



ON THE RIGHT TRACK

Since 1988, public health and epidemiology have returned to the health agenda in NSW. Frustration with a lack of data to assess the health outcomes of health care, AIDS and environmental concerns have been major stimuli. An enhanced professional infrastructure has been developing through which to address disease prevention and control and health promotion.

In December 1988 the NSW Health Department created the Epidemiology and Health Services Evaluation Branch (EHSEB) to improve the surveillance of population health in NSW and to conduct epidemiologic studies evaluating health services. In 1989 infectious disease, non-infectious disease, injury, environmental health, reproductive health, health services evaluation and computer services sections were set up within the EHSEB.

In November 1989 the Public Health Division was created, with five main branches under the direction of the Chief Health Officer — Public Health Services, Epidemiology and Health Services Evaluation, Drug Offensive, AIDS and Mental Health.

In December that year the NSW Minister for Health, Peter Collins, approved \$4 million annual recurrent funding for a program to enhance the public health and epidemiology network in the State. The program has four major objectives:

- To place clearly on the NSW Health Department's agenda promotion of population-based health and improved efficacy, efficiency and equity of health care services.
- To develop, implement and monitor State-wide and local public health goals, objectives, and strategies.
- To develop public health staff with the skills to accomplish these aims.
- To catalyse and co-ordinate local and State-wide public health efforts.

ESTABLISHING PUBLIC HEALTH UNITS (PHUs)

A key element in the fulfilment of these objectives is the establishment of Public Health Units in the State's 16 health Areas (metropolitan) and Regions (rural). The PHUs provide a capacity to identify public health priorities and develop and implement public health strategies at the Area/Regional level, with the support of a

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On the Right Track

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strong central epidemiology service. Specifically, the principal functions of the PHUs are:

- 1 To co-ordinate public health activity in each Area/Region, including public health programs, research and evaluation, with health education and health promotion programs.
- 2 To evaluate local health priorities and develop a public health strategy including surveillance, epidemiology, evaluation and prevention or control in the areas of infectious diseases, environmental health and monitoring, pregnancy outcomes, birth defects, injuries, chronic disease, risk factor prevalence and special problems of minority groups.

Fourteen PHUs were set up in 1990. Twelve of the State's Areas and Regions (average population 375,000) have their own PHU and two PHUs serve two Areas each. The staff configuration varies but all have a Medical Officer of Health who is responsible — among other tasks — for maintaining infectious disease control and environmental health. Units benefit from having staff with backgrounds which include health surveying (many have degrees in environmental health science), nursing, health research and computer science. The PHUs which link with the Public Health Division have focussed attention on developing more effective infectious disease reporting and response mechanisms.

COMMUNICATIONS

Efforts are being made to maximise communications between PHUs and the central Public Health Division and Health Promotion Unit to develop a standardised approach to similar threats to health. A manual including strategies of each PHU, organisational charts of the PHUs and contact information has been distributed to PHU staff. The manual will be expanded to include protocols for handling infectious diseases and environmental health hazards.

A monthly publication — the **NSW Public Health Bulletin** — is circulated to public health professionals in the State. The **Bulletin** contains information on public health investigations, strategies or the need for them and items of interest. While the **Bulletin** serves as the Department's main vehicle for feedback on notifiable infectious diseases, it will include information on births and on selected health indicators and risk factor data.

TRAINING

A major concern of PHU staff has been the lack of adequately trained public health professionals with sufficient experience to develop, implement and evaluate public health strategies. This problem has been particularly so for the country regions which find it hard to attract staff.

These concerns prompted the Department to establish a training program for health professionals. Last year six public health medicine registrars began a three-year training program. Seven more trainees with master's degrees in public health backgrounds will be selected to start on the program this year.

Trainees rotate through positions selected to provide challenging experiences in public health practice, research and management, and attend fortnightly seminars including presentations of work in progress, reviews of topical issues, journal article discussions and seminars on scientific and management methods. The program aims to encourage practical skills in epidemiology, presentation of scientific information, developing and evaluating public health policies and programs, health economics and management. Exchange programs are being developed with the United States Centers for Disease Control and the British Communicable Disease Surveillance Centre.

When possible public health trainees are sent out with trained supervisors to investigate clusters of health problems. These have included sudden infant death syndrome in Sydney suburbs and on the north coast of NSW, gastroenteritis in a nursing home, measles in schools, asthma in a rural town and determining whether HIV and hepatitis B were transmitted during a major bus collision in the State. In 1990 trainees worked on health issues such as: the role of general practitioners in mammographic screening programs, new databases for sexually transmissible diseases, improving the effectiveness of the NSW Cancer Registry, developing a regional injury control strategy, investigating the health effects of the Newcastle earthquake, and planning the new infectious disease notification and response system. Public health trainees helped identify 135 unreported cases of people living with AIDS. Because Commonwealth funding of AIDS services is linked to the number of identified cases, this attracted more than \$4 million in Federal funds that would otherwise have been lost to the State.

THE FUTURE

Perhaps most exciting is that the first stated objective in the NSW Health Department's 1990 Corporate Plan is "to improve the health status of the community through public health services and prevention and promotion services". Clear and measurable population health goals are being established in line with this major overall objective. Emphasis in health is increasingly turning to population-based approaches to total health management to improve the effectiveness and equity of expenditure. This development offers major challenges to public health professionals — to agree on priority areas, to develop realistic objectives and targets with clear performance indicators and, most importantly, to develop collaborative strategies to move decisively towards improved public health.

In conjunction with the central Public Health Division and Health Promotion Unit, the PHUs will catalyse health efforts at the Area and Regional level to accomplish these aims.

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An article similar to this appeared in the December 1990 issue of *In Touch*, the newsletter of the Public Health Association of Australia Inc. An article on improving collaboration in public health in NSW is planned for the February issue of the **Bulletin**.

INFECTIOUS DISEASES

This issue of the Bulletin updates HIV data reported in the December 1990 edition and in a previous story about HIV notification (Improved tracking for HIV, Public Health Bulletin Vol. 1, No. 6, pp7-9).

From this issue we include expanded information on people reported with HIV infection (Table 1). The data are reported by State HIV Reference Laboratories at the Prince of Wales Hospital, Westmead and St Vincent's Hospital.

While we have excluded results of those cases known previously to have tested HIV positive, previous testing history was known for only 8 per cent of the total people testing positive for HIV.

An 81-year-old woman with no history of tetanus immunisation has been reported with tetanus. This is the first notification of tetanus in two years. Ten days before admission the patient scratched her leg while working in her fowl house. We believe that immunisation rates among the elderly are poor. The immunisation status of adults requires periodic review. The NH&MRC recommends 10-yearly booster immunisation against diphtheria and tetanus — Adult Diphtheria Tetanus (ADT).

More than 200 cases of measles were reported during December 1990, making the cumulative total for 1990 the highest since 1981. Nine of 16 Area/Regional Health Services notified cases of measles in November. Public Health Unit staff are encouraged to seek serological confirmation of index cases, to motivate immunisation of contacts and ensure notification of all cases.

Notifications for Ross River fever and arboviral infection were lower in November and December than for the same period in 1989. Cases were reported from the New England Region in December.

Cases of Q fever have been reported in four Regions. The reporting rate for this condition was 27.1/100,000 in 1990 for the Central West, 10.1/100,000 for the combined six country Health Regions and 0.19/100,000 for NSW.

In 1990 reported salmonella infections rose by 30 per cent compared with 1989, for a rate of 24.4/100,000 a year. The Wentworth Area registered the highest rate of 42.9/100,000 — similar to notification rates in the United States.

TABLE 1

TOTAL CONFIRMED HIV POSITIVE CASES¹ BY RISK GROUP² AND SEX, NSW, 1984-90

Risk Group	Male	Female	Unknown	Total	(%)
Homosexual/ bisexual	2053	13	137	2203	(24.8)
Heterosexual contact	73	32	2	107	(1.2)
IV drug use	118	35	13	166	(1.9)
Gay/bisexual + IVDU	34	1	3	38	(0.4)
Heterosexual + IVDU	7	4	1	12	(0.1)
Receipt of blood transfusion or blood product	76	21	1	98	(1.1)
Vertical transmission (mother to infant)	10	4	3	17	(0.2)
Specified, n.e.c. ³	73	10	18	101	(1.1)
Unknown	3433	225	2516	6174	(69.2)
Total	5877	345	2694	8916	(100)

1. See footnote 1 Table 2

2. Reported risk group categories differ considerably between laboratories. Formal algorithms were used to merge categories.

3. Not elsewhere classified

TABLE 2

INFECTIOUS DISEASE NOTIFICATIONS, NSW To end of December 1990

CONDITION	Number of Cases Notified					
	Period			Cumulative		
	Nov. 1989	Nov. 1990	Dec. 1990*	Nov. 1989	Nov. 1990	Dec. 1990*
AIDS	24	6	—	280	306	306
Amoebiasis	—	—	—	7	9	9
Ancylostomiasis	—	—	—	—	—	—
Anthrax	—	—	—	—	—	—
Arboviral infection (NOS)	—	—	—	1	3	3
Brucellosis	—	—	—	—	5	5
Campylobacter infection	111	153	7	1545	1717	1724
Chancroid	—	—	—	—	—	—
Chlamydia infection (NOS)	28	44	2	63	413	415
Cholera	—	—	—	—	1	—
Congenital rubella syndrome	—	—	—	—	—	—
Diphtheria	—	—	—	—	—	—
Donovanosis	—	—	—	—	—	—
Encephalitis (NOS)	—	—	—	1	1	1
Food poisoning (NOS)	—	4	—	7	26	26
Genital herpes	71	49	—	636	917	917
Giardiasis	48	23	1	610	547	548
Gonococcal ophthalmia neo.	—	—	—	1	—	—
Gonorrhoea	31	26	1	521	372	373
Hepatitis A	—	6	—	56	32	32
Hepatitis B	24	17	1	416	397	398
Hepatitis C	N/A	6	—	N/A	37	37
Hepatitis unspecified	—	6	—	17	12	12
HIV**	N/A	N/A	N/A	785	335	—
Hydatid disease	1	—	—	2	2	2
Infantile diarrhoea (NOS)	15	8	—	424	131	131
Legionnaires' disease	1	2	—	49	25	25
Leprosy	1	—	—	11	5	5
Leptospirosis	6	3	1	53	42	43
Lymphogranuloma venereum	—	—	—	—	—	—
Malaria	12	12	6	81	185	191
Measles	21	78	6	63	322	328
Meningococcal infection	5	2	—	51	80	80
Non specific urethritis	59	121	—	1447	1408	1408
Ornithosis	—	—	—	4	1	1
Pertussis	54	2	—	168	133	133
Plague	—	—	—	—	—	—
Poliomyelitis	—	—	—	—	—	—
Q fever	11	9	—	102	139	139
Rabies	—	—	—	—	—	—
Ross River fever	5	2	—	388	250	250
Rubella	4	1	—	7	5	5
Salmonella infection	39	104	2	993	1294	1296
Shigella infection	4	6	3	66	124	127
Syphilis	10	25	—	277	316	316
Tetanus	—	1	—	—	1	1
Trachoma	—	—	—	—	2	2
Tuberculosis	72	31	4	423	468	472
Typhoid & paratyphoid	2	1	—	23	32	32
Typhus	—	—	—	—	—	—
Vibrio infection (NOS)	—	16	—	14	25	25
Viral haemorrhagic fevers	—	—	—	—	—	—
Yellow fever	—	—	—	—	—	—
Yersinia infection	2	12	—	73	125	125

* Preliminary data only

** Cumulative data — St Vincent's 1/1/89-30/9/89. Westmead & POW 1/1/89-30/11/89 and 1/1/90-30/11/90.

TABLE 3

**INFECTIOUS DISEASE NOTIFICATIONS,
BY HEALTH AREA & REGION, NSW,
FOR NOVEMBER 1990**

CONDITION	CSA	ESA	SSA	SWS	WSA	WEN	NSA	CCA	ILL	HUN	NCR	NER	OFR	CWR	SWR	SER	IS	U/K	TOTAL
AIDS	0	2	1	-	-	-	1	-	-	1	-	-	-	-	-	-	-	1	6
Campylobacter inf.	12	11	9	10	13	38	8	1	10	3	9	14	-	6	-	-	9	-	153
Chlamydia inf.	-	30	-	-	-	2	1	-	-	1	4	4	1	-	-	-	-	-	44
Food poisoning (NOS)	-	-	-	-	2	1	-	1	-	-	-	-	-	-	-	-	-	-	4
Genital herpes	-	35	1	1	1	2	-	-	-	1	7	1	-	-	-	-	-	-	49
Giardiasis	2	2	-	-	-	-	1	-	-	2	15	1	-	-	-	-	-	-	23
Gonorrhoea	-	12	1	7	-	-	1	-	-	2	-	1	-	-	-	-	-	-	26
Hepatitis A	-	1	-	-	-	-	2	-	-	-	2	-	-	-	-	-	-	3	6
Hepatitis B	-	-	2	4	1	1	4	-	-	-	2	1	2	-	-	-	-	-	17
Hepatitis C	-	-	-	-	-	1	2	-	-	-	3	-	-	-	-	-	-	-	6
Hepatitis unspecified	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6
Infantile diarr. (NOS)	-	-	-	-	-	-	-	-	6	-	2	-	-	-	-	-	-	-	8
Legionnaires' dis.	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	-	-	2
Leptospirosis	-	-	-	-	-	-	-	-	1	-	-	-	-	-	2	-	-	-	3
Malaria	1	-	-	1	1	1	1	-	-	2	3	1	1	-	-	-	-	-	12
Measles	1	4	-	2	-	-	3	-	12	27	9	8	-	-	-	12	-	-	78
Meningococcal inf.	-	-	-	-	-	-	1	-	-	1	-	-	-	-	-	-	-	-	2
Nonspecific urethritis	-	99	-	15	-	-	-	-	5	-	-	1	1	-	-	-	-	-	121
Pertussis	-	-	-	-	-	1	-	-	-	-	-	-	1	-	-	-	-	-	2
Q Fever	-	-	-	-	-	-	-	-	-	-	1	6	-	1	1	-	-	-	9
Ross River virus	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	2
Rubella	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1
Salmonella inf.	5	9	6	11	17	10	17	5	4	5	9	1	1	2	-	2	-	-	104
Shigella inf.	-	-	1	2	-	-	1	-	-	-	1	1	-	-	-	-	-	-	6
Syphilis	-	4	-	1	-	1	5	-	-	-	6	-	7	-	-	-	1	-	25
Tetanus	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	1
Tuberculosis	5	7	6	1	5	-	2	1	-	-	2	-	1	-	-	-	1	-	31
Typhoid & paratyphoid	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Vibrio Parahaemolyticus	-	1	1	2	9	-	1	-	2	-	-	-	-	-	-	-	-	-	16
Yersinia inf.	-	4	1	1	1	-	4	-	-	-	-	1	-	-	-	-	-	-	12

TABLE 4

**INFECTIOUS DISEASE NOTIFICATIONS,
BY HEALTH AREA & REGION, NSW,
JANUARY 1, 1990 to NOVEMBER 30, 1990**

CONDITION	CSA	ESA	SSA	SWS	WSA	WEN	NSA	CCA	ILL	HUN	NCR	NER	OFR	CWR	SWR	SER	IS	OS	U/K	TOTAL
AIDS	61	121	19	7	12	7	41	3	5	10	6	3	-	1	2	1	-	-	7	306
Amoebiasis	-	2	-	1	-	1	-	-	-	2	3	-	-	-	-	-	-	-	-	9
Arboviral inf. (NOS)	-	-	-	-	-	1	-	-	-	1	1	-	-	-	-	-	-	-	-	3
Brucellosis	-	-	-	-	-	-	-	-	-	-	3	2	-	-	-	-	-	-	-	5
Campylobacter inf.	103	102	275	152	193	257	166	42	32	43	108	142	17	26	6	8	42	2	1	1717
Chlamydia inf.	1	231	2	5	3	3	2	-	25	15	64	50	7	-	3	1	-	-	1	413
Cholera	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Encephalitis (NOS)	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	1
Food Poisoning (NOS)	1	-	-	-	8	2	3	1	-	-	-	-	-	10	-	-	-	-	-	26
Genital herpes	2	662	1	17	9	27	3	3	15	26	85	46	8	8	1	-	4	-	-	917
Giardiasis	18	25	53	18	26	27	37	28	-	31	230	33	9	7	-	2	2	-	1	547
Gonorrhoea	13	212	7	23	11	5	2	4	2	15	30	24	18	4	1	1	-	-	-	372
Hepatitis A	1	5	-	-	4	3	7	-	-	1	1	3	-	-	3	1	-	-	3	32
Hepatitis B	8	90	12	68	22	8	27	6	7	6	36	34	58	3	6	4	2	-	-	397
Hepatitis C	2	-	-	-	4	1	20	1	-	-	7	2	-	-	-	-	-	-	-	37
Hepatitis unspecified	-	9	-	-	-	-	-	-	-	1	-	1	-	1	-	-	-	-	-	12
Hydatid disease	-	-	-	-	-	-	-	-	-	-	1	-	-	1	-	-	-	-	-	2
Infantile diarr. (NOS)	-	-	-	5	4	16	-	-	21	2	70	11	2	-	-	-	-	-	-	131
Legionnaires' dis.	-	1	4	3	3	-	4	-	1	3	2	-	-	1	-	1	2	-	-	25
Leprosy	1	1	-	2	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	5
Leptospirosis	-	1	1	-	3	-	1	-	5	3	6	5	-	2	7	3	3	-	2	42
Malaria	15	27	8	8	16	4	51	2	10	13	10	5	2	4	6	1	1	1	1	185
Measles	1	9	18	5	3	1	6	2	14	155	65	25	-	1	17	-	-	-	-	322
Meningococcal inf.	5	1	9	8	10	4	4	1	-	8	11	13	3	2	-	-	-	-	1	80
Nonspecific urethritis	1	1013	2	158	3	1	2	1	90	105	14	9	5	-	1	2	1	-	-	1408
Ornithosis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	1
Pertussis	15	2	8	13	8	22	9	10	-	5	10	21	5	3	-	1	1	-	-	133
Q Fever	-	4	-	-	4	-	1	1	2	3	29	37	9	41	5	1	2	-	-	139
Ross River virus	1	4	1	1	-	1	2	1	5	26	96	48	16	7	24	-	12	1	4	250
Rubella	-	-	-	-	-	-	-	-	-	-	2	3	-	-	-	-	-	-	-	5
Salmonella inf.	80	75	108	155	148	105	179	33	56	58	98	67	37	20	28	26	20	-	1	1294
Shigella inf.	5	16	4	11	6	4	15	2	3	4	21	12	8	5	1	-	6	1	-	124
Syphilis	16	114	14	27	1	1	10	-	6	9	22	11	82	-	2	-	1	-	-	316
Tetanus	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	1
Trachoma	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	2
Tuberculosis	68	85	61	49	61	11	49	7	16	21	7	10	4	4	5	3	3	-	4	468
Typhoid & paratyphoid	1	6	1	2	3	2	3	1	3	3	6	-	-	-	-	-	1	-	-	32
Vibrio Parahaemolyticus	-	1	3	3	9	1	1	-	2	2	-	-	-	-	-	-	-	-	-	22
Vibrio SPP	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1
Vibrio Vulnificus	-	-	-	-	1	-	-	-	-	-	-	-	-	1	-	-	-	-	-	2
Yersinia inf.	19	13	12	14	8	5	24	1	1	1	16	6	2	-	-	1	2	-	-	125

Abbreviations used in this Bulletin:

CSA Central Sydney Health Area, ESA Eastern Sydney Health Area, SSA Southern Sydney Health Area, SWS South Western Sydney Health Area, WSA Western Sydney Health Area, WEN Wentworth Health Area, NSA Northern Sydney Health Area, CCA Central Coast Health Area, ILL Illawarra Health Area, HUN Hunter Health Area, NCR North Coast Health Region, NER New England Health Region, OFR Orana & Far West Health Region, CWR Central West Health Region, SWR South West Health Region, SER South East Health Region, IS Interstate, U/K Unknown, OS Overseas, NOS Not Otherwise Stated

Footnote: The data contained in this Bulletin are provisional and subject to change because of late reports or changes 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.