

INFECTIOUS DISEASE

NOTIFICATIONS, 1988-1990

Together with the NSW Infectious Disease Advisory Committee, the Department of Health is reviewing the process of infectious disease reporting, surveillance and response. This process has six major objectives:

- First, to reduce the list of notifiable conditions. A revised draft of notifiable infectious diseases is currently being circulated for comment by relevant organisations.
- Second, to introduce laboratory-based notification. To increase the proportion of notifiable disease occurrences that are reported, the new system will incorporate reporting of specific microbiologic or serologic findings by laboratory staff. This reporting mechanism has been successfully pilot-tested in the Eastern Sydney Area Health Service (see article p.5).
- Third, to streamline reporting procedures and increase involvement of those who will be responsible for immediate control measures. Medical practitioners and pathology laboratory staff will be asked to forward notifications to the Medical Officer of Health (MOH) in the Public Health Unit (PHU) of their Area/Region. The MOH will be responsible for monitoring and responding to these reports and for forwarding the information to the Epidemiology Branch in the Department of Health for statewide collation.
- Fourth, to develop a computerised database that is readily accessible to all people requiring information on infectious diseases in New South Wales. Staff of the Epidemiology Branch are modifying software developed by the United States Centers for Disease Control (EPIINFO) for use by PHUs. It is anticipated that PHU staff will maintain a microcomputer database of infectious disease notifications and regularly transmit this via modem to the central Epidemiology Branch database. All PHUs will be able to access the central database. Information will then be transmitted from this central database to a national Communicable Disease Network database maintained by the Communicable Disease Section of the Commonwealth Department of Community Services and Health.
- Fifth, to develop uniform protocols for responding to infectious disease notifications. Protocols, which provide a step-by-step guide for action to be taken in response to a notification, have been drafted for review.
- And finally, to provide rapid feedback to those who provide the notification data and others who need to know. Notification data will be published monthly in the Public Health Bulletin which will be distributed to the public health community of NSW, pathology laboratories, and health departments in the Commonwealth, States and Territories. In addition, the infectious disease notification data will be published simultaneously in the "Medical Observer", a biweekly newspaper distributed to general practitioners throughout Australia.

While we expect that reporting of notifiable infectious diseases will dramatically improve over the next year, we report here the results of the current system (unrevised) for 1989 and the first two months of 1990. ►

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TABLE 2

INFECTIOUS DISEASE NOTIFICATIONS, NSW, 1988 AND 1989

Disease	1989	1988
AIDS ¹	265	289
Amoebiasis	6	8
Ancylostomiasis	-	-
Anthrax	-	-
Arboviral inf. (NOS) ²	389	136
Brucellosis	-	1
Campylobacter inf.	1875	1875
Chancroid	1	-
Cholera	-	1
Congenital rubella synd.	-	-
Diphtheria	-	1
Donovanosis	-	1
Encephalitis (NOS) ²	-	4
Food poisoning (NOS) ²	7	36
Genital herpes	876	947
Giardiasis	659	497
Gonococcal ophthalmia neo.	1	-
Gonorrhoea	603	746
Hepatitis A	63	89
Hepatitis B	465	388
Hepatitis unspecified	21	15
Hydatid disease	2	5
Infantile diarrhoea (NOS) ²	492	498
Legionnaires' disease	52	26
Leprosy	12	7
Leptospirosis	58	36
Lymphogranuloma venereum	-	-
Malaria	91	84
Measles	76	43
Meningococcal inf.	58	18
Non specific urethritis	1708	3124
Ornithosis	4	5
Pertussis	202	25
Plague	-	-
Poliomyelitis	-	-
Q Fever	138	232
Rabies	-	-
Salmonella inf. (NOS) ²	1333	1048
Shigella inf.	94	99
Syphilis	315	337
Tetanus	-	-
Trachoma	-	-
Tuberculosis	452	406
Typhoid & paratyphoid	19	25
Typhus	-	-
Vibrio parahaemolyticus inf.	8	1
Viral haemorrhagic fevers ³	-	-
Yellow fever	-	-
Yersinia inf.	116	124
Total	10461	11177

1. In 1989, 57 deaths from AIDS were reported. In 1988 there were 123. The cumulative total of AIDS cases reported to the NH & MRC National Centre for HIV Epidemiology and Clinical Research through 31 December, 1989 was 1069. 608 deaths from AIDS were reported to this time. HIV data will be available for the next issue of this Bulletin.

2. NOS — Not Otherwise Specified.

3. Includes Crimean Congo Fever, Ebola Fever, Lassa Fever, Marburg disease.

Please note that the data in this bulletin are provisional and subject to change because of late reports or corrections in case classification. Data are tabulated, where possible, by area of residence and by the disease onset date and not simply the date of notification or receipt of such notification.

TABLE 3

**INFECTIOUS DISEASE NOTIFICATIONS,
NSW, WEEKS ENDING 24 February,
1990 AND 25 February, 1989**

	Cum. 1990	Cum. 1989		Cum. 1990	Cum. 1989
AIDS	56	58	Leprosy	0	4
Amoebiasis	0	1	Leptospirosis	7	9
Ancylostomiasis	0	0	Lymphogranuloma venereum	0	0
Anthrax	0	0	Malaria	31	8
Arboviral inf. (NOS) ¹	1	0	Measles	4	4
Brucellosis	0	0	Meningococcal inf.	4	6
Campylobacter	313	372	Non specific urethritis	227	292
Chancroid	0	0	Ornithosis	0	0
Chlamydia inf. (NOS) ¹	28	0	Pertussis	60	10
Cholera	0	0	Plague	0	0
Congenital rubella syn.	0	0	Polio myelitis	0	0
Diphtheria	0	0	Q Fever	18	19
Donovanosis	0	0	Rabies	0	0
Encephalitis (NOS) ¹	0	0	Ross River fever	19	190
Food poisoning (NOS) ¹	1	1	Salmonella inf.	286	267
Genital herpes	108	127	Shigella inf.	31	12
Giardiasis	104	116	Syphilis	43	52
Gonococcal ophthalmia neo.	0	0	Tetanus	0	0
Gonorrhoea	65	122	Trachoma	0	0
Hepatitis A	4	9	Tuberculosis	68	92
Hepatitis B	44	70	Typhoid & Paratyphoid	6	4
Hepatitis unspec.	2	1	Typhus	0	0
HIV ²	N/A	N/A	Vibrios inf. (NOS) ¹	2	2
Hydatid disease	0	0	Viral haemorrhagic fevers	0	0
Infantile diarrhoea (NOS) ¹	10	54	Yellow fever	0	0
Legionnaires' disease	10	6	Yersinia inf.	20	18

1. NOS — Not Otherwise Specified.
2. HIV data will be available in the next issue of this Bulletin.
3. Includes Crimean Congo Fever, Ebola Fever, Lassa Fever, Marburg disease.

TABLE 4

**INFECTIOUS DISEASE NOTIFICATIONS
BY HEALTH AREA AND REGION, NSW,
31 December, 1989-24 February, 1990**

DISEASES	CSA	NSA	SSA	ESA	WSA	WEN	SWS	HUN	CCA	ILL	NCR	NER	OFW	CWR	SWR	SER	VIC	QLD	SA	TAS	ACT	U/K	OS	TOTAL	
AIDS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	56	-	56
Arbovirus (NOS) ¹	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Campylobacter inf.	19	36	59	9	42	51	29	6	8	3	18	18	2	2	5	-	-	-	-	1	3	2	-	-	313
Chlamydia inf. (NOS) ¹	-	-	-	3	1	-	-	1	-	-	15	5	1	-	1	-	-	-	-	-	-	-	1	-	28
Food Poisoning (NOS) ¹	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	1
Genital herpes	-	-	-	81	-	3	2	1	1	-	13	7	-	-	-	-	-	-	-	-	-	-	-	-	108
Giardiasis	1	5	14	5	5	9	5	3	-	45	2	2	2	2	-	-	-	1	-	-	-	-	-	-	104
Gonorrhoea	2	-	1	41	2	-	1	3	2	-	8	3	1	-	1	-	-	-	-	-	-	-	-	-	65
Hepatitis A	-	1	-	1	1	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	4
Hepatitis B	1	-	-	8	2	-	9	3	-	7	4	7	2	1	-	-	-	-	-	-	-	-	-	-	44
Hepatitis unspec.	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	2
Infant diarr. (NOS) ¹	-	-	-	-	3	5	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	10
Legionnaires' dis.	-	4	1	-	1	-	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	2	-	-	10
Leptospirosis	-	-	1	-	1	-	-	-	-	1	-	-	-	1	-	-	1	-	-	-	-	-	2	-	7
Malaria	2	11	-	4	2	-	-	2	1	1	1	-	1	3	1	-	-	-	-	-	-	-	1	1	31
Measles	-	1	-	-	-	-	1	-	-	1	-	-	-	-	1	-	-	-	-	-	-	-	-	-	4
Meningococcal inf.	-	-	1	-	1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
Nonspecific urethritis	-	1	-	178	-	1	21	19	-	1	4	-	-	-	-	-	-	-	1	-	-	1	-	-	227
Pertussis	11	4	5	1	3	8	4	2	5	-	1	10	4	2	-	-	-	-	-	-	-	-	-	-	60
Q Fever	-	-	-	2	-	-	-	1	-	-	4	8	1	1	-	-	-	1	-	-	-	-	-	-	18
Ross River fever	-	-	-	-	-	1	-	-	-	-	5	2	-	2	5	-	-	-	-	2	-	-	1	1	19
Salmonella inf.	22	39	19	8	45	21	33	7	6	13	22	19	6	4	4	5	3	3	-	-	-	1	6	-	286
Shigella inf.	2	3	-	1	1	-	2	-	1	1	9	3	6	1	-	-	-	-	-	-	-	-	-	1	31
Syphilis	6	1	-	20	-	-	4	3	-	-	1	2	6	-	-	-	-	-	-	-	-	-	-	-	43
Tuberculosis (all)	15	1	10	13	6	1	12	2	2	-	1	1	1	1	-	-	-	-	-	-	-	-	3	-	68
Typhoid & paratyphoid	-	1	-	2	-	-	-	1	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	6
Vibrio inf. (NOS) ¹	-	-	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
Yersinia inf.	3	6	-	-	1	-	3	-	-	-	4	1	1	-	-	-	-	-	-	-	1	-	-	-	20
Total	84	114	112	377	117	101	129	56	30	21	161	86	39	24	20	5	4	5	1	3	7	73	3	1572	

1. NOS — Not Otherwise Specified.

Abbreviation Health Area/Region: U/K Area of residence unknown, ACT Australian Capital Territory, CCA Central Coast, CSA Central Sydney Area, CWR Central Western Region, ESA Eastern Sydney Area, HUN Hunter Region, ILL Illawarra Region, NCR North Coast Region, NER New England Region, NSA Northern Sydney Area, OFW Orana and Far West Region, OS Overseas, QLD Queensland, SA South Australia, SSA Southern Sydney Area, SWR South West Region, SWS South Western Sydney, VIC Victoria, WEN Wentworth Area, WSA Western Sydney Area.

LABORATORY

Surveillance of Infectious Disease

In April, 1989 the Medical Officer of Health (MOH) of the Eastern Sydney Area Health Service (ESAHS) and members of the Epidemiology Branch (EB), Department of Health, NSW, agreed to test a system for collecting laboratory data on infectious diseases. As a result, the Laboratory Infectious Disease (ID) Surveillance Project was developed in the ESAHS. The following ESAHS public hospital laboratories were involved in the network for the pilot scheme: Prince of Wales, Prince Henry, Royal South Sydney, St Vincents and Sydney.

After successful completion of the pilot phase of the project the network approached private laboratories providing services in the eastern Sydney area. In September, 1989 the following private laboratories joined the network: Michael D Frack and CH Mansfield; PK Lamond, JH Baird and JF Finlayson; Macquarie Pathology Services; Hanly Moir Pathology; Stat Labs and Sugerman's Pathology. At the same time the microbiology laboratory at the Royal Alexandra Hospital for Children, Camperdown began participating in the project.

Each participating laboratory in this system completes an information sheet which includes: diagnosis, laboratory identification number, patient identifier, area of residence, sex and age of the patient. Each week laboratory staff transmit this information by facsimile to the MOH of the ESAHS who initiates appropriate public health action. The forms are then redirected by facsimile to the EB where the information is entered into a purpose-designed database (EPIINFO Version 3).

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TABLE 5

LABORATORY ID SURVEILLANCE PROJECT, NSW
1989 & 1990 NOTIFICATIONS
BY FOUR WEEKLY REPORTING PERIODS

BACTERIAL/PROTOZOAN ORGANISM	1989								1990			Total
	01-06	07	08	09	10	11	12	13	01	02	03	
Aeromonas hydrophila	2	0	0	0	0	2	2	9	3	8	3	29
Bordetella pertussis	28	7	17	14	20	31	52	32	28	28	8	265
Campylobacter spp	42	10	4	8	6	15	109	117	127	112	84	634
Cryptosporidium	0	0	0	1	3	4	0	5	3	9	2	27
Giardia lamblia	15	2	0	5	0	2	34	28	31	68	49	234
H. Influenzae (systemic)	3	2	2	1	1	0	3	4	0	3	4	23
Legionella spp	4	1	0	1	0	0	2	1	0	1	0	10
Malaria	0	0	0	0	0	0	0	0	1	4	0	5
Mycobacterium tuberculosis	11	13	6	4	4	0	4	2	1	0	0	45
Mycobacterium atypical	20	16	16	6	6	2	2	2	5	2	0	77
Mycoplasma pneumoniae	6	3	0	1	2	1	6	2	7	4	2	34
Neisseria meningitidis	0	0	2	0	1	2	1	0	0	1	0	7
Sal. typhi, paratyphi A&B	13	0	2	1	4	1	1	0	0	3	0	25
Salmonella spp	9	3	6	3	1	6	11	27	27	40	36	169
Shigella spp	6	0	0	0	1	3	5	0	4	3	3	25
Streptococcus group B	1	0	0	0	0	0	1	1	0	0	0	3
Streptococcus pneumoniae	4	1	0	9	4	4	1	1	3	0	1	28
Streptococcus pyogenes	0	0	0	0	0	0	2	1	0	2	0	5
Yersinia enterocolitica	13	1	1	5	0	1	3	6	4	2	3	39
Total	177	59	56	59	50	74	239	238	244	290	195	1684

VIRAL ORGANISM	1989								1990			Total
	01-06	07	08	09	10	11	12	13	01	02	03	
Adenovirus	0	0	0	0	0	0	1	0	0	0	0	1
Cytomegalovirus	0	0	1	0	0	5	10	4	7	12	3	42
Enteroviruses (non-Polio)	39	13	13	7	6	6	8	0	3	3	1	99
Epstein-Barr virus	0	0	0	0	2	4	26	9	12	17	11	81
Hepatitis A	2	1	0	0	0	0	5	8	2	4	2	24
Hepatitis B (acute)	0	0	0	0	0	3	4	0	2	0	1	10
Hepatitis B (unspec/carrier)	54	18	11	15	13	15	123	72	91	79	76	567
Influenza type A	0	0	0	6	7	3	6	3	0	0	3	28
Influenza type B	3	0	0	6	9	2	0	0	0	0	0	20
Parainfluenza	1	1	1	2	2	5	2	1	0	0	0	15
Respiratory syncytial virus	23	23	14	9	5	2	2	0	0	0	5	83
Rhinovirus	0	0	0	0	0	0	2	0	1	0	0	3
Rotavirus	5	7	18	35	48	49	30	9	10	6	9	226
Rubella	0	0	0	0	0	0	51	26	8	12	7	104
Varicella	0	0	0	0	1	0	6	2	2	8	3	22
Total	127	63	58	80	93	94	276	134	138	141	121	1325

STD ORGANISM	1989								1990			Total
	01-06	07	08	09	10	11	12	13	01	02	03	
Chlamydia trachomatis	59	31	12	13	24	25	68	38	70	109	63	512
Neisseria gonorrhoeae	17	11	9	8	10	26	30	31	29	44	30	245
Treponema pallidum	3	2	0	0	0	6	16	3	8	2	11	51
Total	79	44	21	21	34	57	114	72	107	155	104	808

LOW FREQUENCY ORGANISM	1989								1990			Total
	01-06	07	08	09	10	11	12	13	01	02	03	
Arboviruses (NOS) ¹	0	0	0	0	0	0	0	0	1	0	0	1
Brucella abortus	3	0	1	0	0	0	2	0	0	0	0	6
Clostridium difficile	0	0	0	0	0	0	0	0	0	0	1	1
Chlamydia psittaci	0	0	1	0	0	0	0	0	0	0	2	3
Cryptococcus neoformans	1	2	0	2	2	2	2	2	0	0	0	13
Echinococcus	2	0	0	0	0	0	0	0	0	0	0	2
Entamoeba histolytica	0	0	0	0	0	0	0	0	4	0	0	4
Enterovirus polio	0	0	0	0	0	0	0	2	0	2	1	5
Leptospira spp	1	0	0	0	0	0	0	0	0	1	0	2
Listeria monocytogenes	0	0	0	0	0	0	1	0	0	0	0	1
Pneumocystis carinii	0	0	0	0	0	2	0	3	0	0	0	5
Ross River virus	6	0	0	0	0	4	1	0	0	1	0	12
Toxoplasma	0	0	0	0	0	0	0	0	0	3	1	4
Total	13	2	2	2	2	8	6	7	5	7	5	59

1. NOS — Not Otherwise Specified.

Laboratory Surveillance of Infectious Disease

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These data are analysed and a report, consisting of the accumulated data and a brief commentary, is forwarded by facsimile to the participating laboratories within two working days. The enclosed tables show the data collected during 1989 and 1990 by monthly reporting period. The scheme has been maintained by the enthusiastic support and interest of all the participants. The feedback of up to date information has been found to be of considerable benefit to the laboratories, particularly in assisting them to fulfil their consultative role to the primary care practitioners.

The Laboratory ID Surveillance Project also has been successful in promptly identifying outbreaks of infectious diseases. Interventions which have resulted from the Project include education campaigns in eastern Sydney to reduce spread of respiratory syncytial virus and rotavirus, rubella and whooping cough. When it became clear that the outbreaks of rubella and whooping cough were early indicators of more widespread epidemics, the education campaigns were extended statewide through the central office of the Department of Health.

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Improved Public Health

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infectious and non-infectious disease, reproductive health and injury. Examples include examining horizontal transmission of hepatitis B and investigating risk factors for invasive haemophilus influenza B infection.

It is planned to appoint an experienced epidemiologist to give a personal touch to communications throughout the developing public health and epidemiology network. As well, there will be regular meetings of PHU and Central Office staff.

Future challenges in NSW for public health professionals include developing clear strategies for action at both the central and Area/Regional levels; demonstrating the utility of epidemiologic analyses to health care decision-makers (including clinicians); developing better collaborative linkages between academic departments of public health and public health action/service groups; and effectively communicating information to health workers and the public in a timely manner.

The Bulletin will provide a useful mechanism for exchange of information and ideas on investigations, programs, and evaluations that (may) affect the health of the citizens of NSW.

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1. An organised societal effort to protect, promote and restore health. It is a combination of sciences, skills and beliefs directed to the maintenance and improvement of health through collective or social actions. The programs, services and institutions involved emphasise the prevention of disease and the health needs of the population.
2. The study of the distribution and determinants of health-related states or events in specified populations and the application of this study to control health problems — it is the scientific discipline underpinning public health practice.
3. Department of Health, NSW. Epidemiology and Health Services Evaluation Branch. 1987 *Maternal and Perinatal Report*.
4. Health Services Implementation Branch. Central Office Department of Health, NSW, Organisational Structure. November 1989.

Infectious Disease

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Compared with 1988, there was an eight-fold increase in the number of pertussis cases notified to the Department of Health in 1989 (Table 2). The greatest increase occurred in the latter part of 1989 — in the two months from October 1. The majority of cases occurred in one to two year old children. Males and females were affected equally. Increased pertussis reporting has persisted through to January 1990 (Tables 3 & 4). A likely explanation for this is that immunity of children against *B. pertussis* is currently suboptimal.

While measles is potentially preventable, cases continue to be notified. Their existence suggests that there is substantial room for improvement in present immunisation practices.

Arbovirus notifications increased during 1989 compared with 1988. It is not known whether this was due to more accurate reporting than previously, or a true increase in incidence. All reported arbovirus notifications were Ross River virus infections, with the majority of cases being reported from the South West Region.

No particular trend in reporting of enteric diseases between 1988 and 1989 could be detected other than Salmonella notifications increased 30% in 1989. Of enteric pathogens, *Campylobacter*, *Giardia* and *Salmonella* were notified more frequently than infections due to *Shigella* and *Yersinia* and unclassified infantile diarrhoea. Typhoid fever is no longer endemic in New South Wales; primary cases reported for 1988 and 1989 occurred in overseas visitors. Six cases were notified in the first 2 months of 1990 (Tables 3 & 4).

Sexually transmitted disease notifications declined in 1989 compared with 1988 — genital herpes (7.5%), gonorrhoea (19.2%), syphilis (6.5%) and non-specific urethritis (45%). This pattern of declining notifications is still evident in the first 2 months of 1990 (Table 3).

Malaria notifications increased substantially in the first 8 weeks of 1990 compared with the comparable period in 1989 (Table 3). The majority of these cases reside in northern Sydney (Table 4). Most of these cases were acquired in Papua New Guinea.

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