

MOVING FORWARD WITH HEALTH SURVEYS: A REPORT OF THE 2001 CATI FORUM

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In any discussion of health surveys, the central role of the interviewer in data collection is sometimes overlooked. But at the 2001 Computer Assisted Telephone Interviewing (CATI) Forum, interviewers from the NSW Health Survey Program took centre stage, with two powerful performances revealing the mysteries, methods, and madness of conducting CATI health survey interviews.

The 2001 Computer Assisted Telephone Interviewing (CATI) Forum, held in Sydney in November 2001 at the Powerhouse Museum, was convened by the National CATI Technical Reference Group (a sub-committee of the National Public Health Information Working Group) and sponsored by the Commonwealth Department of Health and Ageing and the NSW Department of Health. Delegates came from across Australia to hear speakers from the World Health Organization, Health Canada, state and territory health departments, the Commonwealth Department of Health and Ageing, the Australian Bureau of Statistics, the Australian Institute of Health and Welfare, and other research groups.

The first day was dedicated to an examination of the measurement of inequalities in health through health surveys, and how health survey data can influence policy. The second day explored methodological issues such as sampling, validation, pre-testing, question development, data collection, automated reporting, and the applications of survey data.

The messages from the Forum include the need for harmonisation of CATI questions among states and territories, the need for trend data, and aligning survey information in order to influence policy.

A subsequent meeting of representatives from each of the states undertaking CATI health surveys was held in Adelaide on 10 December 2001, to seek consensus on a minimum set of questions for SNAPS topic areas (Smoking, Nutrition, Alcohol, Physical Activity, and Mental Health). This was achieved, along with progress on minimum sets of questions for demographics, asthma, and diabetes. These questions have already been incorporated into the NSW Health Survey Program, which commenced year-round interviewing (as distinct from a series of discrete surveys) in February 2002. ☒

COMMUNICABLE DISEASES, NSW: APRIL 2002

TRENDS

Notifications of communicable diseases received by NSW Health through to February 2002 are shown in Table 5 and Figure 2. Notably, there have been relatively few reports of **Ross River virus infection** this season, although **Barmah Forest virus infection** remained active in the mid North coast. Both these infections are due to arboviruses that are transmitted through the bite of infected mosquitos, and which can cause a self-limiting illness characterised by rash, fever, and joint pains. Reports of **cryptosporidiosis** remain relatively high, especially in rural areas (although well below the epidemic levels seen in 1998 linked to swimming in contaminated swimming pools). No common source of disease linked to an outbreak has been identified this summer. Relatively few reports of **meningococcal disease** were received over the summer months; and, for the fourth month running, no cases of **measles** were reported in NSW.

SALMONELLOSIS OUTBREAK

Salmonellosis is an acute illness caused by infection with *Salmonella* bacteria. It is characterised by a sudden onset

of headache, abdominal pain, diarrhoea, nausea, and vomiting.

There are several species of *Salmonella* bacteria, the most common of which is *Salmonella typhimurium*. *Salmonella typhimurium* can be further subgrouped by phage typing. In the past *Salmonella typhimurium* phage type 9 (STMP9) infections were relatively common in NSW; although in 2001 cases were reported less frequently.

Chickens, cattle, and other animals are natural reservoirs of *Salmonella* bacteria. Salmonellosis is transmitted via the faecal-oral route, usually through eating contaminated food, but sometimes from person-to-person, or from animal-to-person. It is postulated that many infections are acquired when contaminated foods (like chicken) are not cooked sufficiently to kill the bacteria, or when they are handled in a way that allows cross-contamination with other foods that are not cooked further. Changes in the type of *Salmonella* bacteria found in chickens may lead to changes in the type of salmonella bacteria subsequently infecting people via the food chain.

In February, an increase in STMP9 was identified. To date, 82 cases have been reported with onset in 2002,

compared with 126 for the whole of 2001. There were 55 cases reported with onset in February 2002, compared with only 16 in February 2001 (Figure 1).

Compared with all cases of salmonellosis identified in 2001, a higher proportion of the 82 STMPT9 cases identified in 2002 were females, and a lower proportion were less than five years old. In both years, STMPT9 cases occurred more frequently in the Sydney area (Table 1).

Two clusters have been identified among the STMPT9 cases reported in February 2002. The first cluster involved seven cases who were students of a Northern Sydney boarding school. The Northern Sydney Public Health Unit (NSPHU) investigated this outbreak and identified a total of 105 students who reported gastrointestinal disease between 11 and 22 February. These cases were also likely to be caused by STMPT9. NSPHU conducted a case-control study involving both ill and well students, but the sources of infection remain unclear.

The second cluster of cases was among people who had eaten at a restaurant in Western Sydney. In late February, Western Sydney Public Health Unit (WSPHU) received a report that a group of people who had eaten at the restaurant had become ill with gastroenteritis. WSPHU staff subsequently interviewed 19 people who were at the restaurant on 20 and 21 February. Of these, eight reported illness within 48 hours of eating there (in two of these individuals, STMPT9 infection was confirmed on stool testing). In a retrospective cohort study, WSPHU found an association between illness and eating deep fried ice cream. Investigation revealed that the ice cream had been battered using a tray that had earlier been used to prepare raw chicken. This practice has since ceased.

Staff from the NSW Department of Health interviewed 37 other STMPT9 cases; seven of these reported eating at the same restaurant. All seven reported eating the restaurant's deep fried ice cream between 7 and 22 February.

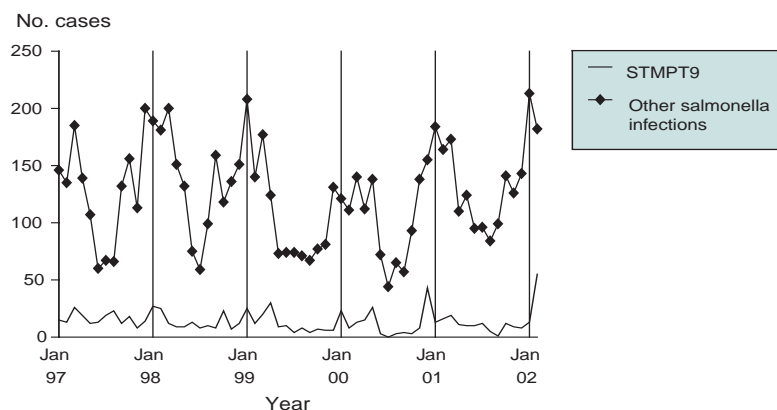
TABLE 1

CHARACTERISTICS OF PEOPLE REPORTED WITH *SALMONELLA TYPHIMURIUM* PHAGE TYPE 9 (STMPT9), AND OTHER TYPES OF SALMONELLOSIS, EXPRESSED AS NUMBERS AND PERCENTAGES, NSW, JANUARY 1997 TO FEBRUARY 2002

Case characteristics	Jan–Dec 2001		Jan–Feb 2002	
	STMPT9 N %	Other N %	STMPT9 N %	Other N %
Male	67 (53)	780 (51)	32 (39)	230 (51)
<5	43 (34)	470 (31)	18 (22)	124 (27)
5–24	47 (37)	400 (26)	32 (39)	144 (32)
25–64	31 (25)	563 (37)	25 (30)	149 (33)
65+	5 (4)	106 (7)	7 (9)	34 (8)
Rural	31 (25)	674 (44)	14 (17)	220 (49)
Total	126 (100)	1539 (100)	82 (100)	451 (100)

FIGURE 1

REPORTS OF *SALMONELLA TYPHIMURIUM* PHAGE TYPE 9 (STMPT9), AND OTHER TYPES OF SALMONELLOSIS, BY MONTH OF ONSET, NSW, JANUARY 1997 TO FEBRUARY 2002



QUARTERLY REPORT: AUSTRALIAN CHILDHOOD IMMUNISATION REGISTER

Table 2 reports immunisation coverage by area health service for children aged 12 months to less than 15 months.

These data refer to four different cohorts of children whose age has been calculated 90 days before data extraction. The information contained in each of the reports has been extracted from the Australian Childhood Immunisation Register (ACIR) and may not reflect true levels of coverage due to under-reporting. The percentages of children in each area health service who are fully vaccinated for this age is presented according to the current immunisation schedule.

TABLE 2

PERCENTAGE OF IMMUNISATION COVERAGE BY AREA HEALTH SERVICE FOR CHILDREN AGED 12 MONTHS TO LESS THAN 15 MONTHS

Area health service	30 June 2001	30 Sept 2001	31 Dec 2001	31 March 2002
Central Coast	94	93	94	92
Central Sydney	91	89	87	88
Hunter	94	96	93	94
Illawarra	92	93	91	93
Northern Sydney	90	89	89	90
South Eastern Sydney	89	89	89	90
South Western Sydney	92	90	89	90
Wentworth	92	92	91	92
Western Sydney	89	90	89	90
Far West	87	92	94	92
Greater Murray	93	93	93	93
Macquarie	93	92	95	92
Mid North Coast	91	91	88	90
Mid Western	90	92	92	92
New England	92	92	94	94
Northern Rivers	86	86	84	80
Southern	91	91	89	93
NSW	91	91	91	91

QUARTERLY REPORT: HIV NOTIFICATIONS TO END OF DECEMBER 2001

To the end of December 2001, the cumulative number of HIV diagnoses in NSW residents was 12,450. The number of new diagnoses of HIV in NSW has plateaued over the past few years, and was 360 in 2001 (Tables 3 and 4).

Between 1981 and 2001, 92 per cent of NSW residents diagnosed with HIV infection were males and 89 per cent were 20–49 years of age. Reported exposures included male-to-male sexual contact (with or without a history of injecting drug use) in over 60 per cent of cases, injecting drug use for three per cent of cases, and heterosexual contact (as the only risk factor) for seven per cent of cases. For over a quarter (27 per cent) of all notifications, no risk factor was reported. However, over the period 1991–2000, the proportion of notifications with undetermined or unknown risk factor information declined to 16 per cent.

In 2001, 88 per cent of cases were males and 86 per cent were 20–49 years of age. Male-to-male sexual contact (with or without a history of injecting drug use) was reported for 59 per cent of cases, injecting drug use for five per cent of cases, and heterosexual contact (as the only risk factor) for 15 per cent of cases. The proportion of cases with undetermined or unreported risk factors was 17 per cent. Some of these notifications may be duplicated. The Communicable Diseases Branch is currently undertaking active follow-up of these notifications.

AIDS diagnoses and AIDS deaths

The cumulative AIDS diagnoses and AIDS deaths to December 2001 were 4888 and 3330 respectively. The number of diagnoses and deaths declined significantly in 2001 falling from 115 and 69 respectively in 2000, to 62 and 33 respectively in 2001.

While data from recent years may be under-reported, they indicate that there have been reductions in the number of people being diagnosed with and dying from AIDS in NSW.

While there has been a decline in the rate of new cases of HIV infection overall, there is a growing number of people living with HIV infection in NSW. Consequently, it is essential that HIV prevention efforts continue to be a priority. ☒

TABLE 3

NOTIFICATIONS OF HIV, AIDS, AND AIDS DEATHS, REPORTED BY YEAR, NSW, 1981–2001

Year	HIV	AIDS	AIDS Deaths
1981	1	1	1
1982	1	1	0
1983	1	3	1
1984	202	30	6
1985	990	91	46
1986	1110	160	108
1987	1635	250	143
1988	1144	312	138
1989	988	346	235
1990	813	417	313
1991	810	435	334
1992	708	415	304
1993	597	464	363
1994	506	520	405
1995	539	454	339
1996	459	348	255
1997	426	194	108
1998	409	165	68
1999	390	105	61
2000	359	115	69
2001	360	62	33
Jan'01–Mar'01	86	12	6
Apr'01–Jun'01	88	16	4
Jul'01–Sep'01	103	20	13
Oct'01–Dec'01	83	14	10
Total	12450	4888	3330

TABLE 4

CHARACTERISTICS OF NSW RESIDENTS REPORTED WITH HIV INFECTION, AIDS, OR WHO HAVE DIED FROM AIDS, 1981 TO DECEMBER 2001

Characteristic	All cases 1981–2001			1991–2000			Jan–Dec 2001			AIDS deaths				
	HIV N	%	AIDS N	%	AIDS deaths N	%	HIV N	%	AIDS N	%	HIV N	%	AIDS N	%
Gender														
Male	11500	92.4	4671	95.6	3207	96.3	4782	91.9	3052	94.9	2219	96.2	317	88.1
Female	662	5.3	206	4.2	116	3.5	343	6.6	154	4.8	81	3.5	36	10.0
Other	288	2.3	11	0.2	7	0.2	79	1.5	9	0.3	6	0.3	9	2.5
Age														
0–2	38	0.3	8	0.2	4	0.1	22	0.4	8	0.2	3	0.1	0	0.0
3–12	36	0.3	12	0.3	9	0.3	9	0.2	6	0.2	5	0.2	0	0.0
13–19	200	1.6	15	0.3	11	0.3	61	1.2	5	0.2	6	0.3	1	0.3
20–29	3920	31.5	815	16.7	579	17.4	1481	28.5	477	14.8	391	17.0	89	24.7
30–39	4758	38.2	2031	41.6	1358	40.8	2035	39.1	1353	42.1	940	40.8	148	41.1
40–49	2351	18.9	1379	28.2	949	28.5	1016	19.5	935	29.1	672	29.1	73	20.3
50–59	754	6.1	472	9.7	305	9.2	377	7.2	332	10.3	214	9.3	20	5.6
60+	265	2.1	156	3.2	115	3.5	126	2.4	99	3.1	75	3.3	10	2.8
Not reported	128	1.0	0	0.0	0	0.0	77	1.5	0	0.0	0	0.0	19	5.3
Exposure														
Male homosexual–bisexual	7260	58.3	3957	81.0	2763	83.0	3344	64.3	2522	78.4	1881	81.6	213	59.0
Male homosexual–bisexual and IDU	277	2.2	182	3.7	128	3.9	163	3.1	129	4.0	97	4.2	16	4.4
Injecting drug use (IDU)	414	3.3	45	0.9	20	0.6	194	3.7	39	1.2	19	0.8	17	4.7
Heterosexual	874	7.0	380	7.8	189	5.7	628	12.1	320	10.0	162	7.0	54	15.0
Haemophilia–Coagulation disorders	113	0.9	51	1.0	45	1.4	8	0.2	24	0.7	28	1.2	0	0.0
Blood-tissue recipient/ NSI*	117	0.9	106	2.2	91	2.7	28	0.5	44	1.4	43	1.9	0	0.0
Vertical	35	0.3	15	0.3	8	0.2	29	0.6	13	0.4	6	0.3	0	0.0
Not stated–Unknown	3360	27.0	152	3.1	86	2.6	810	15.6	124	3.9	70	3.0	60	16.9
Residence														
Sydney*	7006	56.3	4078	83.4	2782	83.5	3970	76.3	2699	84.0	1941	84.2	314	87.2
Rural	795	6.4	656	13.4	418	12.6	515	9.9	488	15.2	337	14.6	38	10.6
Unknown	4649	37.3	154	3.2	130	3.9	719	13.8	28	0.9	28	1.2	8	2.2
Total	12450	100.0	4888	100.0	3330	100.0	5204	100.0	3215	100.0	2306	100.0	360	100.0

HIV data to 31 December, 2001 source: NSW HIV database, CDB, NSW Department of Health, Recent AIDS data to 31 December, 2001 source: National Centre for HIV Epidemiology and Clinical Research

* Needle Stick Injury

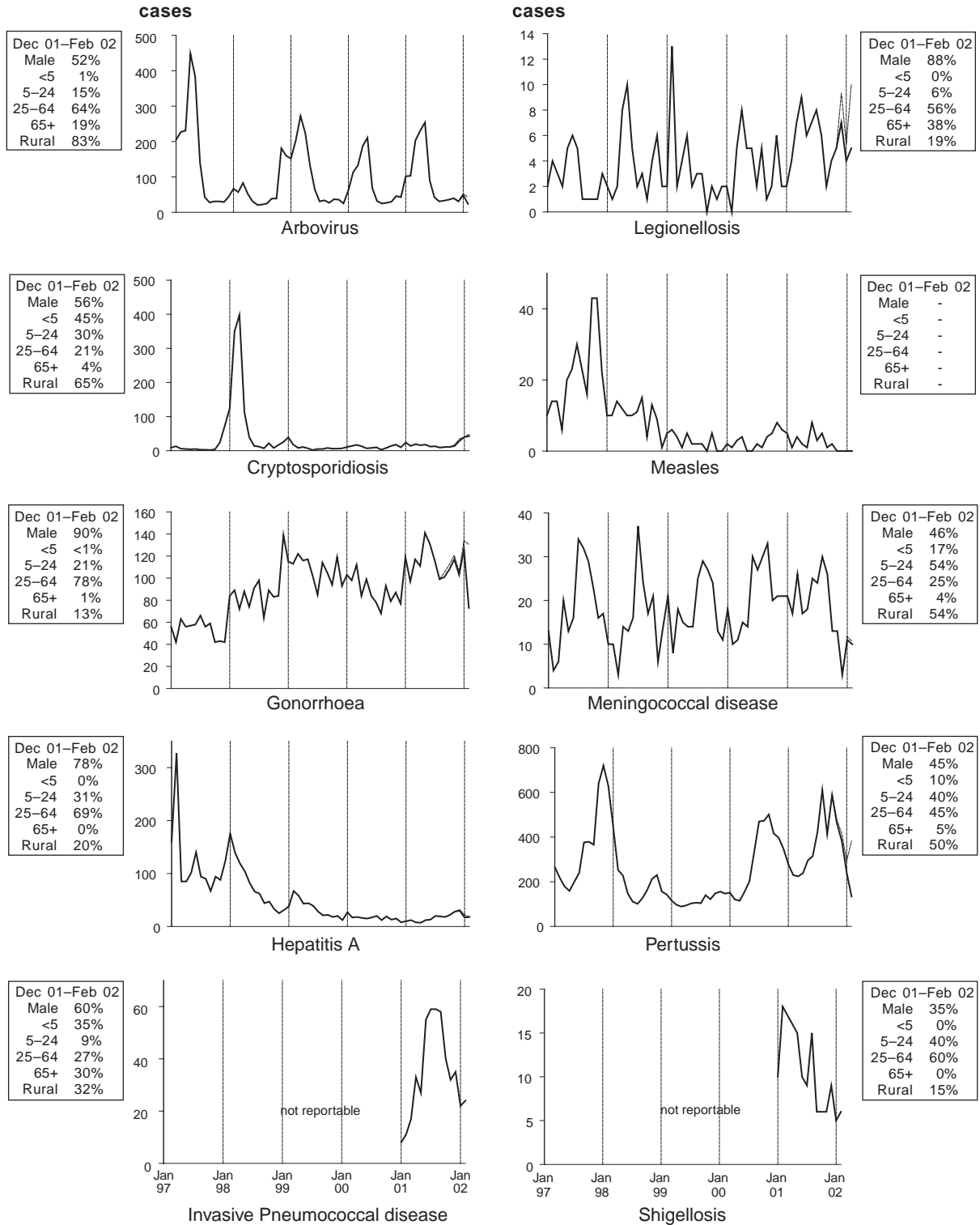
*Sydney area health services include Central Sydney, Northern Sydney, Western Sydney, Wentworth, South Western Sydney, and South Eastern Sydney.

FIGURE 2

REPORTS OF SELECTED COMMUNICABLE DISEASES, NSW, JANUARY 1997 TO FEBRUARY 2002, BY MONTH OF ONSET

These are preliminary data: case counts for recent months may increase because of reporting delays. Laboratory-confirmed cases, except for measles, meningococcal disease and pertussis — actual — — predicted after adjusting for likely reporting delays.

NSW population	
Male	50%
<5	7%
5-24	28%
25-64	52%
65+	13%
Rural*	42%



* For definition, see *NSW Public Health Bulletin*, April 2000

TABLE 5 **REPORTS OF NOTIFIABLE CONDITIONS RECEIVED IN FEBRUARY 2002 BY AREA HEALTH SERVICES**

Condition	Area Health Service														Total						
	CSA	NSA	WSA	WEN	SWS	CCA	HUN	ILL	SES	NRA	MNC	NEA	MAC	MWA		FWA	GMA	SA	CHS	For Feb ¹	To date ²
Blood-borne and sexually transmitted																					
Chancroid*	51	50	38	14	15	6	38	18	119	10	7	12	5	5	2	12	7	4	418	-	798
Chlamydia (genital)*	2	7	6	2	8	-	1	3	59	3	1	1	1	-	-	-	-	1	98	-	235
Gonorrhoea*	1	1	-	-	-	-	1	1	1	1	1	-	-	-	-	-	-	1	6	-	15
Hepatitis B - acute viral*	35	41	34	11	58	5	8	1	37	-	4	1	-	1	-	3	1	5	247	-	624
Hepatitis B - other*	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	2	-	-	5	-	17
Hepatitis C - acute viral*	62	30	64	39	38	34	46	41	84	31	21	11	6	9	2	11	18	37	593	-	1,243
Hepatitis C - other*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1
Hepatitis D - unspecified*	16	3	7	1	7	2	2	1	14	2	-	1	-	2	1	-	-	1	61	-	126
Vector-borne																					
Barmah Forest virus*	-	-	-	-	-	-	-	-	-	1	6	-	-	-	-	-	2	-	9	-	27
Ross River virus*	-	-	-	-	-	2	-	2	-	1	3	3	1	-	1	3	-	-	18	-	35
Arboviral infection (Other)*	-	2	1	1	-	-	-	-	1	-	-	-	-	-	-	-	-	-	5	-	13
Malaria*	-	4	3	-	2	-	1	1	2	-	1	1	1	-	-	-	-	-	16	-	29
Zoonoses																					
Anthrax*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Brucellosis*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Leptospirosis*	-	-	-	-	1	1	1	1	-	-	1	-	-	-	-	-	-	-	4	-	10
Lyssavirus*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Psittacosis*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1	-	3
Q fever*	-	-	-	-	-	-	1	1	-	2	3	2	5	3	1	-	-	-	18	-	35
Respiratory and other																					
Blood lead level ¹	1	4	5	1	-	-	5	3	-	-	2	-	6	-	-	2	-	-	29	-	58
Influenza*	-	-	1	1	-	-	-	-	2	-	-	-	-	-	-	1	-	-	5	-	11
Invasive pneumococcal infection	1	3	4	-	-	1	3	3	4	-	-	-	1	-	1	-	-	-	21	-	49
<i>Legionella longbeachae</i> infection *	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	4
<i>Legionella pneumophila</i> infection *	-	1	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	3	-	5
Legionnaires' disease (other)*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Leprosy	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Meningococcal infection (invasive)	-	-	-	1	1	1	1	3	2	-	1	1	-	-	-	1	1	-	10	-	20
Tuberculosis	9	5	6	-	1	3	1	-	9	-	1	-	-	-	-	-	-	-	36	-	68
Vaccine-preventable																					
Adverse event after immunisation	-	-	-	1	-	1	1	-	-	-	-	-	-	-	-	-	-	-	3	-	13
<i>H. influenzae b</i> infection (invasive)*	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1	-	-	-	2	-	3
Measles	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mumps*	-	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	3	-	6
Pertussis	16	34	22	7	13	7	33	13	38	11	7	14	5	8	-	3	4	-	235	-	636
Rubella*	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	8
Tetanus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Faecal-oral																					
Botulism	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cholera*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cryptosporidiosis*	2	5	8	1	-	-	-	3	6	14	1	7	-	-	1	-	2	-	50	-	82
Food borne illness (not otherwise specified)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Gastroenteritis (in an institution)	-	-	-	-	-	-	100	18	-	-	-	-	1	-	-	-	-	-	119	-	175
Giardiasis*	-	9	10	2	6	2	12	4	20	1	3	6	2	-	-	5	1	-	83	-	147
Haemolytic uraemic syndrome	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Hepatitis A*	6	-	2	-	1	1	2	1	2	-	-	-	-	1	-	-	-	-	17	-	42
Hepatitis E*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Listeriosis*	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	3
Salmonellosis (not otherwise specified)*	14	26	29	8	23	3	25	14	37	33	2	4	2	5	1	7	4	-	238	-	469
Shigellosis*	-	-	1	-	2	-	-	-	2	-	-	-	-	-	-	-	-	-	5	-	14
Typhoid and paratyphoid*	2	-	2	-	2	-	-	-	3	-	-	-	-	-	-	-	-	-	9	-	13
Verotoxin producing <i>E. coli</i> *	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1

* lab-confirmed cases only + includes cases with unknown postcode* HIV and AIDS data are reported separately in the Public Health Bulletin quarterly

CSA = Central Sydney Area	WEN = Wentworth Area	HUN = Hunter Area	NRA = Northern Rivers Area	MAC = Macquarie Area	GMA = Greater Murray Area
NSA = Northern Sydney Area	SWS = South Western Sydney Area	ILL = Illawarra Area	MNC = North Coast Area	MWA = Mid Western Area	SA = Southern Area
WSA = Western Sydney Area	CCA = Central Coast Area	SES = South Eastern Sydney Area	NEA = New England Area	FWA = Far West Area	CHS = Corrections Health Service