

# INFECTIOUS DISEASES

## MONITORING INFECTIOUS DISEASES — HEALTH INDICATORS

The following progress indicators for infectious diseases in NSW are proposed:

- reported measles incidence rate by age, sex and Aboriginality;
- school-entry measles immunisation rate;
- tuberculosis incidence rate by age, sex, Aboriginality and HIV status;
- hepatitis B incidence by age, sex, Aboriginality and risk-factor;
- compliance with neonatal hepatitis B immunisation program;
- AIDS incidence rate by age, sex, Aboriginality and risk group; and
- HIV seroconversions by age, sex, Aboriginality and risk group.

The indicators will be published regularly in the *Bulletin*. Comments for improvements are requested from interested individuals and organisations. Please send comments to Michael Levy, Infectious Diseases Section, Epidemiology and Health Services Evaluation Branch, NSW Health Department.

## COMPLETENESS OF REPORTING

Data in this *Bulletin* relate to Epiweeks 1 to 12. Table 4 lists the number of weekly reports made to Epidemiology and Health Services Evaluation Branch this year, out of a possible 11.

TABLE 4

NUMBER OF WEEKLY REPORTS MADE TO EPIDEMIOLOGY BRANCH, 1992

Central/Southern Sydney	10
Eastern Sydney	4
South Western Sydney	4
Western Sector	11
Northern Sydney	11
Central Coast	6
Illawarra	8
Hunter	6
North Coast	10
New England	10
Orana & Far West	10
Central West	7
South West	11
South East	10

In addition to improving transmission of notification data, health professionals are encouraged to improve the reporting of critical epidemiological data with each notification — namely:

- disease name;
- age;
- sex; and
- Aboriginality.

Data on incomplete notifications are presented in Table 5.

TABLE 5

PERCENTAGE OF NOTIFICATIONS WITH INCOMPLETE INFORMATION BY VARIABLE AND PUBLIC HEALTH UNIT, 1992.

Public Health Unit	Age	Sex	Aboriginality
Central/Southern Sydney	0.3	2.3	100
Eastern Sydney	9.3	6.8	100
South Western Sydney	0.8	4.7	81.4
Western Sector	6.7	5.0	89.5
Northern Sydney	3.5	3.0	100
Central Coast	5.4	2.7	100
Illawarra	6.1	complete	84.8
Hunter	3.4	1.5	99.5
North Coast	1.0	1.5	85.0
New England	38.1	13.8	86.2
Orana & Far West	8.4	complete	82.1
Central West	4.8	complete	85.7
South West	complete	complete	68.4
South East	3.1	complete	53.1

## INFLUENZA SENTINEL SURVEILLANCE

Four Public Health Units (Central/Southern Sydney, Illawarra, Central West Region and South Eastern Region) now provide general practitioner sentinel surveillance data on influenza. The rate of influenza, expressed as the number of cases per 100 consultations, increased during the period February to April (Figure 1).

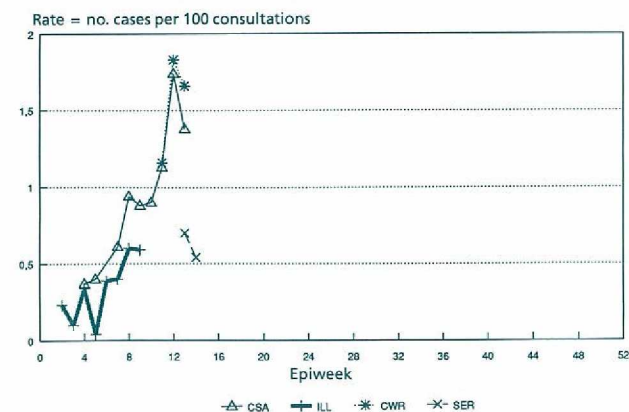
The National Health and Medical Research Council (NHMRC) recommends that the following groups of people will benefit from influenza vaccination:

- all people over the age of 65 years;
- all people who are immunosuppressed;
- all people with chronic heart, lung or kidney diseases; and
- all people with diabetes.

Individuals not in these "risk" groups should not be vaccinated against influenza.

FIGURE 1

INFLUENZA-GENERAL PRACTITIONER SENTINEL SURVEILLANCE NETWORK, NSW 1992



Source: GP Sentinel Surveillance — PHUs



### HUMAN IMMUNODEFICIENCY VIRUS (HIV)

Notifications are reported to the end of February, to allow comparison with data for the same period in 1991.

In February, 77 cases of HIV infection were diagnosed compared with 82 in 1991. The cumulative total diagnoses for 1992 is 167. This compares with 158 diagnoses for January to February 1991.

Information on sex was available for only 100 of the 167 notifications. Of these, 95 were male.

Most notifications come from the Eastern Sydney, Central Sydney and Northern Sydney Area Health Services. Forty per cent of notifications do not include postcode of residence.

In an effort to reduce the number of notifications being made with missing age, sex, exposure category and ethnicity, reference laboratories are requesting information from medical practitioners for people diagnosed with HIV infection. The Infectious Diseases Advisory Committee will review the success of these efforts at the next meeting on May 15. If the completion rate of HIV notifications is unsatisfactory, a proposal to make HIV notifiable by medical practitioners will be considered.

The large increase seen in this month's cumulative statistics is due to a number of late notifications not previously reported in the *Bulletin*.

### DIPHTHERIA CASE

A case of diphtheria in a 29-year-old North Coast woman was confirmed bacteriologically last month. The symptoms included severe pharyngitis with tonsillar exudate. The woman had been fully immunised as a child and made a full recovery.

Guinea pig inoculation testing by the Queensland Health Department Microbiology Laboratories identified the *Corynebacterium diphtheriae* as non-toxigenic.

Nasopharyngeal swabbing of household and work contacts revealed no further cases. This is the first case of diphtheria to be notified to the NSW Health Department since 1987 and only the second since 1982. It emphasises the need for continued immunisation and notification of this potentially fatal bacterial disease.

NHMRC has recommended that booster immunisation for diphtheria and tetanus be given every 10 years.

### WHOOPING COUGH OUTBREAK

An outbreak of pertussis occurred in a North Coast community in March. Local doctors had notified 10 cases by April 7. All notified cases (seven girls and three boys) are aged between two and 11 years.

Erythromycin was administered to reduce infectivity and to reduce the risk of further transmission to household contacts.

Public health measures initiated by the North Coast Region Public Health Unit included media releases to allay fears about safety of the triple antigen vaccine and to encourage all parents to ensure their children were fully immunised. Information about whooping cough treatment and vaccination also was provided to doctors and community groups. The PHU is monitoring the situation and plans to conduct a study of vaccine efficacy in cases and contacts within the Region.

### ANTIBIOTIC SUSCEPTIBILITY OF *N. GONORRHOEAE*

Penicillin-based regimens remain unacceptable for the therapy of gonorrhoeae in the current situation in Sydney, according to studies by the Microbiology Department of the Prince of Wales Hospital (see Table 6).

Gonococci referred from public and private laboratories in Sydney during 1990 and 1991 were examined for their susceptibility to penicillin, ceftriaxone, spectinomycin, ciprofloxacin and tetracycline using standardised agar plate dilution techniques. Four hundred and sixty-eight strains were examined in 1990 and 521 in 1991.

Despite a decline in the rate of penicillinase producing *N. gonorrhoeae* (PPNG), and an increase in fully sensitive strains, isolates with chromosomally mediated resistance to the penicillins are prevalent. Ceftriaxone and spectinomycin have retained their usefulness. Some resistance to the quinolone group of antibiotics has appeared and this situation requires further monitoring. High-level tetracycline resistance, although detected in Sydney isolates, has been found only in low numbers of imported strains.

TABLE 6

PENICILLIN SENSITIVITY OF  
*N. GONORRHOEAE* ISOLATED IN SYDNEY  
IN 1990 AND 1991

	Fully sensitive	Percentage of strains Less sensitive	Relatively resistant	PPNG
<b>All isolates</b>				
1990 (n = 468)	8.3	59.4	12.6	19.7
1991 (n = 521)	19.2	57.2	14	9.6
<b>Males</b>				
All sites				
1990 (n = 313)	11.5	61.4	8.9	18.2
1991 (n = 392)	23.7	57.9	9.7	8.7
Urethral				
1990 (n = 278)	10.1	60.4	9.7	19.8
1991 (n = 349)	20.9	60.2	10.9	8.0
Rectal/Pharyngeal				
1990 (n = 30)	26.7	66.7	2.3	2.3
1991 (n = 42)	45.2	40.4	0	14.4
<b>Females</b>				
All sites				
1990 (n = 155)	2	55.4	20	22.6
1991 (n = 129)	5.4	55	27	12.4
Rectal				
1990 (n = 1)		100		
1991 (n = 2)				100
Pharyngeal				
1990 (n = 15)		66.7	20	13.3
1991 (n = 8)		12.5	50	37.5

### ARBOVIRAL SURVEILLANCE

During March there were no reported isolations of arboviruses from the mosquito and sentinel chicken surveillance programs.



TABLE 7

**INFECTIOUS DISEASE NOTIFICATIONS  
BY HEALTH AREA AND REGION  
MARCH 1992**

CONDITION	CSA	SSA	ESA	WSA	WEN	NSA	CCA	HUN	NCR	NER	OFR	CWR	SWR	SER	TOTAL
Adverse event after immunisation	-	-	-	-	-	-	1	-	-	1	-	-	-	-	2
AIDS	2	-	4	-	-	3	-	-	1	-	-	-	-	-	9
Arboviral infection	-	-	-	-	-	-	1	3	6	2	2	-	1	-	15
Foodborne illness (NOS)	1	-	-	-	-	-	1	3	-	-	7	-	-	-	12
Gastroenteritis (instit)	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1
Gonorrhoea	1	1	-	-	-	-	-	-	-	-	-	-	1	1	4
H. influenzae epiglottitis	-	-	-	1	-	-	-	1	-	-	-	-	-	-	2
H. influenzae meningitis	1	1	-	-	-	1	-	1	-	-	-	-	1	-	5
H. influenzae septicaemia	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1
H. influenzae infection (NOS)	-	-	-	1	-	-	-	-	-	-	-	-	-	-	1
Hepatitis A - acute viral	5	4	-	2	1	5	-	1	1	9	-	-	-	-	28
Hepatitis B - chronic/carrier	-	-	-	-	-	-	-	2	2	-	-	-	-	-	4
Hepatitis B - unspecified	3	5	-	7	-	4	-	-	-	3	-	-	-	1	23
Hepatitis C - unspecified	7	3	-	-	1	1	2	20	21	1	-	-	-	-	56
Hydatid disease	-	-	-	-	-	-	-	-	1	-	-	1	-	-	2
Legionnaires' disease	-	-	-	1	-	-	-	-	-	-	-	-	-	-	1
Malaria	-	-	-	-	-	-	-	1	-	1	1	-	-	-	3
Measles	2	-	-	-	-	-	-	2	-	-	1	-	-	2	7
Mycobacterial atypical	-	-	-	-	-	1	-	-	-	-	-	-	-	-	1
Mycobacterial tuberculosis	-	-	-	-	-	4	-	-	-	1	-	-	-	-	5
Mycobacterial infection (NOS)	-	-	-	1	-	2	-	-	-	-	-	-	-	-	3
Q fever	-	-	-	-	-	-	-	1	1	1	2	-	-	-	5
Rubella	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1
Salmonella infection (NOS)	2	-	-	-	-	1	-	1	2	4	-	-	1	-	11
Salmonella typhimurium	-	-	-	-	-	-	-	1	-	1	-	-	-	-	2
Syphilis	4	-	-	1	-	-	-	-	1	2	1	-	-	-	9

TABLE 8

**INFECTIOUS DISEASE NOTIFICATIONS  
BY HEALTH AREA AND REGION  
CUMULATIVE TO MARCH 1992**

CONDITION	CSA	SSA	ESA	SWS	WSA	WEN	NSA	CCA	ILL	HUN	NCR	NER	OFR	CWR	SWR	SER	OTH	U/K	TOTAL
Adverse event after immunisation	-	-	-	-	-	-	-	1	-	-	5	4	-	-	-	-	-	-	10
AIDS*	5	-	10	-	1	1	5	-	1	-	-	-	-	-	-	1	-	-	24
Arboviral infection	-	-	-	-	-	-	1	2	-	8	27	9	6	-	8	-	-	-	61
Diphtheria	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	1
Foodborne illness (NOS)	2	1	23	1	14	3	-	10	-	6	-	3	13	1	1	-	-	-	78
Gastroenteritis (instit)	-	2	-	-	-	1	-	-	-	1	1	87	-	-	-	-	-	-	92
Gonorrhoea	7	1	13	3	1	-	3	-	2	1	6	1	3	2	4	-	-	-	49
H. influenzae epiglottitis	-	1	-	-	1	-	-	-	-	2	2	-	-	-	1	-	-	-	7
H. influenzae meningitis	2	3	-	-	-	2	4	-	-	3	2	-	-	-	2	1	-	-	19
H. influenzae septicaemia	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1	-	-	-	2
H. influenzae infection (NOS)	1	-	1	-	2	-	-	-	-	-	-	1	-	-	-	1	-	-	6
Hepatitis A - acute viral	38	10	42	7	10	2	35	-	2	11	13	42	11	-	3	1	-	-	227
Hepatitis B - acute viral	2	1	-	1	2	-	2	-	1	1	-	-	10	-	-	-	-	-	20
Hepatitis B - chronic/carrier	1	2	-	1	7	2	-	-	-	18	2	2	2	2	-	-	-	-	39
Hepatitis B - unspecified	62	42	9	50	54	5	60	3	2	8	6	14	1	1	4	2	3	-	326
Hepatitis C - acute viral	10	1	-	14	4	-	2	-	-	8	3	3	-	-	-	-	-	-	46
Hepatitis C - unspecified	77	22	44	11	30	5	35	8	7	106	69	11	-	1	2	4	-	-	432
Hepatitis D	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	1
Hepatitis, acute viral (NOS)	-	-	-	2	-	-	-	-	-	-	-	-	-	1	1	-	-	-	4
HIV infection*	16	3	41	4	5	5	11	2	1	3	6	1	1	-	-	2	2	67	167
Hydatid disease	-	-	-	-	-	-	-	-	-	-	1	2	-	1	-	-	-	-	4
Legionnaires' disease	-	-	-	-	5	-	1	2	-	-	-	-	-	-	-	1	-	-	9
Leprosy	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1
Leptospirosis	-	-	-	-	-	-	-	-	-	-	-	1	-	3	-	-	-	-	4
Listeriosis	-	-	-	-	-	-	1	-	-	-	-	-	-	1	-	-	-	-	2
Malaria	1	1	-	1	1	-	6	-	1	2	-	2	1	-	2	2	-	-	20
Measles	5	4	3	8	8	2	12	4	5	13	5	5	3	2	-	5	-	-	84
Meningococcal meningitis	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Meningococcal septicaemia	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
Meningococcal infection (NOS)	-	-	-	-	-	-	1	-	1	-	-	2	-	-	-	-	-	-	4
Mumps	-	-	-	-	1	-	-	-	-	3	-	-	-	-	-	-	-	-	4
Mycobacterial atypical	4	-	-	-	4	1	4	-	1	-	-	-	-	-	-	-	-	-	14
Mycobacterial tuberculosis	9	5	3	4	6	2	15	1	2	1	2	2	-	-	-	1	-	-	53
Mycobacterial infection (NOS)	-	-	-	-	2	1	6	1	2	2	-	-	1	-	-	-	-	-	15
Pertussis	-	7	-	4	1	-	-	-	-	1	-	-	-	-	-	-	-	-	13
Q fever	-	-	-	-	-	-	-	1	-	3	10	4	8	-	1	-	-	-	27
Rubella	-	-	-	-	1	1	5	-	-	1	2	-	-	-	-	2	-	-	12
Salmonella infection (NOS)	11	16	17	10	18	8	23	3	3	10	22	14	9	6	4	6	-	-	180
Salmonella typhimurium	-	-	-	-	1	-	-	-	-	2	-	1	-	-	1	-	-	-	5
Syphilis	27	7	7	8	6	1	8	-	2	2	12	8	24	-	-	1	1	-	114
Tetanus	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Typhoid & paratyphoid	2	-	-	-	2	-	3	-	-	-	-	-	-	1	-	-	-	-	8

**Abbreviations used in this Bulletin:**

CSA Central Sydney Health Area, SSA Southern Sydney Health Area, ESA Eastern 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, OTH Interstate/Overseas, U/K Unknown, NOS Not Otherwise Stated

Please note that 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.



**TABLE 9**

**INFECTIOUS DISEASE NOTIFICATIONS, NSW  
MARCH 1992**

Condition	Number of cases notified			
	Period		Cumulative	
	March 1991	March 1992	March 1991	March 1992
Adverse reaction	N/A	2	N/A	10
AIDS	*40	*9	*63	*24
Arboviral infection	152	15	317	61
Brucellosis	1	—	1	—
Cholera	—	—	—	—
Diphtheria	—	—	—	1
Foodborne illness (NOS)	251	12	921	78
Gastroenteritis (instit)	16	1	23	92
Gonorrhoea	44	4	122	49
H influenzae epiglottitis	1	2	2	7
H influenzae B — meningitis	4	5	4	19
H influenzae B — septicaemia	—	1	1	2
H influenzae infection (NOS)	10	1	19	6
Hepatitis A — acute viral	39	28	68	227
Hepatitis B — acute viral	1	—	5	20
Hepatitis B — chronic/carrier	—	4	—	39
Hepatitis B — unspecified	81	23	251	326
Hepatitis C — acute viral	—	—	2	46
Hepatitis C — unspecified	33	56	66	432
Hepatitis D	N/A	—	N/A	1
Hepatitis, acute viral (NOS)	45	—	69	4
HIV infection	*82	*77	*158	*167
Hydatid disease	—	2	1	4
Legionnaires' disease	7	1	14	9
Leprosy	—	—	—	1
Leptospirosis	5	—	18	4
Listeriosis	—	—	3	2
Malaria	4	3	13	20
Measles	71	7	113	84
Meningococcal meningitis	1	—	5	1
Meningococcal septicaemia	1	—	5	2
Meningococcal infection (NOS)	5	—	6	4
Mumps	N/A	—	N/A	4
Mycobacterial tuberculosis	21	5	55	53
Mycobacterial — atypical	11	1	18	14
Mycobacterial infection (NOS)	11	3	40	15
Pertussis	—	—	20	13
Plague	—	—	—	—
Poliomyelitis	—	—	—	—
Q fever	41	5	64	27
Rubella	1	1	4	12
Salmonella infection (NOS)	164	13	477	185
Syphilis	53	9	140	114
Tetanus	—	—	1	1
Typhoid & paratyphoid	12	—	28	8
Typhus	—	—	—	—
Viral haemorrhagic fevers	—	—	—	—
Yellow fever	—	—	—	—

\*Data to February only

**P**rofessor James S. Lawson, Professor and Head of the School of Health Services Management at the University of NSW, has prepared the following public health items from the literature.

## ANAL AND CERVICAL CANCER PROBABLY HAVE SIMILAR CAUSES

Anal cancer is rare, but is more frequent in women than in men. An increase in anal cancer has been suspected in the past two decades, especially among homosexual men. It seems likely that an infectious agent similar to that for cancer of the uterine cervix is involved. In a very large study involving nearly 30,000 women in Denmark, it has been demonstrated that patients with anal cancer were significantly more likely to have had a previous cervical cancer than other patients with cancer.

Melbye M and Sprogel P. Aetiological parallel between anal cancer and cervical cancer, *Lancet* 1991; 338:657-659.

## LIVE LUNG TRANSPLANTATION — DIFFICULT ETHICS

Lung transplantation (lobe only with respect to live donors) has become a viable treatment option for many patients with terminal pulmonary disease, but the scarcity of donor lungs is a severe constraint. The main risk to the live donor is the risk of lobectomy which carries a mortality rate of less than 1 per cent. The main benefit to the donors is psychological in knowing they have saved the life of another. The ethics are difficult and require careful consultation with donors and recipients on several occasions before the decisions are made.

Shaw LR, Miller JD, Slutsky AS, Maurer JR et al. Ethics of lung transplantation with live donors, *Lancet* 1991; 338:678-681.

## ALCOHOL AND CARDIOVASCULAR DISEASE

Evidence suggests that two alcoholic drinks a day are associated with no cardiovascular harm and may be protective against coronary heart disease. However, a public health recommendation that emphasised the positive effects of alcohol would be likely to do more harm than good because above two drinks a day, there is evidence of harm — biological as well as social. Any increase in overall consumption of alcohol, even as low as an extra one drink a week, has been found in many countries to be associated with a 10 per cent increase in the prevalence of heavy drinkers. Therefore any recommendations in favour of encouraging the public to drink in order to prevent coronary heart disease may well have an adverse effect.

Marmot M and Brunner E. Alcohol and cardiovascular disease: the status of the U-shaped curve, *Br Med J* 1991; 303:565-568.

## ANTIBIOTICS REMAIN VALUABLE FOR MIDDLE EAR INFECTIONS

Acute painful red ear is a problem commonly encountered in general practice and the dilemma of whether and how to treat this condition remains the subject of continuing debate. However, the published evidence is conflicting. A British study using double blind control techniques has shown that the use of antibiotics (the penicillins), improves short-term outcomes substantially and therefore continues to be an appropriate management policy.

Burke P, Bain J, Robinson D and Dunleavy J. Acute red ear in children: controlled trial of non-antibiotic treatment in general practice, *Br Med J* 1991; 303:558-562.