538	450	424	404	379	352	344	397	413	403	392	366	387	326	329	305
Influenza									244	1006	856	1004	1486	683	2067	1891	12 832	1580
Influenza – Type A[a]	Not notifiable until December 2000								216	766	763	817	1167	490	1705	843	12 556	1396
Influenza – Type B[a]	Not notifiable until December 2000								27	239	55	160	298	183	185	1028	162	142
Influenza – Type A&B[a]	Not notifiable until December 2003											0	10	2	3	3	12	36
Influenza – Type NOS[a]	Not notifiable until December 2000								1	1	38	27	11	8	174	17	102	6
Legionellosis	66	60	75	74	33	45	41	41	68	44	59	80	88	78	105	90	94	85
Legionella longbeachae[a]	13	8	16	30	9	18	12	12	29	21	37	27	24	22	29	52	64	42
L. pneumophila[a]	34	30	35	34	18	22	22	26	38	22	22	51	63	56	74	37	28	35
Legionnaires' disease – other	19	22	24	10	6	5	7	3	1	1	0	2	1	0	2	1	2	8
Leprosy	5	3	3	2	0	0	1	2	3	0	2	5	1	1	4	4	0	1
Leptospirosis[a]	16	14	6	33	33	50	56	52	65	39	39	39	34	17	9	17	18	19
Listeriosis[a]	12	10	14	22	23	28	22	18	12	11	28	30	25	26	22	34	27	26
Lymphogranuloma venereum[a]	0	0	0	0	0	0	0	0	0	0	0	1	2	1	0	3	4	55
Malaria[a]	173	184	96	202	173	157	174	227	154	103	119	97	204	136	93	109	88	117
Measles[a]	2345	1483	596	191	272	119	33	31	30	7	18	12	5	60	3	39	19	26
Meningococcal disease	153	142	113	161	218	184	214	247	229	212	194	146	136	102	108	80	91	73
Meningococcal – serogroup B[a]	8	8	27	40	53	54	94	93	88	104	98	81	73	54	76	49	57	49
Meningococcal – serogroup C[a]	8	11	8	38	55	55	59	64	38	54	44	24	15	13	9	9	7	6
Meningococcal – serogroup W135[a]	0	0	1	0	2	4	4	3	1	2	2	5	8	5	2	5	5	4
Meningococcal – serogroup Y[a]	1	1	0	1	0	7	1	7	2	2	5	3	3	1	5	4	3	3
Meningococcal – other	136	122	77	82	108	64	56	80	100	50	45	33	37	29	16	13	19	11
Meningococcal – conjunctivitis	0	0	0	0	0	2	3	4	2	3	4	3	3	5	3	1	4	2
Mumps[a]	13	11	14	27	30	38	32	91	28	29	36	64	109	154	318	76	39	34
Paratyphoid[a,c]	9	11	12	15	5	9	5	14	11	13	22	10	0	0	0	0		
Pertussis	1534	1405	1370	1157	4246	2306	1413	3696	4441	2013	2771	3568	5805	4915	2099	8756	12 408	9255
Pneumococcal disease (invasive)[a]	Not notifiable until December 2000								444	878	796	903	637	564	523	549	474	493
Psittacosis[a]	Not notifiable until December 2000								38	155	88	81	120	94	35	40	22	11
Q fever[a]	403	267	200	286	258	235	164	131	143	308	287	219	143	176	205	166	139	126
Rotavirus[a]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1215
Rubella	1186	233	2375	636	153	78	46	190	58	35	24	18	10	37	9	17	7	12
Congenital rubella[a]	2	4	1	5	0	0	1	0	0	0	1	1	0	0	1	0	0	0
Rubella – other[a]	1184	229	2374	631	153	78	45	190	58	35	23	17	10	37	8	17	7	12
Salmonella infection[a,c]	944	1075	1276	1228	1700	1815	1427	1409	1654	2100	1847	2135	2165	2055	2540	2239	2658	3671
Shigellosis[a]	Not notifiable until December 2000								133	82	57	96	133	74	70	107	148	112
Syphilis	21	64	183	117	95	86	223	291	376	458	775	752	548	609	818	835	929	707
Congenital syphilis	0	2	6	3	3	0	3	3	1	2	3	1	9	4	5	3	0	0
Syphilis infection[a,d]	7	28	131	72	57	44	85	79	65	126	238	293	240	223	451	426	532	387
Syphilis – other[a]	14	34	46	42	35	42	135	209	310	330	534	458	299	382	362	406	397	320
Tetanus	5	4	0	1	3	3	1	3	0	0	1	0	1	2	2	1	1	1
Tuberculosis[a,e]	390	388	443	407	422	384	477	450	421	448	378	408	455	452	452	488	505	392
Typhoid[a]	28	25	27	30	27	18	32	26	30	24	14	38	26	34	32	43	45	28
Verotoxin-producing *Escherichia coli* infections[a]	Not notifiable until December 1996				0	2	0	1	1	6	3	5	16	10	23	19	21	10

Onset of illness: the earlier of patient reported onset date, specimen date or date of notification.
[a]Laboratory-confirmed cases only. [b]Foodborne illness cases are only those notified as part of an outbreak. [c]From 2005, all paratyphoid recorded as salmonellosis. [d]Includes syphilis primary, syphilis secondary, syphilis < 1 y duration and syphilis newly acquired. [e]Tuberculosis data reported on diagnosis year. [f]Includes cases with unknown PHU.
NOS: not otherwise specified.
No case of the following diseases have been notified since 1991: plague[b], diphtheria[b], granuloma inguinale[b], lyssavirus[b], poliomyelitis[b], rabies, smallpox, typhus[b], viral haemorrhagic fever, yellow fever.
2009 influenza data: cases reported to public health units; contain 50 laboratory notifications from either interstate residents or overseas travellers.
Please note that from the May–June 2011 issue of the *Bulletin*, 'notifiable conditions' are now referred to in both text and tables as 'scheduled medical conditions', reflecting the terminology of the NSW *Public Health Act 2010*.

Table 2. Disease notifications by month of onset of illness, NSW, 2010

Condition	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Total
Adverse event after immunisation	6	14	40	51	16	4	5	5	10	7	7	3	168
Anthrax	0	1	0	0	0	0	0	0	0	0	0	0	1
Arboviral infection	82	168	283	275	161	102	52	56	53	75	106	97	1510
Barmah Forest virus infection[a]	25	23	34	29	26	15	9	12	14	12	27	26	252
Ross River virus infection[a]	48	134	241	236	119	70	15	28	26	39	44	52	1052
Other[a]	9	11	8	10	16	17	28	16	13	24	35	19	206
Blood lead level ≥ 15 µg/dl[a]	3	15	17	13	13	24	26	26	22	21	21	11	212
Brucellosis[a]	1	0	1	0	0	0	0	0	0	0	0	0	2
Chlamydia trachomatis infection	1387	1571	1813	1381	1546	1538	1434	1551	1485	1487	1630	1316	18 139
Congenital chlamydia[a]	1	3	6	1	3	5	2	4	2	3	1	5	36
Chlamydia – other[a]	1386	1568	1807	1380	1543	1533	1432	1547	1483	1484	1629	1311	18 103
Cholera[a]	0	0	0	0	0	0	1	1	0	0	0	0	2
Creutzfeldt-Jakob disease[a]	0	1	1	0	1	1	0	0	1	0	1	0	6
Cryptosporidiosis[a]	51	35	41	30	29	19	23	19	22	21	33	22	345
Foodborne illness (NOS)[b]	225	18	71	71	58	107	16	61	28	29	18	26	728
Gastroenteritis (institutional)	264	159	633	563	798	667	1707	1643	1751	652	277	272	7651
Giardiasis[a]	225	234	271	240	193	173	162	170	158	150	155	158	2289
Gonorrhoea[a]	240	195	194	192	179	198	176	203	179	187	173	168	2284
H. influenzae serotype b[a]	0	0	0	0	2	0	2	1	1	0	0	0	6
Haemolytic uraemic syndrome	1	1	0	0	0	0	0	1	0	0	0	0	3
Hepatitis A[a]	16	13	5	5	6	3	3	2	12	9	6	4	84
Hepatitis B	193	203	237	176	206	232	229	200	221	212	199	158	2466
Hepatitis B – acute viral[a]	2	2	4	2	5	1	2	7	4	1	2	2	34
Hepatitis B – other[a]	191	201	233	174	201	231	227	193	217	211	197	156	2432
Hepatitis C	270	304	288	286	303	308	328	321	333	307	293	212	3553
Hepatitis C – acute viral[a]	2	2	5	1	3	4	3	5	5	3	3	0	36
Hepatitis C – other[a]	268	302	283	285	300	304	325	316	328	304	290	212	3517
Hepatitis D[a]	1	0	0	0	1	2	1	1	1	0	0	0	7
Hepatitis E[a]	1	3	1	1	2	1	3	1	1	1	0	0	15
HIV infection[a]	26	33	24	23	24	28	29	22	31	22	27	16	305
Influenza	54	35	37	70	54	49	99	270	410	274	111	117	1580
Influenza – Type A[a]	49	30	35	67	46	46	90	235	372	241	88	97	1396
Influenza – Type B[a]	3	5	1	1	6	2	6	18	34	33	16	17	142
Influenza – Type A&B[a]	2	0	1	2	2	1	3	16	4	0	5	0	36
Influenza – Type NOS[a]	0	0	0	0	0	0	0	1	0	0	2	3	6
Legionellosis	4	7	10	11	7	9	7	6	4	7	7	6	85
Legionella longbeachae[a]	2	4	7	6	3	6	0	2	1	3	5	3	42
L. pneumophila[a]	1	3	3	5	4	2	6	2	3	3	1	2	35
Legionnaires' disease – other	1	0	0	0	0	1	1	2	0	1	1	1	8
Leprosy	0	0	1	0	0	0	0	0	0	0	0	0	1
Leptospirosis[a]	3	2	2	1	1	2	3	1	2	0	0	2	19
Listeriosis[a]	4	8	4	1	1	1	0	0	0	2	2	3	26
Lymphogranuloma venereum[a]	0	2	2	2	7	8	5	13	6	6	1	3	55
Malaria[a]	5	4	7	6	10	11	13	15	16	11	5	14	117
Measles[a]	1	4	1	1	1	0	1	13	4	0	0	0	26
Meningococcal disease	8	4	5	5	5	3	5	11	7	11	5	4	73
Meningococcal – serogroup B[a]	7	3	3	3	3	2	3	7	4	8	5	1	49
Meningococcal – serogroup C[a]	0	0	0	1	0	1	0	2	0	1	0	1	6
Meningococcal – serogroup W135[a]	0	0	2	0	0	0	0	0	0	1	0	1	4
Meningococcal – serogroup Y[a]	0	0	0	0	0	0	2	0	0	0	0	1	3
Meningococcal – other	1	1	0	1	2	0	0	2	3	1	0	0	11
Meningococcal - conjunctivitis	0	0	0	0	0	0	1	0	1	0	0	0	2
Mumps[a]	1	1	4	4	4	5	3	2	1	3	3	3	34
Pertussis	594	382	374	317	360	338	376	608	970	1473	1857	1606	9255
Pneumococcal disease (invasive)[a]	19	18	32	27	42	61	65	56	60	42	40	31	493
Psittacosis[a]	0	0	0	1	2	1	2	0	1	2	1	1	11
Q fever[a]	12	9	17	8	9	16	12	10	9	5	11	8	126
Rotavirus[a]	58	49	55	52	53	58	76	139	264	186	146	79	1215
Rubella	3	1	3	1	0	0	1	0	1	0	0	2	12
Rubella – other[a]	3	1	3	1	0	0	1	0	1	0	0	2	12
Salmonella infection[a,c]	466	406	477	375	268	222	206	202	165	220	277	387	3671
Shigellosis[a]	7	5	12	6	7	9	11	17	4	15	11	8	112
Syphilis	74	68	73	54	68	67	45	72	51	50	55	30	707
Syphilis infection[a,d]	45	36	35	28	30	41	27	37	23	30	32	23	387
Syphilis – other[a]	29	32	38	26	38	26	18	35	28	20	23	7	320
Tetanus	0	0	0	0	0	0	0	1	0	0	0	0	1
Tuberculosis[a,e]	44	36	41	21	20	36	35	26	37	38	31	27	392
Typhoid[a]	2	6	5	3	1	3	0	2	2	1	2	1	28
Verotoxin-producing *Escherichia coli* infections[a]	3	1	0	0	0	1	1	1	2	1	0	0	10

Onset of illness: the earlier of patient reported onset date, specimen date or date of notification.
[a]Laboratory-confirmed cases only. [b]Foodborne illness cases are only those notified as part of an outbreak. [c]Includes all paratyphoid cases. [d]Includes syphilis primary, syphilis secondary, syphilis < 1 y duration and syphilis newly acquired. [e]Tuberculosis data reported on diagnosis year.
NOS: not otherwise specified.
No case of the following diseases have been notified since 1991: plague[a], diphtheria[a], granuloma inguinale[a], lyssavirus[a], poliomyelitis[a], rabies, smallpox, typhus[a], viral haemorrhagic fever, yellow fever.
2010 influenza data: cases reported to public health units; contain 50 laboratory notifications from either interstate residents or overseas.
Please note that from the May–June 2011 issue of the *Bulletin*, 'notifiable conditions' are now referred to in both text and tables as 'scheduled medical conditions', reflecting the terminology of the NSW *Public Health Act 2010*.

Table 3. Incidence rate of disease notifications by local health district of residence, crude rates per 100 000 population, NSW, 2010 (based on onset of illness)

Condition	Sydney	Central Coast	Far West	Hunter New England	Illawarra Shoalhaven	Mid North Coast	Murrum-bidgee	Nepean Blue Mountains	Northern Sydney	Northern NSW	South Eastern Sydney	South Western Sydney	Southern NSW	Western Sydney	Western NSW
Adverse event after immunisation	1.6	1.3	9.5	3.1	4.1	0.0	7.2	2.9	1.6	0.3	2.8	1.0	3.5	2.2	2.2
Anthrax	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Arboviral infection	4.6	22.7	97.8	29.4	13.7	42.1	74.6	13.0	7.1	77.4	6.8	3.1	43.0	3.3	84.6
Barmah Forest virus infection[a]	0.2	4.1	9.5	5.6	3.4	19.4	3.4	0.3	0.1	25.3	0.0	0.1	10.5	0.2	7.8
Ross River virus infection[a]	1.6	13.9	88.3	21.8	4.7	20.3	70.8	12.2	2.0	47.3	1.1	1.8	30.5	2.3	76.1
Other[a]	2.8	4.7	0.0	2.1	5.4	2.4	0.3	0.6	4.9	4.7	5.8	1.2	2.0	0.7	0.7
Blood lead level ≥ 15 µg/dl[a]	1.8	1.0	22.1	2.4	0.5	0.0	21.6	2.0	0.5	1.0	1.0	1.7	2.0	1.2	20.4
Brucellosis[a]	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Chlamydia trachomatis infection	300.3	279.5	290.2	318.8	261.3	215.5	236.7	218.7	163.4	287.2	363.0	165.9	205.5	181.5	285.0
Congenital chlamydia[a]	0.0	0.3	0.0	0.5	0.8	0.5	1.0	0.3	0.1	0.3	0.4	1.0	0.5	0.6	1.1
Chlamydia – other[a]	300.1	279.2	290.2	318.4	260.5	215.1	235.6	218.2	163.3	286.9	362.6	164.9	204.5	180.9	283.1
Cholera[a]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Creutzfeldt-Jakob disease[a]	0.0	0.0	0.0	0.2	0.5	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
Cryptosporidiosis[a]	6.0	5.1	3.2	5.7	1.3	6.6	6.2	5.2	6.7	6.4	4.0	2.4	4.0	3.9	7.4
Giardiasis[a]	38.5	29.7	18.9	28.2	24.1	18.9	31.1	33.0	42.3	6.8	57.3	20.3	19.0	24.9	40.1
Gonorrhoea[a]	86.9	16.7	12.6	21.2	10.9	14.2	4.8	13.0	22.2	16.2	94.8	21.7	4.5	17.3	1.9
H. influenzae serotype b[a]	0.0	0.0	0.0	0.1	0.3	0.5	0.0	0.3	0.0	0.0	0.0	0.1	0.0	0.0	0.4
Haemolytic uraemic syndrome	0.2	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0
Hepatitis A[a]	1.8	0.3	3.2	0.7	0.8	0.0	0.3	0.3	1.0	1.4	1.2	0.8	0.5	3.4	0.7
Hepatitis B	66.2	6.0	12.6	8.0	11.9	11.3	10.6	16.8	26.9	4.4	48.6	55.0	9.0	67.9	14.1
Hepatitis B – acute viral[a]	0.4	0.0	0.0	0.2	0.5	0.5	1.4	0.3	0.4	0.0	0.1	0.9	0.5	0.2	1.5
Hepatitis B – other[a]	65.9	6.0	12.6	7.8	11.4	10.9	9.2	16.5	26.5	4.4	48.5	54.0	8.5	67.6	12.6
Hepatitis C	61.3	48.3	37.9	37.5	44.0	50.1	42.7	40.6	20.4	71.0	47.1	51.6	53.0	33.5	56.0
Hepatitis C – acute viral[a]	0.4	0.3	0.0	0.5	0.3	0.5	1.7	0.3	0.0	0.3	0.4	0.4	2.0	0.0	3.0
Hepatitis C – other[a]	60.8	48.0	37.9	37.1	43.8	49.2	41.0	40.3	20.3	70.6	46.6	51.2	51.0	33.5	52.7
Hepatitis D[a]	0.2	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.0	0.0	0.4
Hepatitis E[a]	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.4	0.6	0.0	0.0	0.0
Influenza	9.5	8.5	6.3	15.2	24.9	23.2	29.8	36.2	17.6	29.7	23.6	14.7	27.5	32.2	26.0
Influenza – Type A[a]	7.5	8.2	3.2	14.0	23.8	22.7	29.4	32.5	15.7	27.0	18.9	13.0	24.0	27.5	22.6
Influenza – Type B[a]	1.9	0.3	3.2	1.0	0.3	0.5	0.0	3.2	1.7	2.0	3.8	1.5	2.5	3.2	1.9
Influenza – Type A&B[a]	0.0	0.0	0.0	0.1	0.8	0.0	0.3	0.3	0.2	0.3	1.0	0.1	0.5	1.5	1.5
Influenza – Type NOS[a]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.3	0.0	0.1	0.5	0.1	0.0
Legionellosis	1.1	0.9	0.0	1.3	3.1	0.5	0.7	2.9	1.1	0.0	0.7	0.7	2.0	1.6	0.7
Legionella longbeachae[a]	0.2	0.6	0.0	0.3	3.1	0.5	0.0	1.5	0.6	0.0	0.1	0.2	2.0	0.6	0.4
L. pneumophila[a]	0.5	0.3	0.0	0.5	0.0	0.0	0.7	1.5	0.5	0.0	0.6	0.5	0.0	0.9	0.0
Legionnaires' disease – other	0.4	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.4
Leprosy	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Leptospirosis[a]	0.2	0.0	0.0	0.3	0.3	0.0	1.0	0.0	0.1	2.0	0.1	0.2	0.0	0.0	0.4
Listeriosis[a]	0.2	0.3	3.2	0.3	0.3	0.0	0.0	0.0	0.8	0.7	0.4	0.4	0.5	0.2	0.4
Lymphogranuloma venereum[a]	3.3	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.2	0.0	3.2	0.0	0.0	0.5	0.0
Malaria[a]	3.0	0.0	0.0	1.7	2.3	0.5	1.4	0.6	2.0	2.4	1.0	0.9	1.0	2.8	0.0
Measles[a]	0.0	0.6	0.0	0.0	0.0	0.0	0.3	0.3	0.5	4.1	0.1	0.0	0.0	0.0	0.0
Meningococcal disease	0.5	3.2	0.0	1.5	2.1	2.4	0.3	1.4	0.2	0.3	0.6	1.2	0.5	0.5	1.9
Meningococcal – serogroup B[a]	0.2	2.5	0.0	0.9	1.3	1.9	0.0	1.5	0.1	0.0	0.2	0.8	0.5	0.5	1.1
Meningococcal – serogroup C[a]	0.4	0.3	0.0	0.0	0.3	0.5	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Meningococcal – serogroup W135[a]	0.0	0.3	0.0	0.1	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4
Meningococcal – serogroup Y[a]	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Meningococcal – other	0.0	0.0	0.0	0.2	0.3	0.0	0.3	0.0	0.0	0.3	0.4	0.2	0.0	0.0	0.4
Meningococcal – conjunctivitis	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0
Mumps[a]	1.2	0.6	0.0	0.3	0.8	0.0	0.3	0.0	0.6	0.0	0.6	0.9	0.0	0.0	0.0
Pertussis	118.8	60.3	343.9	87.6	138.5	69.5	190.2	128.4	195.3	72.0	141.4	105.3	238.5	122.0	149.6
Pneumococcal disease (invasive)[a]	6.0	6.0	3.2	7.2	6.7	3.3	5.8	7.8	7.4	7.4	9.0	6.1	7.5	5.2	10.0
Psittacosis[a]	0.0	0.6	0.0	0.3	0.3	0.0	0.3	0.0	0.2	0.0	0.1	0.0	0.0	0.1	0.0
Q fever[a]	0.4	1.3	3.2	5.1	3.4	2.4	0.7	0.6	0.1	7.4	0.1	0.9	2.0	0.4	4.5
Rotavirus[a]	20.3	13.6	3.2	18.8	17.1	9.5	9.2	24.6	24.0	19.9	20.9	9.9	9.0	16.2	7.1
Rubella	0.4	0.3	0.0	0.2	0.0	0.0	0.0	0.0	0.2	0.3	0.4	0.1	0.0	0.0	0.0
Rubella – other[a]	0.4	0.3	0.0	0.2	0.0	0.0	0.0	0.0	0.2	0.3	0.4	0.1	0.0	0.0	0.0
Salmonella infection[a,b]	57.1	54.6	31.6	43.0	36.5	51.5	58.5	53.6	56.7	76.7	54.7	50.9	34.5	48.4	36.4
Shigellosis[a]	3.3	0.6	0.0	0.8	1.6	0.5	0.7	0.3	1.7	2.4	3.8	1.2	1.5	0.9	0.4
Syphilis	32.9	7.9	22.1	3.6	6.2	4.3	2.4	1.7	4.3	2.7	27.6	8.1	2.5	3.4	9.6
Syphilis infection[a,c]	21.7	1.9	3.2	1.4	0.3	0.5	1.4	1.2	3.4	0.3	20.8	1.4	0.5	1.2	2.2
Syphilis – other[a]	11.2	6.0	18.9	2.3	6.0	3.8	1.0	0.6	1.0	2.4	6.8	6.7	2.0	2.2	7.1
Tetanus	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Tuberculosis[a,d]	14.2	1.0	0.0	1.0	2.3	1.4	1.4	3.8	4.2	1.4	10.4	5.3	1.0	10.8	1.5
Typhoid[a]	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.4	0.0	0.8	0.6	0.0	1.0	0.0
Verotoxin-producing *Escherichia coli* infections[a]	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.0

Onset of illness: the earlier of patient reported onset date, specimen date or date of notification.
[a]Laboratory-confirmed cases only. [b]Includes all paratyphoid cases. [c]Includes syphilis primary, syphilis secondary, syphilis < 1 y duration and syphilis newly acquired. [d]Tuberculosis data reported on diagnosis year.
NOS: not otherwise specified
No case of the following diseases have been notified since 1991: plague[a], diphtheria[a], granuloma inguinale[a], lyssavirus[a], poliomyelitis[a], rabies, smallpox, typhus[a], viral haemorrhagic fever, yellow fever.
2010 influenza data: cases reported to public health units; contain 50 laboratory notifications from either interstate residents or overseas.
Please note that from the May–June 2011 issue of the *Bulletin*, 'notifiable conditions' are now referred to in both text and tables as 'scheduled medical conditions', reflecting the terminology of the NSW *Public Health Act 2010*.

Table 4. Disease notifications by local health district of residence, NSW, 2010 (based on onset of illness)

Condition	Sydney	Central Coast	Far West	Hunter New England	Illawarra Shoalhaven	Mid North Coast	Murrum-bidgee	Nepean Blue Mountains	Northern Sydney	Northern NSW	South Eastern Sydney	South Western Sydney	Southern NSW	Western Sydney	Western NSW	Justice Health	Other	Total[e]
Adverse event after immunisation	9	4	3	27	16	0	21	10	13	1	23	9	7	18	6	0	1	168
Anthrax	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Arboviral infection	26	72	31	258	53	89	218	45	59	229	57	27	86	27	228	0	5	1510
Barmah Forest virus infection[a]	1	13	3	49	13	41	10	1	1	75	0	1	21	2	21	0	0	252
Ross River virus infection[a]	9	44	28	191	18	43	207	42	17	140	9	16	61	19	205	0	3	1052
Other[a]	16	15	0	18	22	5	1	2	41	14	48	10	4	6	2	0	2	206
Blood lead level ≥15 µg/dl[a]	10	3	7	21	2	0	63	7	4	3	8	15	4	10	55	0	0	212
Brucellosis[a]	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Chlamydia trachomatis infection	1714	886	92	2796	1009	456	692	755	1361	850	3024	1440	411	1494	768	178	213	18 139
Congenital chlamydia[a]	0	1	0	4	3	1	3	1	1	1	3	9	1	5	3	0	0	36
Chlamydia – other[a]	1714	885	92	2792	1006	455	689	754	1360	849	3021	1431	410	1489	765	178	213	18 103
Cholera[a]	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	2
Creutzfeldt-Jakob disease[a]	0	0	0	2	2	0	1	0	0	0	0	0	0	1	0	0	0	6
Cryptosporidiosis[a]	34	16	1	50	5	14	18	18	56	19	33	21	8	32	20	0	0	345
Giardiasis[a]	220	94	6	247	93	40	91	114	352	20	477	176	38	205	108	2	6	2289
Gonorrhoea[a]	496	53	4	186	42	30	14	45	185	48	790	188	9	142	6	4	42	2284
H. influenzae serotype b[a]	0	0	0	1	1	1	0	1	0	0	0	1	0	0	1	0	0	6
Haemolytic uraemic syndrome	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	3
Hepatitis A[a]	10	1	1	6	3	0	1	1	8	4	11	7	1	28	2	0	0	84
Hepatitis B	378	19	4	70	46	24	31	58	224	13	405	477	18	559	38	67	35	2466
Hepatitis B – acute viral[a]	2	0	0	2	2	1	4	1	3	0	1	8	1	2	4	3	0	34
Hepatitis B – other[a]	376	19	4	68	44	23	27	57	221	13	404	469	17	557	34	64	35	2432
Hepatitis C	350	153	12	329	170	106	125	140	170	210	392	448	106	276	151	359	56	3553
Hepatitis C – acute viral[a]	2	1	0	4	1	1	5	1	0	1	3	4	4	0	8	1	0	36
Hepatitis C – other[a]	348	152	12	325	169	105	120	139	170	209	389	444	102	276	143	358	56	3517
Hepatitis D[a]	1	0	0	0	2	0	0	0	0	0	1	2	0	0	1	0	0	7
Hepatitis E[a]	6	0	0	0	0	0	0	0	1	0	3	5	0	0	0	0	0	15
Influenza	54	27	2	133	96	49	87	125	147	88	197	128	55	265	70	1	56	1580
Influenza – Type A[a]	43	26	1	123	92	48	86	112	131	80	157	113	48	226	61	1	48	1396
Influenza – Type B[a]	11	1	1	9	1	1	0	11	14	6	32	13	5	26	5	0	6	142
Influenza – Type A&B[a]	0	0	0	1	3	0	1	1	2	1	8	1	1	12	4	0	1	36
Influenza – Type NOS[a]	0	0	0	0	0	0	0	1	0	1	0	1	1	1	0	0	1	6
Legionellosis	6	3	0	11	12	1	2	10	9	0	6	6	4	13	2	0	0	85
Legionella longbeachae[a]	1	2	0	3	12	1	0	5	5	0	1	2	4	5	1	0	0	42
L. pneumophila[a]	3	1	0	4	0	0	2	5	4	0	5	4	0	7	0	0	0	35
Legionnaires' disease – other	2	0	0	4	0	0	0	0	0	0	0	0	0	1	1	0	0	8
Leprosy	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Leptospirosis[a]	1	0	0	3	1	0	3	0	1	6	1	2	0	0	1	0	0	19
Listeriosis[a]	1	1	1	3	1	0	0	0	7	2	3	3	1	2	1	0	0	26
Lymphogranuloma venereum[a]	19	0	0	0	0	0	1	0	2	0	27	0	0	4	0	0	2	55
Malaria[a]	17	0	0	15	9	1	4	2	17	7	8	9	2	23	0	0	3	117
Measles[a]	0	2	0	0	0	0	1	1	4	12	1	0	0	0	0	4	1	26
Meningococcal disease	3	10	0	13	8	5	1	5	2	1	5	10	1	4	5	0	0	73
Meningococcal – serogroup B[a]	1	8	0	8	5	4	0	5	1	0	2	7	1	4	3	0	0	49
Meningococcal – serogroup C[a]	2	1	0	0	1	1	0	0	1	0	0	0	0	0	0	0	0	6
Meningococcal – serogroup W135[a]	0	1	0	1	1	0	0	0	0	0	0	0	0	0	1	0	0	4
Meningococcal – serogroup Y[a]	0	0	0	2	0	0	0	0	0	0	0	1	0	0	0	0	0	3
Meningococcal – other	0	0	0	2	1	0	1	0	0	1	3	2	0	0	1	0	0	11
Meningococcal – conjunctivitis	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	2
Mumps[a]	7	2	0	3	3	0	1	0	5	0	5	8	0	0	0	0	0	34
Pertussis	678	191	109	768	535	147	556	443	1627	213	1178	914	477	1004	403	0	12	9255
Pneumococcal disease (invasive)[a]	34	19	1	63	26	7	17	27	62	22	75	53	15	43	27	1	1	493
Psittacosis[a]	0	2	0	3	1	0	1	0	2	0	1	0	0	1	0	0	0	11
Q fever[a]	2	4	1	45	13	5	2	2	1	22	1	8	4	3	12	0	1	126
Rotavirus[a]	116	43	1	165	66	20	27	85	200	59	174	86	18	133	19	0	3	1215
Rubella	2	1	0	2	0	0	0	0	2	1	3	1	0	0	0	0	0	12
Rubella – other[a]	2	1	0	2	0	0	0	0	2	1	3	1	0	0	0	0	0	12
Salmonella infection[a,b]	326	173	10	377	141	109	171	185	472	227	456	442	70	398	98	3	13	3671
Shigellosis[a]	19	2	0	7	6	1	2	1	14	7	32	10	3	7	1	0	0	112
Syphilis	188	25	7	32	24	9	7	6	36	8	230	70	5	28	26	0	6	707
Syphilis infection[a,c]	124	6	1	12	1	1	4	4	28	1	173	12	1	10	6	0	3	387
Syphilis – other[a]	64	19	6	20	23	8	3	2	8	7	57	58	4	18	20	0	3	320
Tetanus	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Tuberculosis[a,d]	81	3	0	9	9	3	4	13	35	4	87	46	2	89	4	0	3	392
Typhoid[a]	3	0	0	0	0	0	0	1	3	0	7	5	0	8	0	0	1	28
Verotoxin-producing *Escherichia coli* infections[a]	0	0	0	8	0	0	0	0	0	2	0	0	0	0	0	0	0	10

Onset of illness: the earlier of patient reported onset date, specimen date or date of notification.
[a]Laboratory-confirmed cases only. [b]Includes all paratyphoid cases. [c]Includes syphilis primary, syphilis secondary, syphilis < 1 y duration and syphilis newly acquired. [d]Tuberculosis data reported on diagnosis year. [e]Includes cases with unknown local health district.
NOS: not otherwise specified
Please note that from the May–June 2011 issue of the *Bulletin*, 'notifiable conditions' are now referred to in both text and tables as 'scheduled medical conditions', reflecting the terminology of the NSW *Public Health Act 2010*.

Table 5. Disease notifications by age group and sex of the case, NSW, 2010 (based on onset of illness)

Condition	0–4 yrs		5–24 yrs		25–44 yrs		45–64 yrs		65+ yrs		Missing		Total		Grand Total[e]
	F	M	F	M	F	M	F	M	F	M	F	M	F	M	
Adverse event after immunisation	35	58	29	12	9	3	8	2	4	2	0	0	85	77	168
Anthrax	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
Arboviral infection	0	1	97	76	311	250	314	290	81	84	0	0	803	701	1510
Barmah Forest virus infection[a]	0	1	10	13	29	33	65	59	18	23	0	0	122	129	252
Ross River virus infection[a]	0	0	60	53	229	172	227	196	61	50	0	0	577	471	1052
Other[a]	0	0	27	10	53	45	22	35	2	11	0	0	104	101	206
Blood lead level ≥15 µg/dl[a]	4	7	3	24	3	106	6	52	1	6	0	0	17	195	212
Brucellosis[a]	0	0	0	0	0	1	0	1	0	0	0	0	0	2	2
Chlamydia trachomatis infection	37	30	7017	3710	2859	3563	169	623	3	38	6	1	10 091	7965	18 139
Congenital chlamydia[a]	24	12	0	0	0	0	0	0	0	0	0	0	24	12	36
Chlamydia – other[a]	13	18	7017	3710	2859	3563	169	623	3	38	6	1	10 067	7953	18 103
Cholera[a]	0	0	0	1	0	1	0	0	0	0	0	0	0	2	2
Creutzfeldt-Jakob disease[a]	0	0	0	0	0	0	1	0	2	3	0	0	3	3	6
Cryptosporidiosis[a]	50	71	49	47	40	47	15	8	7	11	0	0	161	184	345
Giardiasis[a]	278	369	195	194	396	362	165	156	101	61	1	1	1136	1143	2289
Gonorrhoea[a]	2	2	187	478	140	1133	24	292	1	16	0	2	354	1923	2284
H. influenzae serotype b[a]	2	2	0	0	1	0	0	1	0	0	0	0	3	3	6
Haemolytic uraemic syndrome	1	1	1	0	0	0	0	0	0	0	0	0	2	1	3
Hepatitis A[a]	1	2	21	24	10	10	3	6	5	2	0	0	40	44	84
Hepatitis B	3	3	193	209	624	676	215	355	65	80	2	1	1102	1324	2466
Hepatitis B – acute viral[a]	2	0	2	7	4	10	2	4	2	1	0	0	12	22	34
Hepatitis B – other[a]	1	3	191	202	620	666	213	351	63	79	2	1	1090	1302	2432
Hepatitis C	7	5	160	166	706	1168	378	805	59	64	4	7	1314	2215	3553
Hepatitis C – acute viral[a]	2	1	5	2	11	8	2	4	1	0	0	0	21	15	36
Hepatitis C – other[a]	5	4	155	164	695	1160	376	801	58	64	4	7	1293	2200	3517
Hepatitis D[a]	0	0	0	3	0	2	1	1	0	0	0	0	1	6	7
Hepatitis E[a]	0	0	2	1	3	6	1	2	0	0	0	0	6	9	15
HIV infection[a]	0	0	3	29	15	185	5	59	0	7	0	0	23	280	305
Influenza	77	89	194	149	244	170	181	175	126	126	14	11	836	720	1580
Influenza – Type A[a]	67	71	167	126	226	154	166	161	107	106	13	10	746	628	1396
Influenza – Type B[a]	9	17	24	21	12	10	9	13	12	12	0	1	66	74	142
Influenza – Type A&B[a]	0	1	2	2	5	4	5	1	7	8	1	0	20	16	36
Influenza – Type NOS[a]	1	0	1	0	1	2	1	0	0	0	0	0	4	2	6
Legionellosis	0	0	0	1	4	6	9	26	16	22	0	0	29	55	85
Legionella longbeachae[a]	0	0	0	1	2	2	6	16	9	6	0	0	17	25	42
L. pneumophila[a]	0	0	0	0	1	3	2	8	6	14	0	0	9	25	35
Legionnaires' disease – other	0	0	0	0	1	1	1	2	1	2	0	0	3	5	8
Leprosy	0	0	0	0	0	1	0	0	0	0	0	0	0	1	1
Leptospirosis[a]	0	0	0	4	1	4	2	7	0	1	0	0	3	16	19
Listeriosis[a]	0	0	0	0	1	0	4	1	11	9	0	0	16	10	26
Lymphogranuloma venereum[a]	0	0	0	0	0	31	0	23	0	1	0	0	0	55	55
Malaria[a]	1	4	14	20	16	25	8	20	4	5	0	0	43	74	117
Measles[a]	1	0	6	14	1	4	0	0	0	0	0	0	8	18	26
Meningococcal disease	13	15	13	14	3	1	5	3	3	3	0	0	37	36	73
Meningococcal – serogroup B[a]	11	10	9	12	2	0	1	2	0	2	0	0	23	26	49
Meningococcal – serogroup C[a]	1	0	1	0	0	1	0	0	3	0	0	0	5	1	6
Meningococcal – serogroup W135[a]	0	1	0	0	0	0	1	1	0	1	0	0	1	3	4
Meningococcal – serogroup Y[a]	0	0	1	0	0	0	2	0	0	0	0	0	3	0	3
Meningococcal – other	1	4	2	2	1	0	1	0	0	0	0	0	5	6	11
Meningococcal – conjunctivitis	0	0	0	0	0	1	0	0	1	0	0	0	1	1	2
Mumps[a]	0	0	4	2	12	8	5	1	0	1	1	0	22	12	34
Pertussis	727	657	2589	2360	967	418	658	395	263	179	3	4	5207	4013	9255
Pneumococcal disease (invasive)[a]	32	66	16	19	25	42	56	58	86	92	0	0	215	277	493
Psittacosis[a]	0	0	0	0	1	2	4	3	0	1	0	0	5	6	11
Q fever[a]	0	1	4	9	16	28	11	48	1	8	0	0	32	94	126
Rotavirus[a]	357	391	91	117	49	36	42	24	62	38	0	0	601	606	1215
Rubella	0	0	2	1	4	3	0	2	0	0	0	0	6	6	12
Rubella – other[a]	0	0	2	1	4	3	0	2	0	0	0	0	6	6	12
Salmonella infection[a,b]	383	453	531	490	408	398	299	251	242	194	0	2	1863	1788	3671
Shigellosis[a]	7	2	16	5	15	30	8	24	1	3	0	0	47	64	112
Syphilis	0	0	6	46	63	315	21	173	30	51	0	0	120	585	707
Syphilis infection[a,c]	0	0	0	35	12	222	1	107	0	8	0	0	13	372	387
Syphilis – other[a]	0	0	6	11	51	93	20	66	30	43	0	0	107	213	320
Tetanus	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
Tuberculosis[a,d]	2	1	38	50	66	98	32	42	16	43	0	0	154	234	392
Typhoid[a]	3	2	6	3	3	8	1	2	0	0	0	0	13	15	28
Verotoxin-producing *Escherichia coli* infections[a]	0	0	2	2	2	0	2	0	0	2	0	0	6	4	10

Onset of illness: the earlier of patient reported onset date, specimen date or date of notification.
[a]Laboratory-confirmed cases only. [b]Includes all paratyphoid cases. [c]Includes syphilis primary, syphilis secondary, syphilis < 1 y duration and syphilis newly acquired. [d]Tuberculosis data reported on diagnosis year. [e]Includes cases with unknown age and sex and people who identify as transgender.
NOS: not otherwise specified. F: female. M: male.
Institutional gastrointestinal outbreaks and foodborne illness are excluded from this table as complete demographic data are not routinely collected.
No case of the following diseases have been notified since 1991: plague[a], diphtheria[a], granuloma inguinale[a], lyssavirus[a], poliomyelitis[a], rabies, smallpox, typhus[a], viral haemorrhagic fever, yellow fever.
2010 influenza data: cases reported to public health units; contain 50 laboratory notifications from either interstate residents or overseas.
Please note that from the May–June 2011 issue of the *Bulletin*, 'notifiable conditions' are now referred to in both text and tables as 'scheduled medical conditions', reflecting the terminology of the NSW *Public Health Act 2010*.

- 92.4% of 2-year old children, a decrease of 0.1% from 2009[b]
- 87.6% of 5-year old children, an increase of 4.3% from 2009.[c]

In 2010, full immunisation coverage in Aboriginal children was recorded for:

- 86.6% of 12-month old Aboriginal children, a decrease of 0.4% from 2009[a]
- 91.9% of 2-year old Aboriginal children, an increase of 1.4% from 2009[b]
- 82.3% of 5-year old Aboriginal children, an increase of 2.2% from 2009.[c]

In 2010, the NSW School-Based Vaccination Program vaccinated:

- 70% of Year 7 and 62% of Year 10 children with the diphtheria-tetanus-pertussis vaccine booster
- 77% of Year 7 girls with at least one dose and 67% of Year 7 girls for three doses of human papillomavirus vaccine
- 63% of Year 7 children with at least one dose and 57% of children with two doses of hepatitis B vaccine (hepatitis B vaccination is only offered to children who have not previously received a full course)
- 34% of Year 7 children with varicella vaccine (varicella vaccination is only offered to children without history of infection or vaccination).

These data do not include children who received these free vaccines from general practitioners (GPs) or other immunisation providers.

In response to increased pertussis and measles notifications, the following initiatives continued in 2010:

- Information provided for new parents of babies registered with Medicare stressing the importance of vaccinating their baby on time and ensuring other household members are up to date with their pertussis vaccinations.
- Free pertussis vaccine provided for new parents, grandparents and other adults who regularly care for infants less than 12 months of age to protect infants too young to be vaccinated (233 565 doses distributed to GPs in 2010).
- Free measles-mumps-rubella vaccine provided to contacts of people with measles to prevent further transmission in the community.
- Communication with health care workers and the public through the media, the NSW Health website and specific fax streams.

[b]A child is assessed as fully vaccinated at 2 years of age (24 to <27 months of age) if he/she has received age-appropriate vaccinations against diphtheria, tetanus, pertussis, polio, *Haemophilus influenzae* type B, hepatitis B, measles, mumps and rubella.

[c]A child is assessed as fully vaccinated at 5 years of age if he/she has received age-appropriate vaccinations against diphtheria, tetanus, pertussis, polio, *Haemophilus influenzae* type B, hepatitis B, measles, mumps and rubella.

Bloodborne viruses

Notification data

There was an overall slight decrease in bloodborne virus notifications in NSW in 2010. Highlights included:

- A slight decrease in the total number of **hepatitis B** notifications, with 2466 reported in 2010 (2620 notifications in 2009). Hepatitis B notifications were predominantly in men and women aged 25–39 years.
- A slight decrease in undifferentiated **hepatitis C** notifications, with 3517 reported in 2010 (3784 notifications in 2009). Hepatitis C was most prevalent in men and women aged 25–54 years.
- Notifications of **newly acquired hepatitis B and hepatitis C** infection remained stable.
- A slight decrease in **human immunodeficiency virus (HIV) infection** notifications**,** with 305 reported in 2010 (329 notifications in 2009). In 2010, 230 notifications (75%) were reported to be homosexually acquired. The number of HIV infections reported to be heterosexually acquired decreased from 77 in 2009 to 50 in 2010.

Note that because of the chronic nature of hepatitis B and hepatitis C infection, repeat testing and repeat notification of cases is common for these conditions. Recent improvements in methods for cleaning data have resulted in the identification of duplicate notifications for hepatitis B and C cases. This has led to a more accurate count of cases through a reduction in the number of case notifications for previous years, particularly before 2005.

Prevention activities

NSW Health has a range of policies and strategies in place to control the spread of HIV, hepatitis B and hepatitis C, including regular campaigns to promote safe sex, needle and syringe programs to provide sterile equipment to injecting drug users, and support of the management of patients with sexually transmissible infections and hepatitis C. Recent highlights have included:

- An independent evaluation in 2010 of the *NSW HIV/AIDS, Sexually Transmissible Infections and Hepatitis C Strategies 2006–2010*, and the supporting *Implementation Plan for Aboriginal People*. The evaluation found that efforts to prevent these conditions and to provide care for those affected have been effective.
- The 2008 Review of Hepatitis C Treatment and Care Services[1] which recommended that NSW double the number of people on antiviral treatment by 2013. Policy initiatives have been implemented to: increase the capacity of specialist services; strengthen area-wide infrastructure; increase the nursing workforce; and trial the provision of treatment in community settings. Since the review, program initiatives (including establishment of additional clinical and program positions across NSW) have resulted in: a 42% increase (from 1264 people in 2005–2006 to 1800 people in 2008–2009) in the number of public patients treated for hepatitis C; and a 136% increase (from 28 sites in 2005–2006 to 66 sites

in 2008–2009) in the number of public sites offering treatment.

- Ongoing commitment to prevention policies that employ a harm reduction approach, such as the NSW Needle and Syringe Program. According to an evaluation,[2] during the period 2000–2009, the Program prevented 23 324 cases of HIV and 31 953 cases of hepatitis C.
- In 2010, the NSW Needle and Syringe Program comprised 864 outlets (332 public sector outlets, 373 pharmacies and 159 dispensing machines). Approximately 9.5 million needles and syringes were dispensed and over 12 000 referrals were provided to drug treatment services, hepatitis services and other health and welfare agencies for people who inject drugs.
- In 2010, NSW publicly funded HIV and sexual health clinics provided 77 375 occasions of services to 6472 clients related to HIV treatment, management, and care. This was an increase of 3.2% of clients compared with 2009.

The regulation of skin penetration industries, and the enforcement of prescribed infection control and equipment standards, is an important part of bloodborne virus control in NSW. In 2010 a Skin Penetration Working Group was established to oversee policies and programs implemented through public health units (PHUs). The group aims to initiate a planning process to strengthen the infection control component of TAFE courses for the skin penetration industry.

Sexually transmissible infections

Notification data

Highlights in 2010 included:

- A decline in the number of **infectious syphilis** notifications with 387 reported in 2010 (532 notifications in 2009, a peak in recent years).
- An outbreak of **lymphogranuloma venereum (LGV)**, with 55 notifications reported in 2010, compared with four in 2009. All notifications were reported in men, and most were aged between 30 and 50 years. The number of notifications decreased during November and December 2010. The outbreak in NSW occurred in the global context of increased rates of LGV infection in Europe and North America amongst men who have sex with men. Timely surveillance, early recognition and treatment of this disease are important.
- A sustained increase in the number of **chlamydia** notifications, with 18 103 notifications. This represents a 21% increase compared with 2009 when 14 872 notifications were reported. Cases were most commonly reported in women aged 20–29 years.
- An increase in the number of **gonorrhoea** notifications, with 2284 notifications. This represents a 39% increase compared with 2009 when 1638 notifications were reported. Cases were most common in men aged 20–39 years.

Overall, notifications of sexually transmissible infections (STIs) in NSW continue to rise. Chlamydia continues to be the most commonly notified STI in NSW. At least some of these increases are likely to be associated with increased screening and case detection.

Prevention activities

In 2010 in NSW, publicly funded sexual health clinics provided 23 900 occasions of services related to STI treatment, management and care. This is an increase of 4.3% compared with 2009. Services were provided to 12 513 clients, an increase of 4.1% compared with 2009.

In 2010, NSW Health led a national response to an increase in syphilis notifications amongst gay men and other men who have sex with men through *The National Gay Men's Syphilis Action Plan*.[3] The Plan aimed to achieve a sustained reduction in the incidence of infectious syphilis in Australian gay and homosexually active men by 2013. The Plan outlined a range of evidence-based interventions to inform prevention efforts.

In 2010, NSW Health commenced the second phase of the successful 2009 HIV and STI education campaign, *Get Tested, Play Safe*.[4] The aim of the campaign was to reinforce STI awareness, increase testing, and improve safe sex behaviour among young people.

Enteric diseases (infectious, food and water)

Notification data

There were 6665 notifications of enteric disease in 2010, a 27% increase compared with the average annual disease count for the previous 5 years. Highlights included:

- A large increase in the number of **salmonellosis** notifications, with 3671 reported in 2010. This represents an increase of 60% compared with the annual average for the previous 5 years and is the largest number of notifications on record in NSW. The increase was in part explained by an ongoing increase of *Salmonella enterica* serovar Typhimurium PT 170 notifications. This increase has been observed nationally and is the subject of an ongoing investigation.
- A decrease in reports of **probable outbreaks of foodborne disease**, with 59 notifications affecting over 728 people reported in 2010. This represents a 15% decline when compared with the 68 notifications affecting 903 people reported in 2009.
- A decrease in reports of **probable outbreaks of viral gastroenteritis in institutions**, with 518 notifications affecting 9386 people. This represents a 14% decline when compared with the 600 outbreaks affecting 11 769 people reported in 2009.
- Eleven point-source outbreaks of ***Salmonella enterica* serovar Typhimurium** most likely associated with the consumption of sauces prepared with raw eggs, deep fried ice-cream prepared with raw eggs, and pork rolls.

Prevention activities

Food

NSW Health works with OzFoodNet nationally and the NSW Food Authority (NSWFA) locally to investigate and control *Salmonella* outbreaks and food contamination incidents.

In 2010, NSW Health and the NSWFA finalised the *Investigation of Foodborne Illness Response Protocol – Operations Procedures Manual*.

With the Environmental Health Branch the Health Risk Policy Unit assessed a number of potential food contamination issues for the NSWFA in 2010. Risk assessments were conducted for the following public health investigations:

- High iodine content in soy milk products, resulting in immediate recall of the product.
- Weight loss products, found to be toxic and harmful to the health of adults and children.

Drinking water

NSW Health is the public health regulator of the major water utilities through operating licences and memoranda of understanding (for Hunter Water Corporation, Sydney Water Corporation and Sydney Catchment Authority). In 2010 the Water Unit and PHUs worked with these utilities to:

- ensure compliance with relevant guidelines including the *Australian Drinking Water Guidelines*[5] and the *Australian Guidelines for Water Recycling*[6]
- undertake major projects including Sydney Water's *Five-Year Drinking Water Quality Management Plan*[7] and the *Ten Year Review of the Sydney Water Inquiry*[8]
- monitor the compliance of utilities with the NSW *Fluoridation of Public Water Supplies Act 1957*.

The Water Unit and PHUs exercise public health oversight of more than 100 water utilities in regional NSW through the *NSW Health Drinking Water Monitoring Program*,[9] which provides guidance on drinking water monitoring and is supported by NSW Health laboratories. In 2010 there was an improvement in regional sampling compliance with:

- 96% of expected microbiological samples taken, compared with 95% in 2009
- 100% of expected chemistry samples taken, up from 98% in 2009.

NSW Health is responsible for reviewing applications from private recycled water or drinking water suppliers for licences under the *Water Industry Competition Act 2006*. In 2010, the Water Unit and PHUs:

- reviewed six licence applications for recycled water
- advised local councils and the NSW Office of Water on more than 30 new and ongoing recycled water schemes regulated under the *Local Government Act 1993*.

Respiratory disease (infectious and environmental)

Notification data

Highlights in 2010 included:

- Notifications of **pandemic (H1N1) 2009 influenza** decreased substantially in 2010 compared with the previous pandemic year. In 2010, notifications were most commonly reported in people aged 15–50 years. In total, 66 people were admitted to intensive care units for treatment and there were eight recorded deaths (although there are likely to be many more hospitalisations and deaths associated with the infection that remained unrecognised).
- At the time of this report the **tuberculosis (TB)** data for 2010 remained incomplete, however preliminary analysis indicated that there was a decrease in both the overall number of TB notifications in 2010 (392 notifications) compared with 2009 (505 notifications), and the number of multi-drug resistant tuberculosis (MDR-TB) cases identified (five cases in 2010 and 10 in 2009).
- One case of **extensively drug-resistant tuberculosis (XDR-TB)** was identified in a NSW resident who had been treated previously for TB overseas. XDR-TB (TB that is resistant to isoniazid and rifampicin, plus resistant to any fluoroquinolone and at least one of three injectable second-line drugs) is a rare event in Australia and this is the second case identified.
- An overall decrease in the number of **Legionnaires' disease** notifications with 85 reported in 2010 compared with 94 in 2009. A slight increase in the number of notifications of *Legionella pneumophila*, with 35 reported in 2010 compared with 28 in 2009. Notifications of *L. longbeachae* were lower in 2010 (42 notifications) compared with 2009 (64 notifications).

Prevention activities

Pandemic control activities

In 2010, NSW public health services continued to promote vaccination against pandemic (H1N1) 2009 influenza and to prepare for a possible second pandemic wave. A thorough review of the pandemic influenza response in 2009 led to the development of the following documents in 2010:

- *Key recommendations on pandemic (H1N1) 2009 influenza*.[10] This is a summary report of the principle lessons learned with recommendations for future pandemic planning and response.
- *NSW Health influenza pandemic plan, Version 2.0*.[11] This is a major revision of the NSW pandemic plan for the health sector which acknowledges the need for greater flexibility in response options for pandemic influenza strains of varying severity. It also reinforces the key elements of pandemic influenza preparedness and response.

TB prevention and control activities

In NSW, a network of public health services provide free and confidential screening, diagnostic, treatment and

management services for persons identified with tuberculosis and the general community.

Legionella control activities

In 2010 a statewide survey of cooling towers was undertaken to assess compliance with guidelines for testing of cooling towers for *Legionella*.

Vectorborne diseases

Notification data

Highlights in 2010 included:

- The total number of notifications of vectorborne diseases in 2010 (1632 notifications) was similar to 2009 (1502 notifications). The most commonly notified vectorborne disease in 2010 was **Ross River Virus** with 1052 notifications received, a 16% increase compared with 2009 (908 notifications), but a similar number to the median number of notifications for the years 2006–2009 (1033 notifications). **Barmah Forest Virus** infection was the second most commonly notified vectorborne disease (252 notifications), a decrease of 30% compared with 2009 (358 notifications), and a decrease of 55% compared with the median number of notifications for the years 2006–2009 (554 notifications).
- A 43% increase in the number of **dengue** notifications with 194 notifications reported compared with 136 notifications in 2009. While there is no local transmission of dengue in NSW, globally it is the most common mosquito-borne viral disease of humans and in recent years has become a major international public health concern. With increasing international travel and migration, mosquito-borne diseases such as dengue, malaria and chikungunya may become increasingly common among travellers returning to NSW.

Prevention activities

The Environmental Health Branch administers the NSW arbovirus surveillance program. This program encompasses mosquito trapping and monitoring of virus activity in mosquito populations, and monitoring for antibody seroconversion of sentinel chicken flocks that are located in a number of strategic sites throughout rural NSW. The trapping and surveillance program is designed to cover the period of seasonal increase and decrease in the populations of the major arbovirus vectors, from mid-spring to mid-autumn, and also to cover the period for natural activity and transmission of arbovirus infections.

Environmental exposures and risk assessment

Air pollution

Air pollution arises from many sources including bushfires, car engines, wood-burning heaters, power stations, mining and other industries. The Environmental Health Branch is involved in a range of activities to improve air quality and in 2010 represented NSW Health in a multi-agency senior advisory group on coal mining. In collaboration with local PHUs, the Branch engaged in a number of activities to address concerns raised by the local community in relation to air quality associated with coal mining and power stations in the Upper Hunter Region. For example:

- Hunter New England Health Study,[12] including analysis of emergency department presentations, hospital separations, cancer and death register data
- Initiation of a cancer cluster investigation[13] and independent review that found the cluster was a chance occurrence
- The establishment of the Expert Advisory Committee on Air Pollution that found that there were indications that asthma may be a more important issue in the Upper Hunter region[14]
- An analysis of general practitioner presentations, treatments and diagnoses to examine the potential health effects of the mining industry and other exposures in Singleton, Muswellbrook and Denman.[15]

Major development assessment

Historically, mining activity has contributed to the presence of lead in the environment of the Broken Hill community. In 2010, NSW Health evaluated the impact of the re-opening of the Broken Hill lead mine on community blood levels. An evaluation of the health risk assessment undertaken by the company was completed. The evaluation recommended that a program of blood lead monitoring be instituted as part of the mine's conditions of approval.

In 2010, the Environmental Health Branch represented NSW Health in a multi-agency senior advisory group on coal-seam gas issues.

Aboriginal health

Housing for Health

Housing for Health is an evidence-based housing repair and maintenance program that focuses on improving the safety and health of residents in those homes.[16]

- Since 1998, over 11 500 Aboriginal people living in 2771 houses in 72 Aboriginal communities have benefited from the Housing for Health program.
- Approximately 70 000 items have been fixed that specifically relate to improved safety and health through the program.
- An evaluation of the NSW Housing for Health program found that populations exposed to the program were 40% less likely to be hospitalised with infectious diseases compared with the rest of the rural NSW Aboriginal population.[17] These findings demonstrate the importance of social determinants in improving health outcomes for Aboriginal people.

In 2010 the Housing for Health program was involved in the following activities:

- Completion of projects in Glenn Innes, Toomelah/Boggabilla, Narrabri/Wee Waa, Goodooga, Dorrigo, Tabulam and Tingha/Inverell.
- New projects in Bourke, Enngonia, Wilcannia and La Perouse.
- A trial project with the Aboriginal Housing Office Backlog Maintenance Program in Coffs Harbour.

The Aboriginal Communities Water and Sewerage Program

Clean water and functioning sewerage systems are a prerequisite for good health. Widespread availability of these essential services will improve outcomes by reducing communicable diseases such as skin infections and diarrhoeal illness.

The Aboriginal Communities Water and Sewerage Program is a joint partnership between the NSW Government and the NSW Aboriginal Land Council.[18] The Program aims to ensure adequate operation, maintenance and monitoring of water supplies and sewerage systems in more than 60 Aboriginal communities in NSW. NSW Health is involved in the development and roll-out of the Program across the state.

- 31 Aboriginal communities with a population of 3000 people are now receiving improved water and sewerage services. This includes 17 new communities in 2010, servicing a population of around 1800 people.
- PHUs are working with communities, the NSW Office of Water, local water utilities and service providers to implement Risk-Based Water and Sewerage Management Plans.

The Aboriginal Environmental Health Officer Training Program

The Aboriginal Environmental Health Officer Training Program aims to increase opportunities for workforce participation by Aboriginal people and enhance the involvement of Aboriginal people in improving environmental health outcomes. Since 1998, 11 Aboriginal Environmental Health Officers have graduated from the Program. Six Aboriginal Environmental Health Officer Trainees were participating in the Program in 2010. The percentage of Aboriginal people employed within the NSW Health Environmental Health workforce increased from 0% in 1998 to over 17% in 2008.

Program activities

- In 2010, two new trainee positions were created under funding agreements between the Aboriginal Environmental Health Unit and the former area health services.
- One trainee position was created under an agreement between the Aboriginal Environmental Health Unit, the Sydney South West PHU and Camden Council. Negotiations are in place to expand the Program further.

Acknowledgments

Protecting the health of the community is a collaborative effort, involving public health units, clinicians, laboratory scientists, affected communities, and other government and community-based organisations. We thank all those involved for the role they played in NSW in 2010.

References

1. NSW Department of Health. Review of Hepatitis C Treatment and Care Services. Available from: http://www.health.nsw.gov.au/pubs/2008/080200_hep_c_report.html (Cited May 2011.)
2. Wilson D and Australian Government Department of Health and Ageing. Return on investment 2: evaluating the cost-effectiveness of needle and syringe programs in Australia 2009. Available from: http://www.health.gov.au/internet/main/publishing.nsf/Content/needle-return-2 (Cited May 2011.)
3. STIGMA. The National Gay Men's Syphilis Action Plan. 2009. Available from: http://stigma.net.au/resources/National_Gay_Mens_Syphilis_Action_Plan.pdf (Cited May 2011.)
4. NSW Department of Health. Get Tested, Play Safe campaign. 2011. Available from: http://www.gettested.com.au/#/HOW%20MANY%20PEOPLE%20HAVE%20YOU%20SLEPT%20WITH?/ (Cited May 2011.)
5. National Health and Medical Research Council and Natural Resource Management Ministerial Council. Australian drinking water guidelines 6, 2004. Available from: http://www.nhmrc.gov.au/_files_nhmrc/file/publications/synopses/adwg_11_06.pdf (Cited May 2011.)
6. Natural Resource Management Ministerial Council; Environment Protection and Heritage Council. Australian Health Ministers' Conference. Australian Guidelines for Water Recycling: Managing Health and Environmental Risks (Phase 1). 2006. Available from: http://www.ephc.gov.au/sites/default/files/WQ_AGWR_GL__Managing_Health_Environmental_Risks_Phase1_Final_200611.pdf (Cited June 2011.)
7. Sydney Water. Five-Year Drinking Water Quality Management Plan. 2010. Available from: http://www.sydneywater.com.au/WaterQuality/FiveYearDrinkingWaterQualityManagementPlan/ (Cited May 2011.)
8. NSW Government. Ten Year Review of the *Sydney Water Inquiry*. 2010. Available from: http://210.247.145.33/Publications/FactSheets/McClellan_Review_-_Ten_year_review_-_NSW_Government_response_to_recommendations.pdf (Cited May 2011.)
9. NSW Department of Health. Drinking Water Monitoring Program. December 2005. Available from: http://www.health.nsw.gov.au/publichealth/environment/water/drinkwater_nsw.asp (Cited May 2011.)
10. NSW Department of Health. Key recommendations on pandemic (H1N1) 2009 influenza from the NSW Health Emergency Management Committee. Available from: http://www.health.nsw.gov.au/pubs/2010/h1n1_2009_key_recomm.html (Cited May 2011.)

11. NSW Department of Health. NSW Health influenza pandemic plan, Version 2.0. Available from: http://www.health.nsw.gov.au/policies/pd/2010/PD2010_052.html (Cited May 2011.)

12. NSW Department of Health. Respiratory and cardiovascular diseases and cancer among residents in the Hunter New England Area Health Service. Available from: http://www.health.nsw.gov.au/pubs/2010/pdf/HNE_Respi_Cardio_Disease.pdf (Cited May 2011.)

13. NSW Department of Health. Singleton cancer cluster investigation. Available from: http://www.health.nsw.gov.au/resources/news/pdf/singleton_cancer.pdf (Cited May 2011.)

14. NSW Department of Health. Conclusion of the EAC on the findings of the General Practitioner data analysis for the Upper Hunter. Available from: http://www.health.nsw.gov.au/PublicHealth/environment/air/apeac.asp (Cited May 2011.)

15. NSW Department of Health. Analysis of BEACH general practitioner encounter data to examine the potential health effects of the mining industry and other exposures in Singleton, Muswellbrook and Denman. Available from: http://www.health.nsw.gov.au/pubs/2010/pdf/beach_report.pdf (Cited May 2011.)

16. NSW Department of Health. Housing for Health. Available from: http://www.health.nsw.gov.au/PublicHealth/environment/aboriginal/housing_health.asp (Cited May 2011.)

17. NSW Department of Health. Closing the Gap: 10 Years of *Housing for Health* in NSW. An evaluation of a healthy housing intervention. Available from: http://www.health.nsw.gov.au/pubs/2010/pdf/housing_health_010210.pdf (Cited May 2011.)

18. NSW Aboriginal Land Council and NSW Government. Aboriginal water supply and sewerage program. Available from: http://www.alc.org.au/media/27358/Final_A3%20Folded_3mm%20Bleed.pdf (Cited May 2011.)